

PROPER AND DARK HEROES
AS DADS AND CADS
Alternative Mating Strategies in British Romantic Literature

Daniel J. Kruger
University of Michigan

Maryanne Fisher
York University

Ian Jobling
Buffalo, New York

Empirical tests described in this article support hypotheses derived from evolutionary theory on the perceptions of literary characters. The proper and dark heroes in British Romantic literature of the late eighteenth and early nineteenth centuries respectively represent long-term and short-term mating strategies. Recent studies indicate that for long-term relationships, women seek partners with the ability and willingness to sustain paternal investment in extended relationships. For short-term relationships, women choose partners whose features indicate high genetic quality. In hypothetical scenarios, females preferred proper heroes for long-term relationships. The shorter the relationship under consideration, the more likely women were to choose dark heroes as partners.

KEY WORDS: **Darwinian literary studies; Life history; Mating strategy; Sexual selection**

It is difficult to make progress in literary studies because, unlike scientists, literary scholars do not base their findings on theories that are subject to empirical tests. The imaginations of literary researchers are allowed to run

Received February 4, 2003; accepted May 22, 2003; revised version received June 15, 2003.

Address all correspondence to Daniel J. Kruger, Institute for Social Research, University of Michigan, P.O. Box 1248, Ann Arbor, Michigan 48106-1248. E-mail address: kruger@umich.edu

Copyright 2003 by Walter de Gruyter, Inc., New York
Human Nature, Vol. 14, No. 3, pp. 305–317.

1045-6767/03/\$1.00+.10

wild, and theories like deconstruction and Lacanian psychoanalysis are selected not because of their effectiveness in generating empirically valid hypotheses, but because people just happen to like them. Also, many humanists have an anti-scientific mythology that perpetuates this situation. This weakness in the field has drawn extensive criticism (e.g., Carroll 1995; Pinker 1997:521–565, 2002:400–420).

This paper attempts to further the project of Darwinian literary studies, which seeks to promote consilience, or integration, between literary studies and the sciences (Carroll 1995; Wilson 1998). We show here how literary studies can be grounded in both the ideas and methods of the sciences by providing an empirical test of a literary interpretation that is derived from evolutionary theory on human sexuality. Our project uses psychological research techniques to generate modern reactions to character types in late eighteenth and early nineteenth century British Romantic literature. We hope to encourage literary researchers to develop their theories of human cognition and behavior out of the best contemporary research on these subjects and to form partnerships with scientists to test their interpretations of literary texts empirically. We also hope to demonstrate to social and biological scientists that literature affords rich possibilities for testing and developing psychological theories.

Literary historians have drawn a distinction between two basic heroic types in the British Romantic period: the proper hero and the dark hero (Railo 1927; Thorslev 1962; Welsh 1992). The proper hero is law-abiding, compassionate, kind, and monogamous. The dark hero is dominant, rebellious, frequently a criminal, and often promiscuous. There is a close correspondence between the personality traits of proper and dark heroes and those of two personality types described by evolutionary scientists: cads and dads (Jobling 2002a, 2002b, 2002c). Cads are designed to maximize their reproductive success by having many short-term relationships without parental investment. Dads, on the other hand, maximize their reproductive success through long-term, monogamous relationships with women and parenting (Dawkins 1976). Women, on their part, possess psychological adaptations that cause them to be attracted to cads for short-term relationships and dads for long-term ones. Naturally occurring variances among cads and dads are the reason for the emergence of these Romantic character types (Jobling 2002a, 2002b, 2002c).

CAD AND DAD MATING STRATEGIES

Recent research on human sexuality suggests that humans evolved to pursue both short-term and long-term, or cad and dad, mating strategies. Considerable evidence suggests that, unlike most mammals, humans are

designed for long-term sexual relationships with substantial male parental investment in children. Human infants require considerable parental care, and children reared in father-absent households suffer much higher mortality rates than those reared in father-present households, especially in preindustrial societies (Hill and Hurtado 1996:434–439; Geary 1998:110–115). The sexual psychology of women also indicates that human sexuality has been shaped by long-term sexual relationships. A number of studies both in the United States and cross-culturally have shown that women regularly report being attracted to men who are socially respected, financially well-off, ambitious, industrious, dependable, emotionally stable, and romantic, all qualities that indicate the ability and willingness to sustain long-term, parentally investing relationships with women (Buss 1994:32–34).

