

Dr. Mark V. Flinn

Current position

- 2009- University of Missouri: Professor, Cultural and Biomedical Anthropology
 - 2013-2016 Chair, Dept. of Anthropology
 - 2006- Adjunct professor, Dept. Psychological Sciences (Child Development)
- 1993-2008 University of Missouri: Associate professor, Dept. of Anthropology
 - 2004-2006 Visiting Associate professor, Dept. Psychological Sciences
- 1987-1993 University of Missouri: Assistant professor, Dept. of Anthropology

Previous positions

- 1983-1987 University of Michigan: Fellow, Michigan Society of Fellows; Assistant professor of Anthropology; Post-doctorate, Evolutionary Medicine & Museum of Natural History (Mentors: R.D. Alexander-NAS & W.D. Hamilton-NAS & FRS)

Education

- 1981-1983 Ph.D. Anthropology, Northwestern University (advisor: N.A. Chagnon-NAS)
- 1977-1980 Anthropology, Pennsylvania State University (abd – advisor moved)
- 1975-1976 A.M. Anthropology, University of Michigan
- 1971-1975 B.S. Anthropology & Zoology (pre-medicine), University of Michigan

Grants and awards

- 2012-present Elected Fellow, Association for Psychological Science (APS)
- 2012-present Elected Fellow, American Association for the Advancement of Science (AAAS) (section H- Anthropology).
- 2013-2015 President, Human Behavior & Evolution Society
- 2007-2011 National Science Foundation, BCS-SBE #0640442, “Collaborative research: Early childhood stress, personality & reproductive strategies in a matrifocal community” Flinn, M. (PI), Leone, D. (co-PI), Muehlenbein, M. (co-PI) / Quinlan, R. (PI), Quinlan M. (co-PI) \$285,038.
- 2010 University of Missouri A&S Alumni Organization faculty incentive grant. Hormonal mechanisms for grandparenting.
- 2009-2011 National Science Foundation, working group member, “Coalitions and alliances” organized by Frans de Waal (Emory University) and Sergey Gavrilets (University of Tennessee, Knoxville) (PIs), National Institute for Mathematical and Biological Synthesis, April 9-12, 2009; February 4-6, 2010; Nov 5-6, 2010.
- 2008-2009 National Science Foundation, REG supplement, BCS-SBE #0640442, “Collaborative research: Early childhood stress, personality & reproductive strategies in a matrifocal community” Flinn, M. (PI), Ponzi, D. (graduate student).
- 2008 National Science Foundation, Senior fellow, Systematic techniques for video data workshop, Duke University Marine Laboratories, Beaufort NC, July 27-August 1.

Research grants and awards cont.

- 2005 Distinguished Scientist Award, Bowen Center for Study of the Family, Georgetown University School of Medicine, Washington, DC.
- 2002-2008 National Science Foundation, SBR-0136023, "Genetic conflicts of interest, fluctuating asymmetry, and MHC" Gangestad S. (PI), Flinn, M. (co-PI), & Thornhill, R. (co-PI), \$340,883.
- 2001-present Elected Fellow, Human Biology Association
- 2000-2001 MU Research Council funded research leave & grant "Child stress and growth." Flinn, M. (PI)
- 1998-1999 MU Research Board, "Childhood stress in a rural Caribbean village" Flinn, M. (PI), Sattenspiel, L. (PI), \$39,226
- 1997-1999 Center for Field Research "Child stress and health" Flinn, M. (PI), Quinlan, R. (co-PI) \$24,000.
- 1992-1996 National Science Foundation, SBR-9205373, "Childhood stress in a rural Caribbean village" Flinn, M. (PI), \$184,072.
- 1993-1994 MU Research Council, funded research leave.
- 1990-1993 National Science Foundation, BNS-8920569, "Parental care and childhood stress in a rural Caribbean village" Flinn, M. (PI), \$70,848.
- 1989 National Science Foundation, Summer research methods fellowship.
- 1989 MU Research Council, "Parental care in a Caribbean village." Flinn, M. (PI).
- 1988 MU Research Council, "Step parent/child relationships." Flinn, M. (PI).
- 1986-1987 U. Michigan Museum of Natural History, Post-doctoral Fellowship.
- 1983-1986 Michigan Society of Fellows, Post-doctoral Fellowship.

Publications Notes: Total = 84; Google Scholar citation count = 4508; h-index=36.

Flinn, M.V. (2016). The human family: evolutionary origins and adaptive significance. In: On Human Nature, M. Teyberanc & F. Ayala (Eds.), Chapter 16, Pp. 251-262. New York: Elsevier. DOI: 10.1016/B978-0-12-420190-3.00016-8

Chagnon, N.A., Lynch, R.F., Shenk, M.S., Hames, R. & Flinn, M.V. (2017). Cross cousin marriage among the Yanomamö shows evidence of parent-offspring conflict and mate competition between siblings. *PNAS*, 114, xxx

Alcock, J., Aktipis, A., Boddy, A.M., Day, T., Femling, J.K., Flinn, M.V., Hochberg, M.E., Jansen, G., Read, G.A., & Maley, C.C. (2017). Heuristics for DOCS: How to identify normal function in abnormal results and define a new normal in medical practice. *British Medical Journal*, 356, xxx.

Publications cont.

