



Evolution and the Prevention of Violent Crime

PDF (Size: 142KB) PP. 393-404 DOI: 10.4236/psych.2011.24062

Author(s)

Jason Roach, Ken Pease

ABSTRACT

This paper suggests how violence prevention can be better informed by embracing an evolutionary approach to understanding and preventing violent crime. Here, ethical crime control through an evolutionary lens is considered and speculation is offered as to what an evolution-evidenced crime reduction programme might look like. The paper begins with an outline of the current landscape of crime prevention scholarship within criminology and presents some possible points of contact with actual or possible violence reduction practice, including child homicide and violence against women. The paper concludes with suggestions for an ethical research agenda for reducing violence, whereby it is hoped that an audience of open-minded criminologists and diverse students of evolution may lend a hand in increasing the sophistication of the criminological study of violence prevention.

KEYWORDS

Violence, Evolution, Child Homicide, Prevention

Cite this paper

Roach, J. & Pease, K. (2011). Evolution and the Prevention of Violent Crime. *Psychology*, 2, 393-404. doi: 10.4236/psych.2011.24062.

References

- [1] Adler, C., & Polk, K. (2001). *Child victims of homicide*. Cambridge: Cambridge University Press.
- [2] Allis, C. D., Jenuwein, T., & Reinberg, D. (2007). *Epigenetics*. New York, NY: Cold Spring Harbour Laboratory Press.
- [3] Baron-Cohen, S. (2011). *Zero degrees of empathy*. London: Allen Lane.
- [4] Barr, C. S., Newman, T. K., Becker, M. L., Parker, C. C., Champoux, M., Lesch, K. P., et al. (2003). The utility of the non-human primate model for studying gene by environmental interactions in behavioural research. *Genes, Brain, and Behaviour*, 2, 336-340. doi:10.1046/j.1601-1848.2003.00051.x
- [5] Bernet, W., Vnencak-Jones, C., Farahany, N., & Montgomery, S. A. (2007). Bad nature, bad nurture and testimony regarding MAOA and SLC6A4 genotyping at murder trials. *Journal of Forensic Psychiatry and Psychology*, 52, 1-9.
- [6] Berkowitz, L. (1989). Frustration-aggression hypothesis: Examination and reformulation. *Psychological Bulletin*, 106, 59-73. doi: 10.1037/0033-2909.106.1.59
- [7] Brantingham, P. J., & Faust, F. L. (1976). A conceptual model of crime prevention. *Crime and Delinquency*, 22, 130-146. doi:10.1177/001112877602200302
- [8] Brookman, F. (2000). Dying for control: Men, murder and sub-lethal violence in England and Wales. *British Criminology Conference Proceedings*, 3. URL (last checked 23 June 2010). <http://www.lboro.ac.uk/departments/ss/bsc/bccsp/vol03/brookman.html>
- [9] Brookman, F. (2005). *Understanding homicide*. London: Sage Publications Limited.

- [Open Special Issues](#)
- [Published Special Issues](#)
- [Special Issues Guideline](#)

[PSYCH Subscription](#)[Most popular papers in PSYCH](#)[About PSYCH News](#)[Frequently Asked Questions](#)[Recommend to Peers](#)[Recommend to Library](#)[Contact Us](#)

Downloads:	247,364
------------	---------

Visits:	543,612
---------	---------

[Sponsors >>](#)