However, aspects of both men's and women's sexuality also show that humans did not evolve exclusively to pursue long-term mating. Men consistently show a marked desire for sexual variety (Buss 1994:76–83). The fitness advantage of short-term sexual relationships to men is obvious: the number of potential offspring men can have increases linearly with the number of sexual partners. This advantage is the reason why short-term mating without parental investment is the strategy that most male mammals pursue (Trivers 1985:207–209). A successful womanizer in the environment in which humans evolved would have been able to sire a large number of children, many of whom would likely have survived despite higher mortality risks, especially in a resource-rich environment. The cad mating strategy has been shown to be successful in some circumstances, such as when there is a small effect of male parental investment on female reproductive success due to the local ecology (Barash and Lipton 2001; Draper and Harpending 1982, 1988; Gangestad and Simpson 2000; Lancaster and Kaplan 1992).

Why would cads have been attractive to ancestral women who would have had to provide on their own the immense parental investment necessary to bear and raise a child? The most common answer to this question is the "sexy son hypothesis." When a woman mates with a cad, the genes that made the father successful as a cad will be passed on to their son. This sexy son would increase his mother's fitness by giving her numerous grandchildren. Many theorists have hypothesized that women may have evolved in some circumstances to prefer cues in men that show high sexual success, or "good genes," to cues of potential paternal investment (Barash and Lipton 2001; Cashdan 1996; Gangestad and Simpson 2000). It is also possible that women with a parentally investing mate would have extra-pair copulations with a cad in order to benefit from his genetic contribution.

Draper, Harpending, and Belsky have argued that men evolved to specialize in one of the two mating strategies and have found that,

cross-culturally, cads and dads show distinct clusters of personality traits. They believe that cads and dads are different human morphs, just as workers and queens are different morphs of ants, and that whether a man becomes one or the other depends on an environmental trigger: the presence or absence of the father in the household where the son grows up. The sons of father-absent households will become cads, and those of father-present households will become dads (Draper and Harpending 1982, 1988; Draper and Belsky 1990).

One of the most reliable findings in the biological study of sexual behavior is that male sexual competitiveness is proportional to the degree of polygyny in a species (Alexander et al. 1979). The more females one male impregnates, the fewer the opportunities for other males. Consequently, the higher the degree of polygyny, the more intense the selection pressure on males to develop effective means of sexual competition. Consequently, Draper, Harpending, and Belsky reason that, because cads are more polygynous than dads, they ought to have developed to be more highly sexually competitive. Their review of the literature on the subject supports this view. Cross-culturally, men from father-absent households favor a sexually promiscuous mating strategy and are misogynistic and reluctant to engage in parental investment; they are also violent, aggressive, rebellious, high in risk-taking, and at high risk of incarceration. Boys from father-present households are more likely than boys from father-absent households to delay sexual experience, have positive attitudes towards and develop stable pair-bonds with women, have good relations with male peers, and accept authority.

Draper, Harpending, and Belsky's account of cad and dad mating strategies meshes well with other research. If women had evolved exclusively to pursue long-term mateships, their sexual attraction would be uniform in all contexts: they would always look for men who showed the ability and willingness to parentally invest in children. However, some studies show that women have *different* criteria for choosing long- and short-term mates, and the traits that they look for in short-term mates correspond quite well to the cad traits that Draper and Harpending have described. Kelly and Dunbar (2001) tested women's reactions to male displays of altruism (or kindness) and bravery and found that bravery was the only significant factor in women's sexual attraction for short-term relationships, in contrast to long-term relationships where altruism was a significant factor.