- Flinn, M.V. (2016). Stress in the wild: Naturalistic studies of cortisol. *Hormones and Behavior*, 87, xxx.
- Ponzi, D., Muehlenbein, M.P., Geary, D.C., & Flinn, M.V. (2016). Cortisol, salivary alpha-amylase and children's perceptions of their social networks. *Social Neuroscience*, 11(2), 164-174. DOI: 10.1080/17470919.2015.1045988
- Flinn, M.V. (2015). Evolution of psychological mechanisms for human family relationships. In: The Family Emotional System: An Integrative Concept for Theory, Science and Practice, R. Noone & D. Papero (Eds.), Chapter 6, Pp. 143-160. New York: Lexington Books.
- Flinn, M.V. (2015). Aggression, affiliation, and parenting. In: Basics in Human Evolution, M. Muehlenbein (Ed.), Chapter 35, pp. 455-466. Academic Press.
- Bissonnette, A., Perry, S., Barrett, L., Mitani, J., Flinn, M.V., Gavrilets, S., & De Waal, F.B. (2015). Coalitions in theory and reality: A review of pertinent variables and processes. *Behaviour*, 152(1), 1-56. DOI: 10.1163/1568539x-00003241.
- Flinn, M.V. & Ward, C.V. (2015). The role of hormones in the evolution of the human family. In: Handbook of Evolutionary Psychology, 2nd edition, D. Buss (Ed.), Chapter 24, pp. 598-622. New York: Wiley.
- Macfarlan, S.J., Walker, R.S., Flinn, M.V. & Chagnon, N.A. (2014). Lethal coalitionary aggression and long-term alliances among Yanomamö men. *Proceedings of the National Academy of Sciences* 111(47), 16662-16669. DOI: 10.1073/pnas.1418639111
- Ponzi, D., Muehlenbein, M.P., Sgoifo, A., Geary, D.C., & Flinn, M.V. (2014). Day-to-day variation of salivary cortisol and dehydroepiandrosterone (DHEA) in children from a rural Dominican community. *Adaptive Human Behavior and Physiology*, 1, 12-24. DOI: 10.1007/s40750-014-0002-4
- Flinn, M.V. (2013). The evolution of hormonal mechanisms for human sociality. *Family Systems* 9(2), 174-181.
- Flinn, M.V. (2013). The evolutionary biology of culture. In K. Summers & B. Crespi, (Eds.) Foundations of Human Social Evolution, Pp. 94-103. Oxford: Oxford University Press.
- Walker, R.S., Beckerman, S., Flinn, M.V., Gurven, M., von Reuden, C.R., Kramer, K.L., Greaves, R.D., Córdoba, L., Hagen, E.H., Koster, J.M., Sugiyama, L., Hunter, T.E., & Hill, K.R. (2013). Living with kin in lowland horticultural societies. *Current Anthropology* 54(1), 96-103.
- Flinn, M.V., Ponzi, D., Nepomnaschy, P. & Noone, R. (2012). Ontogeny of stress reactivity: phenotypic flexibility, trade-offs, and pathology. *Current Topics in Neurotoxicity* 3, (Mal)adaptive aspects of developmental stress, Laviola, G. & Macrì, S. (Eds.), Pp. 154-172. Berlin: Springer.
- Flinn, M.V., Ponzi, D., & Muehlenbein, M.P. (2012). Hormonal mechanisms for regulation of aggression in human coalitions. *Human Nature*, 22(1), 68-88. DOI 10.1007/s12110-012-9135-y

Publications cont.

- Flinn, M.V., Duncan, C., Quinlan, R.L., Leone, D.V., Decker, S.A. & Ponzi, D. (2012). Hormones in the wild: Monitoring the endocrinology of family relationships. *Parenting: Science and Practice*, 12(2), 124-133. DOI: 10.1080/15295192.2012.683338
- Walker, R.S., Hill, K., Flinn, M.V., & Ellsworth, R. (2011). Evolutionary history of hunter-gatherer marriage practices. *PLoS ONE*, 6(4), e19066. doi:10.1371/journal.pone.0019066
- Decker, S. & Flinn, M.V. (2011). Parenting styles and gender-linked drinking behaviors in Dominica. *Ethos*, 39 (2), 189-210.
- Flinn, M.V., Nepomnaschy, P., Muehlenbein, M.P., & Ponzi, D. (2011). Evolutionary functions of early social modulation of hypothalamic-pituitary-adrenal axis development in humans. *Neuroscience and Biobehavioral Reviews*, 35(7), 1611-1629.
- Flinn, M.V. (2011a). Evolutionary anthropology of the human family. In *Oxford handbook of evolutionary family psychology*, C. Salmon & T. Shackelford (Eds.), chapter 2, pp. 12-32. Oxford: Oxford University Press.
- Flinn, M.V. (2011b). Social inequalities, family relationships, and child health. In: *Biosocial research contributions to understanding family processes and problems*, A. Booth, S. McHale, & N. Landale (Eds.), chapter 14, pp. 205-220. New York: Springer-Verlag.
- Muehlenbein, M. & Flinn, M.V. (2011). Pattern and process of human life history evolution. In: *Oxford handbook of life history*, T. Flatt & A. Heyland (Eds.), chapter 23, pp. 153-168. Oxford: Oxford University Press.
- Walker, R.S., Flinn, M.V., & Hill, K. (2010). The evolutionary history of partible paternity in lowland South America. *Proceedings of the National Academy of Sciences* 107(45), 19195-19200.
- Vigil, J., Geary, D., Granger, D., & Flinn, M.V. (2010). Sex differences in salivary cortisol, alpha-amylase, and psychological functioning following hurricane Katrina. *Child Development*, 81(4), 1227-1284.
- Flinn, M.V. (2010). Evolutionary biology of hormonal response to social challenge in the human child. In *Human Evolutionary Biology*, M.P. Muehlenbein (Ed.), Chapter 24, pp. 405-424. Cambridge: Cambridge University Press.
- Vigil, J., Carle, A.C., Geary, D., Granger, D., Flinn, M.V., & Pendleton, P. (2009). Maternal correlates of children's stress functioning following a major natural disaster. *Journal of Child and Adolescent Trauma*, 2(4), 287-296.
- Nepomnaschy, P., Vitzhum, V., & Flinn, M.V. (2009). Evolutionary endocrinology: integrating proximate mechanisms, ontogeny, and evolved function. *American Journal of Human Biology* 21(6), 728-730.
- Flinn, M.V. (2009). Are cortisol profiles a stable trait during child development? *American Journal of Human Biology* 21(6), 769-771.