- [10] Buss, D. M., & Shackelford, T. K. (1997). Human aggression in evolutionary psychological perspective. *Clinical Psychology Review*, 17, 605-619. doi: 10.1016/S0272-7358(97)00037-8
- [11] Buss, D. M. (2000). *The dangerous passion*. New York, NY: Free Press.
- [12] Buss, D. M. (2004). *Evolutionary psychology: The new science of the mind* (2nd ed.). Boston: Pearson.
- [13] Buss, D. M. (2005). *The murderer next door*. New York, NY: Penguin Press.
- [14] Buss, D. M., & Malamuth, N. M. (1996). *Sex, power, conflict*. New York, NY: Oxford University Press.
- [15] Campbell, A. (2002). *A mind of her own: The evolutionary psychology of women*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780198504986.001.0001
- [16] Campbell, A. (2009). Gender and crime. In A. Walsh and K. M. Beaver (Eds.), *Biosocial criminology: New directions in theory and research*. New York, NY: Routledge.
- [17] Campbell, J. (1992). If I can't have you, no one can: Power and control in homicide of female partners. In J. Radford and D. E. H. Russell (Eds.), *Femicide: The politics of woman killing*. Buckingham: Open University Press.
- [18] Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I., Taylor, A., & Poulton, R. (2002). Evidence that the cycle of violence in maltreated children depends on genotype. *Science*, 297, 851-854. doi: 10.1126/science.1072290
- [19] Cavalli-Sforza, L. J., & Feldman, M. W. (1981). *Cultural transmission and evolution: A quantitative approach*. Princeton, NJ: Princeton University Press.
- [20] Chagnon, N. A. (1983). *Yanomam?: The fierce people* (3rd ed.). New York, NY: Holt, Rinehart and Winston.
- [21] Clarke, R. V. (1992). *Situational crime prevention: Successful case studies*. New York, NY: Harrow & Heston.
- [22] Clarke, R. V. (1997). *Situational crime prevention: Successful case studies*. (2nd ed.). New York, NY: Harrow & Heston.
- [23] Clarke, R. V., & Mayhew, P. (1988). The British gas suicide story and its criminological implications. *Crime and Justice*, 10, 79-116. doi: 10.1086/449144
- [24] Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends. *American Sociological Review*, 44, 588-608. doi: 10.2307/2094589
- [25] Collins, W. A., Maccoby, E. E., Steinburg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist*, 55, 218-232. doi: 10.1037/0003-066X.55.2.218
- [26] Coomaraswamy, K. S., & Shepherd, J. P. (2003). Predictors and severity of injury in assaults with barglasses and bottles. *Injury prevention*, 9, 81-84. doi: 10.1136/ip.9.1.81
- [27] Coyne, J. A. (2009). *Why evolution is true*. Oxford: Oxford University Press.
- [28] Crawford, A. (1998). *Crime prevention and community safety: Politics, policies and practices*. Harlow: Longman
- [29] Creighton, S. J. (1989). *Child Abuse Trends in England and Wales 1983-1987*. London: NSPCC.
- [30] Daly, M., & Wilson, M. (1988). *Homicide*. Hawthorne, CA: Aldine de Gruyter.
- [31] Daly, M., & Wilson, M. (1998). *The truth about Cinderella: A Darwinian view of parental love*. London: Orion Publishing.
- [32] Dobash, R. E., & Dobash, R. P. (1979). *Violence against wives*. New York, NY: Free Press.
- [33] Dollard, J., Doob, L., Miller, N., Mowrer, O., & Sears, R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press. doi: 10.1037/10022-000
- [34] Dunbar, R. I. M. (1992). Neocortex size as a constraint on group size in primates. *Journal of Human Evolution*, 22, 469-493. doi: 10.1016/0047-2484(92)90081-J
- [35] Ekblom, P. (1997). *Gearing up against crime: A dynamic framework to help designers keep up with*

the adaptive criminal in a changing world. *International Journal of Risk, Security and Crime Prevention*, 2, 249-265.