Buss (2000:163–164) has found that women desire men who prove themselves highly desirable to and sought after by other women for short-term relationships, but that these qualities are not nearly as important to them in long-term mates. These results support the hypothesis that, in choosing short-term mates, women are looking for risk-taking, sexually competitive males who will give them sexy sons. Dominance traits are also associated

with male promiscuity (Mazur, Halpern, and Udry 1994). Dominant people have an upright bearing, move with ease and freedom, gaze at people fixedly and unashamedly, are more likely to infringe on other people's personal space than submissives, and smile less often than submissives because smiling is frequently a gesture of appeasement (Maclay and Knipe 1972; Sadalla, Kenrick, and Vershure 1987).

To conclude, there is substantial evidence that there are two different male reproductive strategies and men may exhibit features of one or a combination of these strategies (Lancaster and Kaplan 1992). Dads attract women by showing their ability and willingness to parentally invest in children; these men are compassionate, kind, romantic, and industrious. Cads attract women by showing that they are highly competitive and will give women sons who show the same characteristics; these men are dominant, brave, aggressive, high in risk-taking, rebellious, and prone to be criminals.

THE PROPER AND THE DARK HERO

The proper and the dark (or Byronic or Romantic) hero are two of the major male character types of the British Romantic period (Thorslev 1962; Welsh 1992). The characteristics of the dark and proper heroes closely resemble those of cads and dads, respectively (Jobling 2002a, 2002b, 2002c). The dark hero occurs most prominently in the historical adventure novels and poems of Walter Scott and the narrative poems of Lord Byron, the two most popular writers of the British Romantic period.

The dark hero is typically a violent, rebellious outlaw. For example, George Staunton, of Scott's *The Heart of Mid-Lothian* (1969 [1818]), leads an uprising against a tyrannous police force in 1736 Edinburgh; Clement Cleveland of Scott's *The Pirate* (1900 [1821]) is, of course, a pirate. Dark heroes show evidence of dominance traits, such as a piercing and aggressive gaze, unsmiling countenance, freedom and ease of bodily movements, and a threatening self-confidence. As one would expect of men with these dominance traits, dark heroes are usually leaders: both Staunton and Cleveland are leaders of their outlaw bands.

Finally, dark heroes have a tendency to libertinage, rarely marry, and are almost always unhappy when they do. Clement Cleveland, for example, says, "I never saw a woman worth thinking twice about after the anchor was a-peak—on shore it is another thing; and I will laugh, sing, dance, and make love, if they like it, with twenty girls" (p. 142, ch. 12) and that pirates "enjoy the pleasures which chance throws in their way" (p. 254, ch. 22). George Staunton has two children out of wedlock. He ends up getting

married, but the marriage is a failure because it is incompatible with his nature.

Although common in Romantic narrative, the dark hero was always an eccentric figure. The standard male lead in the narratives of this period was what Alexander Welsh calls the "proper hero" and Peter L. Thorslev, the "hero of sensibility." This character resembles the traditional romance and folktale hero in that he has the happy ending of marriage to a beautiful heroine and a prosperous future. Like the traditional hero, the proper hero's motives are kind and altruistic (Jobling 2002a, 2002b, 2002c) and contrast with the egoism of villains and dark heroes. As John P. Farrell says of Scott's novels, the proper hero is "the good man" caught in a world of "egotistical fanaticisms" (1980:85). In many respects, however, the proper hero is strikingly different from the traditional hero: he is in general a weak and passive character who does not commit heroic actions in the course of the narrative. This type of hero "is distinguished not by daring exploits or superior intelligence, but quite simply by his capacities for feeling, mostly for the tender emotions—gentle and tearful love, nostalgia, and pervasive melancholy" (Thorslev 1980:35).

The proper hero is nonviolent (Welsh 1992:150) and low in dominance traits. Proper heroes do not possess the commanding and striking presence of the dark hero and are rarely the center of attention in a group. Instead, in the words of Scott and Byron's contemporary, William Hazlitt, these heroes "keep in the background and in a neutral posture, till they are absolutely forced to come forward, and it is then only with a very amiable reservation of modest scruples" (1930:252). Finally, the proper hero is entirely monogamous. Characteristically, he falls in love with the heroine at the beginning of the novel, but is shy about confessing his love to her. He is then separated from the heroine for the body of the novel, which often covers several years, but continues to think of her the whole time. And at the end, the two lovers are rejoined and are married. The proper hero is of a highly parentally investing disposition. As the narrator says of *Waverley*, "the real disposition of *Waverley* . . . seemed exclusively domestic" (Hazlitt 1930:248).