Publications cont.

- Flinn, M.V. & Leone, D.V. (2009/2012). Alloparental care and the ontogeny of glucocorticoid stress response among stepchildren. In: Substitute parents: Biological and social perspectives on alloparenting in human societies. G. Bentley & R. Mace (Eds.), chapter 13, pp. 212-231. Biosocial Society Series, volume 3. Oxford: Berghahn. Paperback in 2012.
- Nepomnaschy, P. & Flinn, M.V. (2009/2012). Early life influences on the ontogeny of neuroendocrine stress response in the human child. In: The endocrinology of social relationships, P. Ellison & P. Gray (Eds.), chapter 16, pp. 364-382. Cambridge, MA: Harvard University Press. Paperback in 2012.
- Flinn, M.V. (2008). Why words can hurt us: Social relationships, stress, and health. In: Evolutionary medicine and health, W. Trevathan, E.O. Smith, & J. McKenna (Eds.) Chapter 13, pp. 247-258 + refs. Oxford: Oxford University Press.
- Flinn, M.V. & Alexander, R.D. (2007). Runaway social selection. In: The evolution of mind, S.W. Gangestad & J.A. Simpson (Eds.), pp. 249-255. New York: Guilford Press.
- Flinn, M.V. & Coe, K. (2007). The linked red queens of human cognition, coalitions, and culture. In: The evolution of mind, S.W. Gangestad & J.A. Simpson (Eds.), pp. 339-347. New York: Guilford Press.
- Flinn, M.V., Quinlan, R.J., Ward, C.V., & Coe, M.K. (2007). Evolution of the human family: Cooperative males, long social childhoods, smart mothers, and extended kin networks. In: Family relationships, C. Salmon & T. Shackelford (Eds.) Chapter 2, pp. 16-38. Oxford: Oxford University Press.
- Flinn, M.V. (2006a). Evolution and ontogeny of stress response to social challenge in the human child. *Developmental Review*, 26, 138-174.
- Flinn, M.V. (2006b). Evolution of stress response to social-evaluative threat. In: Oxford handbook of evolutionary psychology, R. Dunbar & L. Barrett (Eds.), Chapter 20, pp. 272-296. Oxford: Oxford University Press.
- Flinn, M.V. (2006c). Cross-cultural universals and variations: The evolutionary paradox of informational novelty. *Psychological Inquiry*, 17(2), 118-123.
- Flinn, M.V. & Leone, D.V. (2006). Early trauma and the ontogeny of glucocorticoid stress response in the human child: Grandmother as a secure base. *Journal of Developmental Processes*, 1(1), 31-68.
- Flinn, M.V., Geary, D.C. & Ward, C.V. (2005). Ecological dominance, social competition, and coalitionary arms races: Why humans evolved extraordinary intelligence. *Evolution and Human Behavior*, 26(1), 10-46.
- Flinn, M.V., Ward, C.V., & Noone, R. (2005). Hormones and the human family. In: Handbook of evolutionary psychology, D. Buss (Ed.), pp. 552-580. New York: Wiley.
- Flinn, M.V. & Ward, C.V. (2005). Evolution of the social child. In: Origins of the social mind: Evolutionary psychology and child development, B. Ellis & D. Bjorklund (Eds.), chapter 2, pp. 19-44. London: Guilford Press.

Publications cont.

