Events interpreted through the models of other people built by your ToM usually turn out to be the most satisfactory ones for occasioning emotions.

Emotions cannot be divided strictly into positive and negative, because all emotions must have a fast-paying reward component in order to have their characteristic vividness. Some emotions are usually aversive because initial attention to them leads to longer-term inhibition of reward, but even fear and grief can be cultivated in ways that make them pleasurable, for instance, in horror movies and tear-jerkers. Anger is often called negative, but it shares many psychometric and neurophysiological properties with the more obviously positive emotions (Lerner et al., in press). I agree with Nell that cruelty need not involve anger (sect. 3.4), but I have argued that, like anger, it often becomes preferred despite its spoiling effect on other rewards because it repairs a felt vulnerability (Ainslie 2001, pp. 183–86). As with anger, there are people who cultivate cruelty habitually, presumably in default of richer sources of reward, but occasional cruelty seems to be common to everyone. It is the commonplace examples that best differentiate negative empathy from Nell's examples of predation: the pleasures of seeing the boor get his comeuppance, the driver who cut us off stopped by the police, and the pretensions of the poseur punctured, as well as less respectable examples like *schadenfreude* and our minor persecution of people whom we hope we do not resemble.

What sometimes impels us toward cruelty? Because sympathy is a mental response quickly rewarded by emotion, it is hard to bring under voluntary control. But there are people with traits that we fear in ourselves or who might exploit such traits, sympathy with whom might let them weaken us or even enchant us. In the absence of more direct controls, cruelty toward these people might be the handiest way to reduce our sense of potential seduction. That is, sympathy with the thief or heretic, with someone who has a sexual taste we are afraid we might develop, with a painfully naïve younger sibling who has traits we have barely overcome, with the rejecting lover we can't get over or the needy lover who threatens to become dependent, with any object of envy, even with someone whom we are conscious of having wronged – sympathy with any of these people might threaten to weaken us. A solution that hedonically pays for itself in the short run is to attack positive empathy with negative empathy, "set affection against affection and master one by another: even as we used to hunt beast with beast" (Francis Bacon, quoted by Hirschman 1977, p. 22). The capacity to do this undoubtedly comes from a more elementary process, perhaps the sheer arousal occasioned vicariously by anyone else's strong feeling – as in the fascination of a fight or car wreck, perhaps by the inherited preparedness for predation that Nell suggests. However, because of its tendency to spoil other sources of reward, it is apt to be cultivated only by people with a need to suppress their sympathy.

NOTES

The commentator is employed by a government agency and, as such, this commentary is considered a work of the U.S. government and not subject to copyright within the United States.

1. This was not just Euripides' imagination. I professionally encountered the case of a man who, when his wife served him with divorce papers, killed their children and himself, "to give her something to think about."

A murky portrait of human cruelty

Albert Bandura

Department of Psychology, Stanford University, Stanford, CA 94305-2130.
Bandura@psych.stanford.edu

Abstract: In this commentary, I review diverse lines of research conducted at both the macrosocial and microbehavioral level that dispute the view that cruelty is inherently gratifying. Expressions of pain and suffering typically inhibit rather than reinforce cruel conduct in humans. With regard to functional value, cruelty has diverse personal and social effects, not just the alluring benefits attributed to it.

In the target article, Nell brings an unusually broad perspective to bear on the possible origins of human cruelty. He reports that, despite the cultural evolution over the many millennia, human cruelty is still overwhelmingly present in the contemporary world. The cited examples of contemporary cruelty highlight the need for further specification of the defining criteria for what belongs in this category. Boxing may be construed as an attenuated form of cruelty, but why does motorcycle racing qualify as a vestige of the pain-blood-death complex? If psychic pain is a modern proxy of physical slaughter, does cruelty essentially become a boundless category?

There is a difference between behavior motivated and reinforced by conditioned pain-based gratifications and by its functional value. For example, motorcycle racing can bring monetary prizes, social status, and a sense of self-pride for a race well run. But what do these rewarding benefits have to do with cruelty and pain gratification? Empirical evidence indicates that cruel behavior can be more readily modified by varying its functional value than by relying on inherent affective gratifications of pain cues (Bandura 1973).