HYPOTHETICAL PREDICTIONS

Jobling's thesis that these two character types are representations of cads and dads leads to a testable prediction: women ought to find dark heroes more exciting as fantasy partners for brief sexual relationships, and proper heroes more acceptable for long-term relationships. We selected two prototypical proper heroes to represent dads and two prototypical dark heroes to represent cads. We predicted that females would prefer proper heroes as long-term mates rather than as short-term mates. We predicted

that females would prefer dark heroes as short-term mates rather than as long-term mates, and that the tendency to choose cads over dads would increase as the length of the hypothetical relationship decreases. Additionally, we expected participants to prefer dads as sons-in-law, as dads are more likely to provide parental investment during their offspring's development. In father-absent societies, children may be fostered out to mother's kin (Draper and Harpending 1988). In modern societies, this event would tax the resources of maternal grandparents.

METHOD

Participants

Ethnically diverse (70% indicated some ancestry other than Western European) female undergraduates ($N = 257$; mean age = 18.73, s.d. age = 0.99) at a large Midwestern-American university participated in the research to fulfill a course requirement.

Procedure

Participants read descriptive passages (200–300 words) of prototypical dads and cads assembled from British Romantic novels. *Waverley*, from *Waverley* (1814) by Walter Scott, and Valancourt, from *The Mysteries of Udolpho* (1794) by Ann Radcliffe, represented dads. George Staunton from *The Heart of Mid-Lothian* (1818) and Clement Cleveland from *The Pirate* (1821), both by Walter Scott, represented cads. Vocabulary keys defining several arcane words or phrases were included for each passage. In the passages, dads were described as domestic, happy, peaceable, bookish, moral, gentle, compassionate, frank, and shy. Cads were described as daring, arrogant, unconstrained, moody, passionate, rebellious, strong, defiant, humorous, confident, shrewd, vulgar, and slanderous, but also successful with attractive women. (The characters were not portrayed as being uncommonly handsome; this would introduce a new factor into the analysis that could confound the results.)

Participants completed items for two dad/cad pairs, *Waverley* with George Staunton and Valancourt with Clement Cleveland, counterbalanced for position and separated by 15 minutes of filler items. For each character, participants rated how much they thought they would like each as a person, how each would like the participant, how well participants and characters would get along, how well each matched their personality, and how likely participants would be to have short-term, long-term, and brief sexual relationships with each character. In a forced-choice section, participants indicated which character they would be more likely to go

with on a three-week road trip and a formal date, have sexual relations with, marry, and prefer to see engaged to their 25-year-old daughter. Paired samples *t*-tests compared participant ratings of dads and cads across paired passages; binomial probabilities indicated preferences in forced-choice items. We used the HC-Holm procedure (Toothaker 1993) to hold the family-wise error rate at .05; effect sizes of statistically significant comparisons are presented in Table 1. Cohen (1988) outlines small ($d = .20$), medium ($d = .50$), and large ($d = .80$) effect sizes for the behavioral sciences.

Results

For both sets of passages, participants thought they would like dads more than cads, thought that dads would like them more than cads would, and thought that dads better matched their personality than cads (Table 1). In the Waverley vs. George Staunton comparison, participants had a moderate preference for a long-term relationship with the dad, no preference for a short-term relationship, and a moderate preference for a sexual affair with the cad. In the Valancourt vs. Clement Cleveland comparison, participants had a strong preference for a long-term relationship with the dad, a moderate preference for a short-term relationship with the dad, and no preference for a sexual affair. In a forced choice between characters, participants preferred dads for a formal date, marriage, and as a son-in-law in both sets of passages (Table 2). However, participants preferred the cad for sexual relations in one comparison and had no clear preference in the