- Quinlan, R.J., Quinlan, M.B., & Flinn, M.V. (2005). Local resource enhancement & sex-biased breastfeeding in a Caribbean community. *Current Anthropology*, 46(3), 471-480.
- Quinlan, R.J. & Flinn, M.V. (2005). Kinship, sex & fitness in a Caribbean community. *Human Nature*, 16(1), 32-57.
- Flinn, M.V. (2004). Culture and developmental plasticity: Evolution of the social brain. In: Evolutionary perspectives on child development. K. MacDonald & R.L. Burgess (Eds.), chapter 3, pp. 73-98. Thousand Oaks, CA: Sage.
- Ward, C.V., Flinn, M.V., & Begun, D. (2004). Body size and intelligence in hominoid evolution. In: The evolution of thought: Evolutionary origins of great ape intelligence, A.E. Russon & D.R. Begun (Eds.), pp. 335-349. Cambridge: Cambridge University Press.
- Quinlan, R.J. & Flinn, M.V. (2003). Intergenerational transmission of conjugal stability. *Journal of Comparative Family Studies*, 34(4), 569-584.
- Flinn, M.V. & England, B.G. (2003). Childhood stress: endocrine and immune responses to psychosocial events. In: Social & cultural lives of immune systems, J.M. Wilce (Ed.), pp. 107-147. London: Routledge press.
- Quinlan, R.J., Quinlan, M.B., & Flinn, M.V. (2003). Parental investment & age at weaning in a Caribbean village. *Evolution and Human Behavior*, 24(1), 1-17.
- Decker, S.A., Flinn, M.V., England, B.G., & Worthman, C. (2003). Cultural congruity and the cortisol stress response among Dominican men. In: Social & cultural lives of immune systems, J.M. Wilce (Ed.). London: Routledge press.
- Geary, D.C. & Flinn, M.V. (2002). Sex differences in behavioral and hormonal response to social threat. *Psychological Review*, 109(4), 745-750.
- Wagner, J.D., Flinn, M.V., & England, B.G. (2002). Hormonal response to competition among male coalitions. *Evolution and Human Behavior*, 23(6), 437-442.
- Geary, D.C. & Flinn, M.V. (2001). Evolution of human parental behavior and the human family. *Parenting: Science and Practice*, 1 (1&2), 5-61.
- Flinn, M.V. & Altemeier, W.A. (2000). Why do we have IgE-mediated immediate hypersensitivity? *Pediatric Annals*, 29(12), 731.
- Flinn, M.V., Leone, D.V., & Quinlan, R.J. (1999). Growth and fluctuating asymmetry of stepchildren. *Evolution and Human Behavior*, 20(6), 465-480.
- Flinn, M.V. (1999). Family environment, stress, and health during childhood. In: Hormones, health, and behavior, C. Panter-Brick & C. Worthman (Eds.), pp. 105-138. Cambridge: Cambridge University press.
- Flinn, M.V., Baerwald, C., Decker, S.A., & England, B.G. (1998). Evolutionary functions of neuroendocrine response to social environment. *Behavioral & Brain Sciences*, 21, 372-374.
- Flinn, M.V. & England, B.G. (1997). Social economics of childhood glucocorticoid stress response and health. *American Journal of Physical Anthropology*, 102(1), 33-53.

Publications cont.

- Flinn, M.V. (1997). Culture and the evolution of social learning. *Evolution and Human Behavior*, 18(1), 23-67.
- Flinn, M.V., Quinlan, R.J., Turner, M.T., Decker, S.D., & England, B.G. (1996). Male-female differences in effects of parental absence on glucocorticoid stress response. *Human Nature*, 7(2), 125-162.
- Flinn, M.V. & England, B.G. (1995). Childhood stress and family environment. *Current Anthropology*, 36(5), 854-866.
- Flinn, M.V., Tedeschi, D., Quinlan, R.J., Decker, S.D., Picha, P., Sutter, R., & Turner, M.T. (1994). Evolution and culture turf wars: history, mind, and/or ecology? *Journal of Anthropological Research*, 50, 327-333.
- Flinn, M.V. (1992). Paternal care in a Caribbean village. In: Father-child relations: Cultural and biosocial contexts, B. Hewlett (Ed.), pp. 57-84. Hawthorne, NY: Aldine de Gruyter.
- Flinn, M.V. (1989). Household composition and female reproductive strategies. In: Sexual and reproductive strategies, A. Rasa, C. Vogel & E. Voland (Eds.), pp. 206-233. London: Chapman and Hall.
- Flinn, M.V. (1988a). Mate guarding in a Caribbean village. *Ethology & Sociobiology*, 9(1), 1-28.
- Flinn, M.V. (1988b). Parent-offspring interactions in a Caribbean village: daughter guarding. In: Human reproductive behaviour, L. Betzig, M. Borgerhoff Mulder & P. Turke (Eds.), pp. 189-200. Cambridge: Cambridge University Press.
- Flinn, M.V. (1988c). Step and genetic parent/offspring relationships in a Caribbean village. *Ethology and Sociobiology*, 9(6), 335-369.
- Flinn, M.V. (1987). Resources, reproduction, and mate competition in human populations. *Behavioral and Brain Sciences* 10(3), 305-307.
- Flinn, M.V. (1986). Correlates of reproductive success in a Caribbean village. *Human Ecology*, 14(2), 225-243.
- Flinn, M.V. & Low, B.S. (1986). Resource distribution, social competition, and mating patterns in human societies. In: Ecological aspects of social evolution, D. Rubenstein & R. Wrangham (Eds.), pp. 217-243. Princeton NJ: Princeton University Press.
- Flinn, M.V. (1985). How can evolutionary theory help explain inheritance practices? *Behavioral and Brain Sciences* 8(4), 673-675.
- Flinn, M.V. (1983). Resources, mating, and kinship: the behavioral ecology of a Trinidadian village. Ph.D. thesis, Department of Anthropology, Northwestern University. Ann Arbor: University Microfilms.
- Flinn M.V. & Alexander, R.D. (1982). Culture theory: the developing synthesis from biology. *Human Ecology*, 10, 383-400.

Publications cont.

Flinn, M.V. (1981). Uterine and agnatic kinship variability. In: Natural selection and social behavior: recent research and new theory, R.D. Alexander & D.W. Tinkle (Eds.), pp. 439-475. New York: Blackwell Press.

Chagnon, N.A., Flinn, M.V., & Melancon, T. (1979). Sex ratio variations among the Yanomamo. In: Evolutionary biology and human social behavior: an anthropological perspective, N.A. Chagnon & W.G. Irons (Eds.), pp. 290-320. Boston: Duxbury Press.

Other publications (abstracts, commentaries & reviews – mostly peer reviewed) total=66

Flinn, M.V. (2011). Review of: *Formative experiences* edited by C. Worthman, et al. *American Journal of Human Biology* 23(3), 429.