- [36] Ekblom, P. (1999). Can we make crime prevention adaptive by learning from other evolutionary struggles? *Studies on Crime and Crime Prevention*, 8, 27-51.
- [37] Ekblom, P., & Sidebottom, A. (2007). What do you mean, "Is it secure?" Redesigning language to be fit for the task of assessing the security of domestic and personal electronic goods. *European Journal on Criminal Policy and Research*, 14, 61-87. doi:10.1007/s10610-007-9041-8
- [38] Farrington, D. P. (1988). Studying changes within individuals: The causes of offending. In M. Rutter (Ed.), *Studies of psychosocial risk: The power of longitudinal data*. Cambridge: Cambridge University Press.
- [39] Farrington, D. P. (2003). Developmental and life-course criminology. *Criminology*, 41, 201-235. doi:10.1111/j.1745-9125.2003.tb00987.x
- [40] Felson, M. (1994). *Crime and everyday life* (1st ed.). Thousand Oaks, CA: Pine Forge Press.
- [41] Felson, M. (2002). *Crime and everyday life* (3rd ed.). London: Pine Forge.
- [42] Felson, M. (2006). *Crime and nature*. London: Sage.
- [43] Foley, D., Eaves, L., Wormley, B., Silberg, J., Maes, H., Hewitt, J., Kuhn, J., & Riley, B. (2004). Childhood adversity, MAOA genotype, and risk for conduct disorder. *Archives of General Psychiatry*, 61, 738-744. doi:10.1001/archpsyc.61.7.738
- [44] Gao, Y., Raine, A., Venables, P. H., Dawson, M. E., & Mednick, S. A. (2010). Association of poor childhood fear conditioning and adult crime. *American Journal of Psychiatry*, 167, 156-160. doi:10.1176/appi.ajp.2009.09040499
- [45] Goetz, A. T., Shackelford, T. K., Starratt, V. G., & Mckibbin, W. F. (2008). Intimate partner violence. In J. D. Duntley and T. K. Shackelford (Eds.), *Evolutionary forensic psychology: Darwinian foundations of crime and law*. New York, NY: Oxford University Press.
- [46] Gibson, J. J. (1950). *The perception of the visual world*. Boston, MA: Houghton Mifflin.
- [47] Hall, P., & Innes, J. (2011). Violent and sexual crime. In J. Flatley, C. Kershaw, K. Smith, R. Chaplin and D. Moon, (Eds.), *Crime in England and Wales 2009/10: Findings from the British Crime Survey and police recorded crime* (3rd ed.). London: Home office.
- [48] Holmes, R. (2009). *The age of wonder*. London: Harper.
- [49] Gilling, D. (1997). *Crime prevention*. London: Routledge
- [50] Goldblatt, P., & Lewis, C. (Eds) (1998). *Reducing offending: An assessment of research evidence on ways of dealing with offending behaviour*. Home Office Research Study, 187. London: HMSO.
- [51] Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford: Stanford University Press.
- [52] Gottschall, J. (2008). *The rape of troy*. Cambridge: Cambridge University Press.
- [53] Grossman, D. (2009). *On killing* (rev ed.) New York: Little Brown.
- [54] Hawton, K., Townsend, E., Deeks, J., Appleby, L., Gunnell, D., Bennewith, O., & Cooper, J. (2001). Effects of legislation restricting pack sizes of paracetamol and salicylate on self-poisoning in the United Kingdom: Before and after study. *British Medical Journal*, 322, 1-7. doi:10.1136/bmj.322.7296.1203
- [55] Heils, A., Teufel, A., Petri, S., Stober, G., Riederer, P., Bengel, B., & Lesch, K. P. (1996). Allelic variation of human serotonin transporter gene expression. *Journal of Neurochemistry*, 6, 2621-2624.
- [56] Hinshaw, S. P. (2002). Intervention research, theoretical mechanisms, and causal processes related to externalizing behavior patterns. *Development and Psychopathology*, 14, 789-818. doi:10.1017/S0954579402004078
- [57] Hirschi, T., & Gottfredson, M. (1983). Age and the explanation of crime. *American Journal of Sociology*, 89, 552-584. doi:10.1086/227905
- [58] Innes, M. R. (2003). *Investigating murder: Detective work and the police response to criminal homicide*. Oxford: Oxford University Press.