Table 1. Comparisons of Participants' Ratings of Dad and Cads

	<i>Favors</i>	<i>d</i>
WAVERLEY VS. GEORGE STAUNTON		
Would like Waverley more than George Staunton	Dad	.52
Thought Waverley would like them more	Dad	.41
Would get along better with Waverley	Dad	.68
Waverley better matched their personality	Dad	.46
Preferred a long-term relationship with Waverley	Dad	.49
No preference for a short-term relationship	Draw	n.s.
Preferred to hook-up sexually with George Staunton	Cad	.53
VALANCOURT VS. CLEMENT CLEVELAND		
Would like Valancourt more than Cleveland	Dad	.81
Thought Valancourt would like them more	Dad	.56
Would get along better with Valancourt	Dad	.76
Valancourt better matched their personality	Dad	.70
Preferred a long-term relationship with Valancourt	Dad	.94
Preferred a short-term relationship with Valancourt	Dad	.43
No preference for sexual relations	Draw	n.s.

Table 2. Participants' Choices between Dads and Cads

	% Dad	% Cad	Favors
WAVERLEY VS. GEORGE STAUNTON			
Three-week road trip to California	.60	.40	Dad
Formal date	.68	.32	Dad
Sexual relations	.40	.60	Cad
Marriage	.81	.19	Dad
Son-in-law	.87	.13	Dad
VALANCOURT VS. CLEMENT CLEVELAND			
Three-week road trip to California	.54	.46	Draw
Formal date	.73	.27	Dad
Sexual relations	.56	.44	Draw
Marriage	.83	.17	Dad
Son-in-law	.91	.09	Dad

other. Participants preferred the dad for a three-week road trip in one comparison and had no clear preference in the other.

CONCLUSION

The results of this experiment support our hypotheses. Women preferred proper hero "dads" for long-term relationships. However, the shorter the relationship in question, the more likely women were to choose dark hero "cads." The strongest preference was for whom participants would prefer as a son-in-law; they overwhelmingly chose the dad. It is striking that 60% of women would prefer to have sex with George Staunton, a cad, but only 13% would prefer to see him engaged to their 25-year-old daughter (44% and 9%, respectively, for Clement Cleveland). A cad would be less likely to provide support for offspring, and a daughter may turn to the maternal family for assistance, which may adversely impact the grandmother's overall reproductive success.

Apparently some characters were more desirable than others, regardless of their perceived mating strategy. This difference in preference resulted in stronger preferences across relationship types for Valancourt vs. Clement Cleveland than for Waverley vs. George Staunton. Both sets of comparisons showed the predicted shift in preferences towards the cad as the length of relationship decreased (as indicated by effect sizes). Because of the general attractiveness difference, Clement Cleveland was only as attractive as Valancourt for sexual relations, rather than more attractive as predicted. Differences in writing styles across authors could have contributed to this effect. A general difference in the relative attractiveness of characters com-

bined with the predicted effect of male mating strategy by relationship duration is the most parsimonious explanation for our findings.

The implications for the current study are twofold. First, the dad versus cad distinction is intuitive to women, and when provided with only a brief character sketch, women seem able to make informed mating decisions. This finding supports previous research that women may prefer a cad's "sexy-son" genotype for short-term relationships but still require paternal care and resources that a dad has to offer in a long-term relationship. Second, the distinction is intuitive enough that women are able to determine which type of male they would prefer to see married to their imagined daughter. The women in this study were similar in age to their 25-year-old imagined daughter, and yet they were able to make the distinction between self-preference and preferred selection for a daughter.