Flinn, M.V. (2010a). Evolution is not egalitarian. *Current Anthropology*, 51(1), 103-105.

Ward, C.V., & Flinn, M.V. (2009). Smart mothers, female social power and the evolution of human intelligence. *2009 AAAS annual meeting program*, 233.

Flinn, M.V., Muehlenbein, M.P., & Ponzi, D. (2009). Social endocrinology of the human child. *Behavioral & Brain Sciences*, 32(1), 27-28.

Decker, S.D., Flinn, M.V., Mann, R., Leone, D.V., Gay, J., & Devito, J. (2009). Sex differences in the effects of childhood maternal “overprotectiveness” on adult alcohol and tobacco consumption and body composition in a rural Dominican village. *American Journal of Human Biology* 21(2), 250-251.

Gregor, T., Gross, D.R., Demarest, A.A., Beckerman S., Ehrenreich, J.D., Ember, C.R., Ember, M., Raybeck, D., Robarchek, C., Irons, W, Boster, J., Barkow, J.H., Flinn, M.V., Holloway, R.L., Hrdy, D.B. MD, Hrdy, S.B., Kronenfeld, D.B., Manson, J.H., Sugiyama, L.S., & Katz, S.L. MD (2003). Referendum on Darkness in El Dorado and danger to immunization campaigns. *Anthropology News*, 44(7), 3-11.

Flinn, M.V. (2008). Review of: *Human biology of Afro-Caribbean populations* by L. Madrigal. *American Anthropologist* 110(2), 266-267.

Flinn, M.V., Ponzi, D, & Geary, D.C. (2008). Male-female differences in hormonal responses to social events during middle childhood. *Abstracts of the American Anthropological Association Meetings 2008*, 27.

Flinn, M.V. (2008). Are cortisol profiles a stable trait throughout child development? *American Journal of Human Biology* 20(2), 7.

Flinn, M.V. (2007). Evolution and ontogeny of hormonal stress responses to social challenges. *Society for Research in Child Development meetings abstracts 2007*.

Flinn, M.V. (2005). Temper tantrums: Display or dysfunction? *American Journal of Human Biology* 16, 265.

Flinn, M.V. (2005). Temper tantrums: Adaptation or developmental by-product? *Human Behavior and Evolution Society Conference Abstracts 2005*, 56.

Other publications (abstracts, commentaries & reviews) cont.

- Flinn, M.V. & England, B.G. (2004). Are there sensitive periods in ontogeny of stress response? *American Journal of Physical Anthropology Suppl.* 38, 95-96.
- Leone, D.V. & Flinn, M.V. (2004). Is fluctuating asymmetry a stable trait? *American Journal of Physical Anthropology Suppl.* 38, 134-135.
- Nyberg, C. & Flinn, M.V. (2004). Spatial distribution of childhood morbidity patterns in a Dominican village. *American Journal of Physical Anthropology Suppl.* 38, 154.
- Flinn, M.V. & England, B.G. (2004). Are there critical periods in ontogeny of stress response and immune function? *American Journal of Human Biology* 16, 203.
- Leone D.V., Quinlan, R.J., Hayden, R., Stewart, J., & Flinn, M.V. (2004). Long-term implications for growth of prenatal and early postnatal environment. *American Journal of Human Biology* 16, 212-213.
- Quinlan, R.J., Flinn, M.V., Leone, D.V., Quinlan, M.B., Gangestad, S.J., Thornhill, R., & England, B.G. (2003). Tradeoffs between indirect parental investment and direct childcare: Long-term effects of household production and breastfeeding duration on children's cortisol levels, fluctuating asymmetry, and growth. *Human Behavior and Evolution Society Conference Abstracts 2003*, 73.
- Flinn, M.V., Noone, R., & England, B.G. (2002). Longitudinal patterns of stress, family environment, and child health in a rural Caribbean village. *Abstracts of the American Anthropological Association Meetings 2002*, 145.
- Flinn, M.V. & Bluedorn, A.C. (2002). The evolution of times. *Current Anthropology*, 43(S4), 117-119.
- Flinn, M.V., Noone, R., & England, B.G. (2002). Longitudinal patterns of cortisol reactivity, father absence, and maternal behavior in a rural Caribbean village. *Proceedings of the Human Behavior and Evolution Society 2002*, 51.
- Wagner, J.D., Flinn, M.V., Gangestad, S.G., Thornhill, R., & England, B.G. (2001). Testosterone and cortisol response to competition between male coalitions. *Human Behavior and Evolution Society Conference Abstracts 2001*, 197. Prize winner.
- Flinn, M.V. (2001). 100 years of biology and culture. *Abstracts of the American Anthropological Association Meetings 2001*, 164. Plenary session talk.
- Worthen C.C., Flinn, M.V., Leone D.V., Quinlan, R.J., & England, B.G. (2001). Parasite load, growth, fluctuating asymmetry, and stress hormone profiles among children in a rural Caribbean village. *American Journal of Physical Anthropology Suppl.* 32, 167.
- Ward, C.V. & Flinn, M.V. (2001). How human intelligence evolved. *American Journal of Physical Anthropology Suppl.* 32, 159.
- Leone, D.V., Quinlan, R.J., Quinlan, M.B., Worthen, C.C., Flinn, M.V. & England, B.G. (2001). Duration of breastfeeding, parasite load, growth, fluctuating asymmetry, and cortisol profiles. *American Journal of Physical Anthropology Suppl.* 32, 97-98.