- [59] Johnson, S., & Bowers, K. J. (2010). Permeability and burglary risk: Are cul-de-sacs safer? *Quantitative Journal of Criminology*, 26, 89-111. doi:10.1007/s10940-009-9084-8
- [60] Johnson, S. D., Summers, L., & Pease, K. (2009). Offender as forager? A direct test of the boost account of victimisation. *Journal of Quantitative Criminology*, 25, 181-200. doi:10.1007/s10940-008-9060-8
- [61] Jones, O. D. (2005). *Evolutionary psychology and the law*. In D. M. Buss (Ed.), *The handbook of evolutionary psychology*. New York, NY: Wiley
- [62] Junger, M., Feder, L., & Cote, S. M. (2007). Policy implications of present knowledge on the development and prevention of physical aggression. *European Journal on Criminal Policy and Research*, 13, 301-326. doi:10.1007/s10610-007-9052-5
- [63] Kendler, K. S., and Eaves, L. J. (1986). Models for the joint effect of genotype and environment on liability to psychiatric illness. *American Journal of Psychiatry*, 143, 273-297.
- [64] Keverne, E. B., & Curley, J. P. (2008). Epigenetics, brain evolution and behaviour. *Frontiers in Neuroendocrinology*, 29, 398-412. doi: 10.1016/j.yfrne.2008.03.001
- [65] Killias, M. (1993). International correlations between gun ownership and rates of homicide and suicide. *Canadian Medical Association Journal*, 148, 1721-1725.
- [66] Kim-Cohen, L., 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. doi:10.1038/sj.mp.4001851
- [67] Kramer, D. A. (2005). Nature, nurture and epigenetics. *American Association of Child and Adolescent Psychiatry News*, 24, 294-297.
- [68] Krug, E.G. et al. (2002). *World report on violence and health*. Geneva: WHO.
- [69] Lesch, K. P., Bengel, D., Heils, A., Sabol, S. Z., Greebderg, B. D., Petri, S. et al. (1996). Association of anxiety-related traits with a polymorphism in the serotonin transporter gene regulatory region. *Science*, 274, 1527-1531. doi:10.1126/science.274.5292.1527
- [70] Lester, D., & Clarke, R. V. (1989). Effects of the reduced toxicity of car exhaust on accidental deaths: A comparison of the United States and Great Britain. *Accident Analysis & Prevention*, 21, 191-196. doi:10.1016/0001-4575(89)90086-9
- [71] Lew, T. A., Morrow, E. H., & Rice, W. R. (2006). Standing genetic variance for female resistance to harm from males and its relationship to intralocus sexual conflict. *Evolution*, 60, 97-105.
- [72] Loader, I., & Sparks, R. (2010). *Public criminology*. London: Routledge.
- [73] Lorenz, K. (1966). *On aggression*. London: Methuen.
- [74] Lott, J. R. (2006). *More guns, less crime* (3rd ed.). Chicago, IL: University of Chicago Press.
- [75] Maguire, M., & Brookman, F. (2005). Violent and sexual crime. In N. Tilley (Ed.) *Handbook of crime prevention and community safety*. Cullompton: Willan.
- [76] Mednick, S. A., & Christiansen, K. O. (1977). *Biosocial bases of criminal behaviour*. New York, NY: Gardner Press.
- [77] Mesquida, C., & Wiener, N. (1996). Human collective aggression: A behavioural ecology perspective. *Ethology and sociobiology*, 17, 247-262. doi:10.1016/0162-3095(96)00035-0
- [78] Mesquida, C., & Wiener, N. (1999). Male age composition and severity of conflicts. *Politics and the life sciences*, 18, 181-189.
- [79] Milgram, S. (1977, 2010). *The individual in a social world: Essays and experiments* (3rd ed.). New York, NY: Pinter and Martin
- [80] Mischel, W. (1968). *Personality and assessment*. New York, NY: Wiley.
- [81] Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial-behavior a developmental taxonomy, *Psychological Review*, 100, 674-701. doi:10.1037/0033-295X.100.4.674
- [82] Moffitt, T. E. (1997). Adolescent-limited and life-course persistent offending: A complementary pair of

developmental theories. In T. Thornberry (Ed.), *Developmental theories of crime and delinquency*. Advances in criminological theory. New Brunswick, NJ: Transaction Books.