Some researchers or literary scholars may claim that our results reflect stereotypes deeply rooted in patriarchal Western family systems. We consider this unlikely because anthropological research finds dad and cad morphs with distinct clusters of personality traits cross-culturally (Draper and Belsky 1990). However, it would be worthwhile to replicate this experiment in a society where male parental investment has little effect on reproductive success, such as the matrilineal belt in Southern Africa (see Draper 1989). Women in these societies may be able to distinguish cad and dad types, but they may have a stronger preference for relationships with cads because of the relative degrees of beneficial effects in their local environment. It may also be productive to examine the dad versus cad preferences with women who have accrued enough resources that they do not have to rely on male partners for financial support, although it has been shown that women in postindustrial societies who hold positions of high status and economic power actually increase their preference for high status men with extensive resources (Townsend 1989; Wiederman and Allgeier 1992). This pattern is also consistent in societies where women have more economic resources than men (Ardener 1960).

This project contributes to Darwinian literary criticism, an emerging theoretical approach that promises to promote consilience among the sciences and the humanities. Evolutionary theory is the most powerful framework in the life sciences, is growing in prevalence in the social sciences, and could also provide a great theoretical advancement for the humanities. Although most Darwinian literary criticism merely uses evolutionary theory as a basis for standard qualitative literary interpretations, this project goes further in that it subjects a literary interpretation to the empirical testing typical of the sciences. Other areas in the study of evolution and behavior, such as inter-group warfare, interpersonal politics, mate selection, and kin selection, are well represented in works of fiction and could be studied in similar experimental studies.

Daniel J. Kruger earned his Ph.D. in social psychology at Loyola University Chicago. He is currently a research fellow at the Institute for Social Research at the University of Michigan. His evolutionary research interests include altruism, cooperation, competition, risk, life history, mortality patterns, and applications for social and ecological sustainability.

Maryanne Fisher is a Ph.D. candidate in the Department of Psychology at York University in Toronto, Canada. Her dissertation research focuses on the evolutionary underpinnings of female intrasexual competition for the purposes of female mate selection.

Ian Jobling received his Ph.D. in comparative literature from SUNY Buffalo in September 2002. His dissertation discusses the figures of the proper and dark heroes in the works of Scott and Byron from an evolutionary perspective.

REFERENCES

- Alexander, Richard, John L. Hoogland, Richard D. Howard, Katharine M. Noonan, and Paul W. Sherman
1979 Sexual Dimorphisms and Breeding Systems in Pinnipeds, Ungulates, Primates, and Humans. In *Evolutionary Biology and Human Social Behavior: An Anthropological Perspective*, Napoleon Chagnon and William Irons, eds. Pp. 402–435. North Scituate, Massachusetts: Duxbury.
- Ardener, Edwin
1960 *Plantation and Village in the Cameroons*. London: Oxford University Press.
- Barash, David P., and Judith Eve Lipton
2001 *The Myth of Monogamy: Fidelity and Infidelity in Animals and People*. New York: Freeman.
- Buss, David M.
1994 *The Evolution of Desire: Strategies of Human Mating*. New York: Basic Books.
2000 *The Dangerous Passion: Why Jealousy Is as Necessary as Love and Sex*. New York: Free Press.
- Carroll, Joseph.
1995 *Evolution and Literary Theory*. Columbia: University of Missouri Press.
- Cashdan, Elizabeth
1996 Women's Mating Strategies. *Evolutionary Anthropology* 5:134–143.
- Cohen, Jacob
1988 *Statistical Power Analysis for the Behavioral Sciences*, second ed. New York: Academic Press.
- Dawkins, Richard
1976 *The Selfish Gene*. Oxford: Oxford University Press.
- Draper, Patricia
1989 African Marriage Systems: Perspectives from Evolutionary Ecology. *Ethology and Sociobiology* 10:145–169.

Draper, Patricia, and Jay Belsky

1990 Personality Development in Evolutionary Perspective. *Journal of Personality* 58:141–161.

Draper, Patricia, and Henry Harpending

1982 Father Absence and Reproductive Strategy: An Evolutionary Perspective. *Journal of Anthropological Research* 38:252–273.

1988 A Sociobiological Perspective on the Development of Human Reproductive Strategies. In *Sociobiological Perspectives on Human Development*, Kevin B. MacDonald, ed. Pp. 340–372. New York: Springer.

Farrell, John P.

1980 *Revolution as Tragedy: The Dilemma of the Moderate from Scott to Arnold*. Ithaca, New York: Cornell University Press.