Other publications (abstracts, commentaries & reviews) cont.

- Wagner, J.D., Flinn, M.V., Gangestad, S.G., Thornhill, R., & England, B.G. (2001). Testosterone and cortisol response to competition within and between male coalitions. *American Journal of Physical Anthropology Suppl.* 32, 157-158.
- Gangestad, S.W., Thornhill, R., Quinlan, R.J., & Flinn, M.V. (2000). Men's fluctuating asymmetry, attractiveness, and reproduction in a rural Caribbean village. *Human Behavior and Evolution Society Meetings Conference Abstracts 2000*, 43.
- Flinn, M.V., Leone, D.V., & England, B.G. (1999). Fluctuating asymmetry, stress, and health among children in a Caribbean village. *American Journal of Physical Anthropology Suppl.* 27, 103-104.
- Flinn, M.V. (1997). Glucocorticoid stress response, family environment, immune function, and illness. *Abstracts of the Annual Meetings Society for Medical Anthropology 1997*, 23.
- Flinn, M.V. & England, B.G. (1997). Individual differences in endocrine and immune response to stress among children in a rural Caribbean village. *Abstracts of the American Anthropological Association Meetings 1997*.
- Decker, S.A., Flinn, M.V., & England, B.G. (1997). Social support, affluence, and stress among adult male Dominican horticulturalists. *Abstracts of the American Anthropological Association Meetings 1997*, 185.
- Flinn, M.V., Turner, M.T., & England, B.G. (1996). Stress, immune function, and health among children in a Caribbean village. *American Journal of Physical Anthropology Suppl.* 22, 105.
- Flinn, M.V. & England, B.G. (1996). Family environment, glucocorticoid stress response, and health among children in a rural Caribbean village. *Abstracts of the American Anthropological Association Meetings 1996*, 178.
- Flinn, M.V., Turner, M.T., & England, B.G. (1996). Family environment, stress response, and health among children in a Caribbean village. *Human Behavior and Evolution Society Meetings 8th Annual Conference Abstracts* 8, 47.
- Turner, M., Flinn, M.V. & England, B.G. (1995). Mother-infant glucocorticoid stress response in a Caribbean village. *American Journal of Physical Anthropology Suppl.* 20, 191.
- Flinn, M.V., Decker, S.D., Tedeschi, D., Turner, M.T., Quinlan, R.J., Baerwald, C., & England, B.G. (1995). Life history variation of male hormone profiles in a rural Caribbean village. *American Journal of Human Biology* 7, 122.
- Flinn, M.V., Quinlan, M., Quinlan, R.J., Turner, M.T., & England, B.G. (1995). Glucocorticoid stress response, immune function, and illness among children in a rural Caribbean village. *American Journal of Physical Anthropology Suppl.* 20, 89.
- Flinn, M.V. & England, B.G. (1994). Socioeconomic conditions affecting child glucocorticoid stress response. *American Journal of Physical Anthropology Suppl.* 18, 87-88.
- Decker, S.A., Flinn, M.V., & England, B.G. (1994). Interactions of social status with daily cortisol and testosterone in male Caribbean villagers. *American Journal of Physical Anthropology Suppl.* 18, 77-78.

Other publications (abstracts, commentaries & reviews) cont.

- Flinn, M.V. (1993). Black box mechanisms. *Behavioral & Brain Sciences* 16(2), 293.
- Flinn, M.V. (1993). Glucocorticoid response profiles of “at-risk” children in a Dominican village. *Proceedings of the Society for Research in Child Development* 1993: 43.
- Flinn, M.V. & England, B.G. (1993). Glucocorticoid stress response, immune function, and disease among children in a rural Caribbean village. *American Journal of Physical Anthropology Suppl.* 16, 87.
- Flinn, M.V., England, B.G. & Beer, T. (1992). Health condition and corticosteroid stress response among children. *American Journal of Physical Anthropology Suppl.* 14. 73.
- Flinn, M.V. & England, B.G. (1992). Daily variations in child glucocorticoid stress response. *Proceedings of the International Society of Psychoneuroendocrinology* XXIII: 97.
- Flinn, M.V. (1992). Evolution and function of the human stress response. Plenary talk, annual meetings of the Human Behavior and Evolution Society, Albuquerque, NM. *Proceedings of the Human Behavior and Evolution Society* (1992).
- review: Quale, G.R. (1992). Families in context. *Journal of Marriage & Family* 56, 234-235.
- Flinn, M.V. & England, B.G. (1991). Daily variations in stress in a rural Caribbean village as measured by radioimmunoassay of salivary cortisol. *American Journal of Physical Anthropology Suppl.* 12, 89.
- Flinn, M.V. & Durbrow, E. (1990). Factors associated with child stress as measured by RIA of cortisol levels in saliva. *American Journal of Physical Anthropology* 81, 222.
- Flinn, M.V. & Sattenspiel, L. (1990). Commentary on: Explaining biased sex ratios in human populations. *Current Anthropology* 31, 37-38.
- review: Wynne-Edwards, V.C. 1986. Evolution through group selection. *American Anthropologist* 89, 728-729.
- review: Hausfater, G. & Hrdy, S.B. 1984 (Eds.) Infanticide. *Anthropological Quarterly* 58(3), 130-32.
- review: Crawford, M. 1984 (Ed.) Current developments in anthropological genetics, Vol. 3: Black Caribs. *Quarterly Review of Biology* 60, 556-57.
- review: Dawkins R. 1982 The extended phenotype. *Ethology and Sociobiology* 5, 85-87.
- review: VanParijs, P. 1981 Evolutionary explanation in the social sciences. *Human Ecology* 10(3), 436-38.
- review: Montagu, A. 1980 (Ed.) Sociobiology examined. *American Journal of Sociology* 89 (2), 475-76.