The cited support in the target article for the upper stages of the theory of human cruelty, which are amenable to empirical test, is largely in terms of biblical quotations, anecdotes, descriptions of ancient Greek practices, medieval carnivals, and arena spectacles in the ancient Roman era. Except for passing comments, surprisingly little attention is devoted to the third stage of cruelty. This stage requires the most detailed theoretical specification because the link from gorging excitedly on prey in the pain-blood-death complex to the exercise of social power is the most enigmatic.

The support for the sexualization of cruelty at the hunter stage is essentially metaphoric and anecdotal. As evidence for the fusion of sex and aggression, Nell reports that !Kung hunters use the penis as the metaphor for their hunting bow. He refers to a hunter who claims that thoughts about the kill produce the best sex, and a Vietnam veteran who found killing to be erotic. No evidence is presented, however, on whether these experiences are anomalous or normative ones.

In commenting on the "beauty of war," Nell cites the example of a military pilot mesmerized by the beauty of surface-to-air missiles. One can find support for almost any view by careful selection of cases. The vast numbers of soldiers who experience the hell of war and suffer posttraumatic stress disorders receive no mention. The infliction of death and destruction remotely by satellite and laser-guided missiles actually creates problems for Nell's theory. People behave more injuriously when they do not see and hear the pain and suffering their acts cause. Faceless hardware wars heighten destructive conduct by eliminating the restraining effect of human suffering.

Findings of sexual arousal at depictions of rape, as measured by a penis transducer, further dispute that cruelty is inherently erotic. Rapists are sexually aroused by depictions of pain and suffering of a rape victim, whereas non-rapists are aroused by consensual sex but are turned off by sexual cruelty (Abel et al. 1977). Verification by selective examples of cruelty elevates atypical reactivity to universal proclivity.

At the macrosocial level, Nell greatly exaggerates the prevalence of human cruelty. There exist wide intercultural differences representing both warring and pacific societies with large intracultural variations and even rapid transformation of warring societies into peaceful ones (Alland 1972; Bandura 1973; Gardner & Heider 1969; Levy 1969; Sanday 1981). The Swiss used to be the main suppliers of mercenary fighters in Europe. As they transformed into a pacific society, their militaristic vestige is evident only in the plumage of the Vatican guards.

For ages, the Vikings plundered other nations. After a prolonged war with Russia that exhausted Sweden's resources, the populous rose up and collectively forced a constitutional change that prohibited kings from starting wars (Moerk 1995). This political act promptly transformed a fighting society into a peaceable one.

According to Nell, cruelty is "strongly male-gendered." This, too, is an exaggeration. Most males do not go around mugging people, and a good number of females are child and spouse abusers. Meta-analyses reveal that the gender difference is much smaller than commonly believed and further diminishes with age, under conditions of provocation, and in the presence of aggressive cues. (Bettencourt & Kernahan 1997; Bettencourt & Miller 1996; Hyde 1984). The theoretical challenge is to explain the substantial diversity within gender groups, which far exceeds the difference between them.

The cultural evolution of social roles, norms, and sanctions has long stripped barbaric cruelty of social and reproductive benefits. This evolutionary social transformation in the coevolution process requires theoretical specification. Attributing the shift toward more humane conduct to the development of "walls of shame" does not provide much theoretical guidance for deeper inquiry.

At the microanalytic level, the findings of experiments in which the intensity of victims' suffering and pain are systematically varied show that expressions of pain typically inhibit rather than reinforce aggressive conduct (Baron 1971a; 1971c; Geen 1970; Milgram 1969/1974).

Nell refers to the large audiences for violent entertainment as further evidence that people seek gratification from watching cruelty inflicted on others. In Nell's view, the rewards of cruelty explain the attraction to media violence. However, the widespread belief that violence is a draw is disputed by empirical evidence. Television programs that trade on violence rarely appear in the upper ranks of popularity. As one television executive explained, "There is one maxim that is always true. The network with the most comedy shows is the dominant network." Diener and DeFour (1978) tested the relation between level of program violence and its popularity as measured by the Nielson index of viewership. Program violence was unrelated to popularity, $r = 0.05$. Uncut versions of violent programs are not liked any more than the same programs with most of the gratuitous violence deleted.