Gangestad, Steven W., and Jeffrey A. Simpson

2000 The Evolution of Human Mating: Trade-offs and Strategic Pluralism. *Brain and Behavioral Sciences* 23:573–644.

Geary, David

1998 *Male, Female: The Evolution of Human Sex Differences*. Washington D.C.: American Psychological Association.

Hazlitt, William

1930 Why the Heroes of Romances Are Insipid. In *The Complete Works of William Hazlitt*, Vol. 17. P. P. Howe, ed. Pp. 246–254. London: Dent.

Hill, Kim, and A. Magdalena Hurtado

1996 *Ache Life History: The Ecology and Demography of a Foraging People*. Hawthorne, New York: Aldine de Gruyter.

Jobling, Ian

2002a Byron as Cad. *Philosophy and Literature* 26:296–311.

2002b Testosterone and Romanticism. Submitted for publication in *The Well-springs of the Arts: Biology, Chaos and Popular Culture*, Brett Cooke and Frederick Turner, eds.

2002c *The Emergence of the Dark Hero in Scott and Byron: A Darwinian Perspective*. Ph.D. Thesis, Comparative Literature Department, SUNY Buffalo.

Kelly, Susan, and Robin I. M. Dunbar

2001 "Who Dares, Wins": Heroism versus Altruism in Women's Mate Choice. *Human Nature* 12:89–105.

Lancaster, Jane B., and Hillard Kaplan

1992 Human Mating and Family Formation Strategies: The Effects of Variability Among Males in Quality and the Allocation of Mating Effort and Parental Investment. In *Topics in Primatology, Volume 1: Human Origins*. Toshisada Nishida, ed. Pp. 21–33. New York: Springer.

Maclay, George, and Humphry Knipe

1972 *The Dominant Man: The Pecking Order in Human Society*. New York: Delacorte.

Mazur, Allan, Carolyn Halpern, and J. Richard Udry

1994 Dominant Looking Male Teenagers Copulate Earlier. *Ethology and Sociobiology* 15:87–94.

Pinker, Steven

1997 *How the Mind Works*. New York: Norton.

Heroic Dads and Cads

317

- 2002 *The Blank Slate: The Modern Denial of Human Nature*. New York: Viking.
- Radcliffe, Ann
1998 *The Mysteries of Udolpho*. [Originally published in 1794]. Oxford: Oxford University Press.
- Railo, Eino
1927 *The Haunted Castle: A Study of the Elements of English Romanticism*. London: Routledge, and New York: Dutton.
- Sadalla, Edward K., Douglas T. Kenrick, and Beth Vershure
1987 Dominance and Heterosexual Attraction. *Journal of Personality and Social Psychology* 52:730–738.
- Scott, Sir Walter
1900 *The Pirate*. [Originally published in 1822]. New York: Funk and Wagnalls.
1969 *The Heart of Mid-Lothian*. [Originally published in 1818]. New York: Holt.
1986 *Waverley*. [Originally published in 1814]. Oxford: Oxford University Press.
- Thorslev, Peter L., Jr.
1962 *The Byronic Hero: Types and Prototypes*. Minneapolis: University of Minnesota Press.
- Toothaker, Larry E.
1993 *Multiple Comparison Procedures*. Newbury Park, California: Sage.
- Townsend, John M.
1989 Mate Selection Criteria: A Pilot Study. *Ethology and Sociobiology* 10:173–206.
- Trivers, Robert
1985 *Social Evolution*. Menlo Park, California: Benjamin Cummings.
- Welsh, Alexander
1992 *The Hero of the Waverley Novels, with New Essays on Scott*. Princeton, New Jersey: Princeton University Press.
- Wiederman, Michael W., and Elizabeth R. Allgeier
1992 Gender Differences in Mate Selection Criteria: Sociobiological or Socio-economic Explanation? *Ethology and Sociobiology* 13:115–124.
- Wilson, Edward O.
1998 *Consilience: The Unity of Knowledge*. New York: Random House.