Pending or planned research

Blomquist, G., Flinn, M.V., Taylor, J. (co-PIs). Genetics of metabolic syndrome in a Caribbean village. University of Missouri Research Board. \$50,000. 6/01/2017 – 6/01/2019.

Pending or planned research cont.

Abu Dalou, A., (PI); Flinn, M.V. (co-PI). "Childhood stress and health among Palestinian refugees in Jordan." 7/01/17 – 7/01/18. King Hussein Institute for Biotechnology and Cancer, JD (Jordanian Dinar) 50,000/year for three years. To be re-submitted 5/05/2017.

This project is a comparative study of psychological trauma, cortisol regulation, and health among children living in Palestinian refugee settlements and traditional rural communities.

Flinn, M.V. (PI) "Sensitive periods in the ontogeny of glucocorticoid stress response" 12/1/2017 - 12/31/2018 30% National Science Foundation (Biological and Cultural Anthropology programs) \$218,000. To be submitted 6/15/2017.

This project will continue a longitudinal study of child glucocorticoid stress response in a rural Dominican community. The objective is to better understand how the developmental timing of events in a child's early environment affect HPA stress response.

Flinn, M.V. (PI) "Endocrinology of grandparenting" 6/31/2017 - 6/31/2018 30% UM Research Board. \$19,972. To be submitted 2/1/2017.

This project will study the hormonal correlates of interaction between grandparents and grandchildren in a rural Dominican community. The objective is to better understand hormonal mechanisms for bonding between grandparents and grandchildren, and how grand-relationships affect child psychological and physical health.

Flinn, M.V. (PI), D. Ponzi (PI) & J. Bennesson (PI) "Child development of simple rules of cooperation" 12/1/2017 - 12/31/2018 10% Wenner-Gren. \$25,000. To be submitted 6/15/2017.

This project is a longitudinal study of how children develop understanding of rules of cooperation in Bwa Mawego, Dominica. The project includes assessment of social networks, social competency, hormonal profiles (DHEA, cortisol, and oxytocin) and cooperative behaviors.

Popular press (selected major pieces)

"Evolution of extraterrestrial intelligence" *Science* 360, Oct 2016

"20 Years of Biocultural Research in Dominica: The Bwa Mawego Child Stress Project" (M. V. Flinn, R.J. Quinlan, & D.V. Leone) *Anthropology News*, Dec 2007.

"Down in Dominica" *Mizzou Magic* Fall 2006.

"Verbal stressors lead to elevated stress levels, illness" (IDC) *Infectious Diseases in Children* November 2005, p. 36-37.

"Trouble in Paradise" (M. Small) *New Scientist* December 16, 2000, p. 34-38.

National Public Radio, Todd Mundt show, September 19, 2000

"Family Matters" (M. Small) *Discover* August, 2000, p. 66-71.

"Coping with Paradise" *Earthwatch* June 1999, p. 14-21.

"Dominica: The Cortisol Test" *The Sunday-Times (London)* 06 01 1997

Former graduate student advisees

Seamus Decker, Assistant Professor, University of Massachusetts

Eric Durbrow, Assistant Professor (former), Pennsylvania State University

David Leone, Assistant Professor, University of North Carolina, Greensboro
Colleen Nyberg, Assistant Professor, University of Massachusetts, Boston
Davide Ponzzi, Post-doctorate, University of Chicago
Robert Quinlan, Associate Professor, Washington State University

Presentations (recent major talks)

Invited speaker, Western Pennsylvania Family Center, September 23, 2016.
Invited speaker, Simon Fraser University, Vancouver, November 20, 2015.
Invited speaker, Wissenschaftskolleg, Berlin, Germany, April 2, 2014.
Invited keynote speaker, Evolutionary medicine conference, Arizona State University, Tempe, AZ, February 18, 2014.
Invited speaker, National Evolutionary Synthesis Center Catalysis Meeting. Durham, NC, November 3, 2013.
Invited speaker, Department of Anthropology, University of Utah, Salt Lake City, UT, January 16, 2013.
Invited Preconference commentator, Society for Research on Child Development, Seattle, WA, April 17, 2013.
Dean's fall term distinguished speaker, Brock University, St. Catharines, Ontario, Canada, October 29, 2012.
Invited speaker, Department of Psychology, Neuroscience & Behavior, McMaster University, Hamilton, Ontario, Canada, October 26, 2012.
Invited speaker, International Society for Developmental Psychology, New Orleans, LA, October 11, 2012.
Invited plenary speaker, Family Studies annual meetings, Washington DC, April 14, 2012.
Keynote speaker, Southwest Psychological Association, Oklahoma City, OK April 13, 2012.
Invited speaker, Center for Social Dynamics and Complexity, Arizona State U, Tempe AZ February 13, 2012
Invited speaker, Human Behavior and Evolution Society, Montpellier, France June 29, 2011.
Invited speaker, Society for Research on Child Development, Montreal, Canada April 8, 2011.
Arts & Sciences Dean's invited lecture in Social Sciences, Oklahoma State University, Stillwater, OK, Nov 12, 2010.
Invited workshop presenter, Coalitions and alliances (NSF sponsored), National Institute for Mathematical & Biological Synthesis, Knoxville, TN, November 6-7, 2010.
Invited speaker, Dedication ceremony, Center for the Study of the Family, (SRCF and SSCRF sponsored) University of Toronto, Toronto, Ontario. October 18-19, 2010.
Invited plenary speaker, Conference on evolutionary perspectives in human sciences, Kone Foundation, Helsinki & Turku, Finland, May 21-23, 2010.
Invited plenary speaker, Family Studies annual meetings, Washington DC, April 12, 2010.
Invited workshop presenter, Coalitions and alliances (NSF sponsored), National Institute for Mathematical & Biological Synthesis, Knoxville, TN, February 4-6, 2010.
Invited speaker, conference on Adolescent risk (School of Public Health & Evolution Institute sponsored), University of Arizona, Tucson, AZ, November 7-8, 2009.
Invited speaker, conference on Biosocial research contributions to understanding family processes and problems (NICHD sponsored), Pennsylvania State University, State College, PA, October 24-25, 2009.
Invited speaker, Dept of Anthropology, Indiana University, Bloomington, IN, May 8, 2009.
Invited speaker, Dept of Anthropology, University of California, Santa Barbara, CA, April 17, 2009.