- [83] Moffitt, T. E. (2003). Life-course-persistent and adolescent-limited antisocial behavior. In B. B. Lahey et al. (Eds.), *Causes of conduct disorder and juvenile delinquency*. New York, NY: Guilford Press.
- [84] Moffitt, T. E., & Caspi, A. (2006). Evidence from behavioural genetics for environmental contributions to antisocial conduct. In P. O. H. Wikström and R. J. Sampson (Eds.), *The explanation of crime: Context mechanisms and development*. Cambridge: Cambridge University Press.
- [85] Norman, D. (1998). *The design of everyday things*. Boston, MA: MIT Press.
- [86] Nowak, M. (2011). *Super cooperators*. London: Canongate.
- [87] Olweus, D. (1979). Stability of aggressive reaction patterns in males: A review. *Psychological Bulletin*, 86, 852-875. doi:10.1037/0033-2909.86.4.852
- [88] Pease, K. (2005). Science in the service of crime reduction. In N. Tilley (Ed.), *Handbook of crime prevention and community safety*. Cullompton: Willan.
- [89] Pease, K. (2010). Crime Science. In S. Shoham (Ed.) *International handbook of penology and criminal justice*. London: Taylor and Francis.
- [90] Polk, K. (1994). *When men kill: Scenarios of masculine violence*. Cambridge: Cambridge University Press.
- [91] Rich, H. J. (1998). *The nurture assumption*. London: Bloomsbury.
- [92] Roach, J., & Pease, K. (in press). *Evolution and crime*. Cullompton: Willan
- [93] Roach, J., & Shepherd, A. (2010). *Thirty years of homicide in West Yorkshire 1979-2009. A Report Commissioned by the Homicide and Major Enquiry Team, West Yorkshire Police*. Huddersfield: University of Huddersfield.
- [94] Rutter, M. (2001). How can we know environment really matters? In F. Lamb-Parker, J. Hagen and R. Robinson (Eds.), *Developmental and contextual transition of children and families: Implications for research, policy, and practice*. New York, NY: Columbia University Press.
- [95] Rutter, M., Pickles, A., Murray, R., & Eaves, L. (2001). Testing hypotheses on specific environmental causal effects on behavior. *Psychological Bulletin*, 127, 291-324 doi:10.1037/0033-2909.127.3.291
- [96] Rutter, M., (2003a). Commentary: Causal processes leading to antisocial behavior. *Developmental Psychology*, 39, 372-378. doi:10.1037/0012-1649.39.2.372
- [97] Rutter, M. (2003b). Crucial paths from risk indicator to causal mechanism. In B. Lahey, T. E. Moffitt and A. Caspi (Eds.), *The causes of conduct disorder and serious juvenile delinquency*. New York, NY: Guilford Press.
- [98] Serbin, L. A., & Karp, J. (2003). Intergenerational studies of parenting and the transfer of risk from parent to child. *Current Directions in Psychological Science*, 12, 138-142. doi:10.1111/1467-8721.01249
- [99] Sherman, L. W, Gottfredson, D., Mackenzie, D., Eck, J., Reuter, P., & Bushway, S. (1998). *Preventing crime: What works, what doesn't, what's promising*. Washington, DC: National Institute of Justice.
- [100] Smith, B., & Stevens, R. (2002). Evolutionary psychology. In D. Miell, A. Phoenix and K. Thomas, (Eds.), *Mapping Psychology*, 1, Milton Keynes: Open University Press.
- [101] Smith, P. H., Moracco, K., & Butts, J. (1998). Partner homicide in context: A population-based perspective. *Homicide Studies*, 2/4, 400-421. doi:10.1177/1088767998002004004
- [102] Suomi, S. J. (1991). Up-tight and laid-back monkeys: Individual differences in the response to social challenges. In S. Brauth, W. Hall and R. Dooling (Eds.), *Plasticity of development*. Cambridge, MA: MIT Press
- [103] Suomi, S. J. (1995). Influence of Bowlby's attachment theory on research on nonhuman primate biobehavioural development. In S. Goldberg, R. Muir and J. Kerr (Eds.), *Attachment theory: Social, developmental, and clinical perspectives*. Hillsdale, NJ: Analytic Press