Nell mentions the infliction of severe pain on oneself as a case of major puzzlement to philosophers and psychologists alike. He reasons that as both aggression and sexual activity activate the brain's reward system, the underlining motivation for self-infliction of pain is the fusion of sex and aggression. Empirical research has identified some of the conditions governing this perplexing behavior. For example, self-inflicted pain serves a self-protective function if it averts more painful treatment by others (Bandura 1986; Stone & Hokanson 1969). Under these conditions, self-punitive behavior is adopted and maintained because it is the lesser of two evils. If preventing the external painful threat requires ever increasing intensities of self-punishment, it can escalate to the level of the avoided threat and even be performed persistently, through lack of reality testing, after the external threat no longer exists (Sandler & Quagliano 1964). To observers who witness the seemingly senseless self-inflicted pain, without knowing its functional origin and supporting expectations, the behavior appears deranged or driven by some obscure masochistic pleasure.

A substantial body of research demonstrates that large-scale inhumanities are heavily rooted in ideology (Bandura 1999; Haritos-Fatouros 2003; Reich 1990; Zimbardo 2004). Extensive training and a multitude of social structural influences are needed to produce cruel perpetrators. A good part of this socialization for cruelty is designed to disengage moral self-sanctions from inhumane conduct (Bandura 1999). Through selective moral disengagement, people who behave compassionately in other areas of their lives can perpetrate ruthless inhumanities on disfavored groups.

Cruelty as by-product of ritualisation of intraspecific aggression in cultural evolution

Ralf-Peter Behrendt

MRC Psychiatry, The Retreat Hospital, York, YO10 5BN, United Kingdom.
rp.behrendt@btinternet.com

Abstract: There are few commonalities between intraspecific aggression and predation and few convincing arguments for the conceptualisation of blood and pain as rewards for predation. Not cruelty, but ritualised intraspecific aggression is the predominant mechanism of accretion of social power and this, not cruelty, is what bestows reproductive advantages. Enjoyment of media cruelty is not reinforced by "emotional circuits" adapted to predation, but represents transient relief from culturally determined inhibition of aggression.

Although in predation unspeakable suffering is inflicted, this does not mean that the prey's suffering is enjoyed by the predator. McDougall (1924), for whom instincts were central to behaviour, argued comprehensively against hedonistic theories of behaviour. The "prey's terror and struggles to escape" (target article, sect. 1.1.1), acting as an incentive stimulus, may certainly lead to greater arousal and increase the predators' determination to kill, but "pain" and "blood" are unlikely to represent rewards for the sake of which the animal kills, not least because they do not arrest the striving of the animal. "[H]unters may inflict pain on the prey beyond that which is instrumentally necessary" (sect. 1.1.3, para. 2) because predation is an intrinsic instinctual drive that – once set into motion and energised – has to run its course (according to drive theory), as opposed to it being something done for the sake of enjoying a reward (hedonism) or instrumentally to achieve a certain end (teleology).

Dopaminergic transmission from the ventral tegmental area to the nucleus accumbens is activated not just by stimuli related to predation but a range of motivationally meaningful and salient stimuli that require behavioural reorientation and sustained effort (Horvitz 2000; Parkinson et al. 2000). Dopaminergic activation invigorates incentive motivation and drives appetitive approach but is unrelated to the experience of reward itself (Berridge & Robinson 1998; Horvitz 2000; Ikemoto & Panksepp 1999). Its occurrence during predation does therefore not indicate that "predation is a powerfully rewarding experience even before satiation occurs" (sect. 3.4.5, para. 1).

The hunter is in a "ritually heightened state" during the night after the kill and elaborates in detail on his experience in the presence of others – not necessarily because of his "high arousal at the time of the event" (sect. 4.3) but in accordance with his enjoying the admiration of others (pride) and his potential for rise in the group's ranking order. If there is *enjoyment* in hunting that is not socially mediated, then one should consider the possibility that it represents the sense of mastery arising from the successful solution of a challenging problem rather than "blood lust." Thus, the motivation for hunting may not at all include enjoyment of cruelty or a desire to inflict suffering.

Little justification is given for the notion that predation derives from intraspecific resource competition, or competitive aggression. These behaviours are elicited by different sets of stimuli, are accompanied by different affective states ("quiet-biting predation" vs. "aggressive rage" [sect. 1.1.3]) and find their resolution in the enactment of different states of affairs. Intraspecific aggression can indeed be "marked by intense excitement that appears indistinguishable from that during predation" (sect. 3.3) but – in the animals' natural habitat – it does not lead to bloodshed or death in most cases (Lorenz 1963/2002). Its evolutionary purpose is to effect a distribution of territory and access to resources among individuals of the same species that is advantageous for survival of the species as a whole (Lorenz 1963/2002). In higher vertebrates, intraspecific aggression regulates rank order in groups and expresses itself in ritualised ways in a wide range of social behaviours (Lorenz 1963/2002).

human cruelty, why should we think that this causal influence is the *main causal factor*? Why is it not just one factor among others?