Presentations (recent major talks) cont.

- Spring keynote lecturer, Public Health, University of Arizona, Tucson, AZ, April 15, 2009.
- Invited workshop presenter, Coalitions and alliances (NSF sponsored), NIMBios University of Tennessee, Knoxville, TN, April 4-6, 2009.
- Invited speaker, Tanner conference on The Evolution of Human Aggression, University of Utah, Salt Lake City, UT, February 25-26, 2009.
- Co-presenter (with Carol V. Ward), symposium on Evolution of the Human Female, AAAS annual meetings, Chicago, IL, February 13, 2009.
- Invited speaker, symposium on Middle Childhood, annual meetings of the American Anthropological Association, San Francisco, CA November 19, 2008.
- Invited speaker, conference on Stress Reactivity and the Development of Immunocompetence in Children (APA sponsored), UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ November 6-7, 2008.
- Invited speaker, conference on Evolutionary Perspectives on Warfare, Institute of Cognitive and Decision Sciences, University of Oregon, Eugene, OR, October 17, 2008.
- Chair and presenter, Hormones symposium, Human Behavior and Evolution Society annual meetings, Kyoto, Japan, June 7, 2008.
- Keynote speaker, European Human Behavior & Evolution society annual meetings, Montpellier, France, April 3, 2008.
- Co-chair and presenter, Plenary symposium, Human Biology Association annual meetings, Columbus, OH, April 9, 2008.
- Invited symposium speaker, Society for Research on Child Development annual meetings, Boston, MA, April 5, 2007.
- Distinguished Scientist Lecture, Family Systems, Washington, DC, November 11, 2005.
- Plenary symposium speaker, Human Biology Association, Milwaukee, WI, April 5, 2005.
- Plenary speaker, Biosocial Society meetings, London, U.K., May 7, 2005.
- Keynote speaker, Stress conference, University of Michigan. October 11, 2003
- Plenary session talk, 100 years of biology and culture, American Anthropological Association Meetings Washington, DC, December 3, 2001.
- Keynote speaker, conference on Stress and Children's Health, National Children's Hospital, Utrecht, Netherlands, March 5-9, 1999.

Research interests

I am a biomedical anthropologist. My current scientific interests include the disciplines of pediatrics, cultural anthropology, child development, and evolutionary human biology. My primary research questions involve four interrelated areas:

- (1) *Psychosocial stress* presents both an important medical problem and an evolutionary puzzle. Given the significant health costs associated with chronic physiological stress response, it is unclear why natural selection would have favored links between the psychological mechanisms that assess social challenges, and the neuroendocrine mechanisms that regulate stress physiology. My current research efforts in this area include an ongoing 28-year study of childhood stress, family relationships, and health in a rural Caribbean community by longitudinal monitoring of (a) hormone and immune function from saliva and urine samples, (b) ethnographic observation of child activities and social environment, and (c) medical histories, growth measures, and parasite exams.
- (2) *Family relationships* are a key component of human sociality. Extensive bi-parental care and multi-generational kin networks are distinctive human traits. My current interests involve

using cross-cultural, ethnographic, and physiological techniques to analyze universal and adaptive variations of family and kin relationships and effects on child development. Currently our research team in Dominica is examining changes in hormones – cortisol, testosterone, DHEA/S, oxytocin, and arginine vasopressin – that are associated with affiliative relationships and interactions among parents and offspring, grandparents and grandoffspring, siblings, mates, and coalition partners. We are interested in the physiological mechanisms that underpin the unusual importance in humans of extended kin networks, paternal care, mate bonding, and male bonding including respect for each other's mating relationships. Understanding how the hormonal mechanisms for affiliation function in naturalistic conditions may provide new insights into the evolution of human sociality.

- (3) The *human brain* is an evolutionary paradox. It is huge, metabolically expensive, developmentally complex, and enables unusual cognitive abilities such as language, empathy, foresight, consciousness, and creativity. I am interested in how these aspects of the human brain evolved, based on a runaway process of social selection – including human family relationships – and a dynamic cultural information pool.
- (4) The *ontogeny of cooperative and coalitionary* behaviors. We have been studying the friendship networks and the development of social competencies of children in the Dominica project for many years. In collaboration with Davide Ponzzi, we are currently developing new methods to investigate the cognitive and hormonal mechanisms for cooperative behaviors in the human child.