2. I am unhappy with Nell's *atomism* about the phenomena of cruelty. The worry applies equally to human and animal cruelty, but we can make the point most vividly for human cruelty. The point is one that Nietzsche makes (Nietzsche 1886/1973, sect. 259 and elsewhere). Nietzsche would ask: To what extent is human cruelty a necessary part of a syndrome in which other apparently different phenomena are necessarily involved? Nietzsche thought that a world without human cruelty would also be a world without many things that we do or should value. In particular, he thought that the barbarism of human cruelty is holistically intertwined with many of the highest achievements of "Western high culture." To simplify, Nietzsche would have said: No cruelty, no creative genius. For Nietzsche, the urge to human cruelty is irretrievably locked together with many admirable things in human life; creative and destructive urges are necessarily linked so that one cannot have one without the other. (Freud's later view was different because he separated creative and destructive urges, and he thought that one or the other was usually dominant [Freud 1930/1994]; for Nietzsche, by contrast, the two urges are necessarily tied together.) So my second question to Nell is: Why the atomism?

3. Although the phenomenon (or phenomena) of human cruelty may have animal origins, it is overlaid and transformed by cultural and ideological meaning; so it is not clear how far we are entitled to think of animal and human cruelty as instances of the same phenomena. This worry is partly, but not wholly, a pedantic one about what we are to mean by the word "cruelty." Let us start there, however. Cruelty is surely not merely "the deliberate infliction of physical or psychological pain on a living creature" (sect. 1). A doctor might deliberately inflict physical pain on a patient in the course of an operation, and a therapist might inflict psychological pain in the course of therapy that is intended to help a patient. Doctors or therapists might even take delight in causing pain if they think that it means that the cure is working. However, the doctor or therapist does not pursue or take pleasure in pain for its own sake; rather, the pain is thought to be a by-product or necessary means to what they do want for its own sake. Nell seems to recognize this, but only when we are already quite a long way into the target article; and he simply puts such cases to one side (sect. 2). But it is unsatisfactory simply to exclude these kinds of cases by fiat without modifying the definition deployed elsewhere. One cannot carry on working with the unsatisfactory definition, which does not fit the human phenomena that we call *cruel*. This matters because Nell needs a notion of cruelty that applies to both human beings and animals and which will allow him to draw conclusions about human cruelty from evidence about animals. I am not saying that this cannot be done, only that caution is in order – great caution. A proper conceptualization of human cruelty is essential to drawing any such conclusion. So, my third question for Nell is: What definitions of cruelty does he propose that we operate with?

4. I am not denying that it is possible, and perhaps plausible, that our animal natures are part of the explanation of human cruelty. But there is an enormous danger that the social or religious significance of human cruelty, in the *minds* of those who perpetrate it and suffer it, will be overlooked or underestimated. It is not clear how much we can learn from evolutionary theory alone when we consider the great human significance of blood, and therefore of the spilling of it. Consider bullfighting and foxhunting. In both, the pain-blood-death scenario of the animal is invested with a complex array of meanings by the (human) participants. (See Hemingway 1932/1996 on the meaning of bullfighting; and see Scruton 1998 on the meaning of foxhunting.) And consider Christianity, in which one person's pain-blood-death scenario is invested with huge metaphysical, moral, and social significance. Indeed, the fate of the entire cosmos is sometimes supposed to rest on the pain-blood-death scenario of one man: Jesus. And believing in that significance is supposed to have the power to deliver profound spiritual and metaphysical "salvation." Perhaps the meaning of Jesus's pain-blood-death in Christianity has more to do with suffering than cruelty. Nevertheless, it illustrates the transfiguration of pain-blood-death by complex meanings. There is a general issue lurking here about the relation between the human and social sciences, on the one hand, and disciplines such as biology and neurophysiology, on the other. Consider eating or sex: It is true that both animals and humans do it. But human beings invest these activities with social, moral, and religious significance, and they surround the activities with complex rituals. Human beings transfigure animal phenomena by investing them with meaning. It is not clear how much of the original animal phenomena will be recognizable in the sophisticated human phenomena. So, my fourth and last question for Nell is: Given the layers of meaning that, for perpetrators and sufferers are part of what human cruelty involves, is there enough in common between human and animal "cruelty" to forge a strong explanatory link between them?

Author's Response

Cruelty and the psychology of history

Victor Nell

Institute for Social and Health Sciences, University of South Africa, Pretoria, South Africa. Correspondence to: West Hill House, 6 Swains Lane, Highgate, London N6 6QS, United Kingdom. **psychology@victornell.co.uk**

Abstract: This response deals with seven of the major challenges the commentators have raised to the target article. First, I show that the historical-anecdotal method I have followed has its roots in sociology, and that there is a strong case for the development of a "psychology of history." Next, the observational data suggesting that intentional cruelty cannot be restricted to humans is rebutted on the grounds that cruelty requires not only an intention to inflict pain, but to do so *because* that pain would cause the victim to suffer – which requires a theory of mind. Third, in the light of the commentaries, I recognise that not only predation but also intraspecific aggression contributes to the development of cruelty. Fourth, I contrast nativists and environmentalists, the former regarding cruelty as a universal human capacity and the latter holding the view that cruelty is acquired through social learning, and argue that there is an otherworldly quality to the environmentalist view. I then show (the fifth challenge) that the target article does generate testable hypotheses. Sixth is a consideration of the implications of the target article for the re-admission of the concept of evil to the psychological lexicon; and seventh, a consideration of the commentaries which note that the cultivation of compassion is a tool for the prevention of cruelty. The last section of the response replies to questions of detail and rebuts some misrepresentations of my argument.

Publishing in *BBS* is not for the faint-hearted. It has forced justification of what had seemed to me to be self-evident (as with my historical-anecdotal method), reconsideration of what had appeared to be strong lines of argument (as with recognising the centrality of intraspecific aggression for the development of cruelty); allowed me to follow the encouragement given by commentators in elaborating half-articulated issues (as with the pull of evil); and

produced new approaches to the primary prevention of violence – which had been a principle motivation for soliciting commentary.

R1. A psychology of history

The historical method of my article has been roundly criticised. My arguments are based "on a flood of examples implying universality in humans" **(Schuster)**; my evidence "is largely in terms of biblical quotations, anecdotes, descriptions of ancient Greek practices, medieval carnivals, and arena spectacles" **(Bandura)**; half of the references "are works of art, moral philosophy, anecdotes" and contain "antique historians, poets, and religious texts," and "only about 20% are empirical studies," complains **Kotchoubey.**

My "anecdotal" method, which is theory building by the accretion of behavioural specimens, is well-known in sociology: the behavioural histories of Ariès (1960/1962; 1981) and Elias (1939/2000) proceed through the analysis of historical documents that range from myth and legend to manuals of table manners or the conduct that befits the bereaved, and from these documents a psychology of history is constructed. Psychologists, on the other hand, though attentive to the (very brief) history of psychology, have created no psychology of history, and do not regard the range of values or emotions that were proper to an iron age hunter, to audiences at the Roman arena or at an animal baiting in early nineteenth century England or America, as significant areas of psychological enquiry. These values and emotions are in fact important to psychology because, in order to determine which behaviours flow from the core of human nature, remaining stable across historical time, and which are transient, this historical method, the construction of a psychology of history, is the only available tool. There is no pre-existing body of empirical work on cruelty, so a research agenda must be created. I have done so by means of anecdote: Each of these historical vignettes, separately or together, has the potential to generate testable hypotheses, and, as many of the commentaries show, has succeeded in doing so. This analysis is thus "a promissory note to be cashed out through future research" **(Panksepp)**.

R2. Theories of mind, or, are animals capable of cruelty?

I preface this section with an account of a field observation by Michael Wilson (personal communication, April 24, 2001) that relates to territorial aggression in the Kibale Forest Reserve in 2000: An adult male chimpanzee had been attacked by nine males from another troop on a border patrol and held down by all four limbs. All the wounds were ventral, inflicted by bites and tearing with the hands. The trachea had been torn out, and the testicles were ripped off and found nearby. The next day the attackers returned and were seen beating on the dead body.

In this light, **van den Berghe's** assertion that "almost every claim for human behavioral uniqueness has bitten ethological dust" is telling. Similarly, **Behrendt** points to the capacity of macaques to learn how to avoid punishment from other members of the group, and that unprovoked aggression to group members in animals is analogous to cruelty in humans. **Dallman** observes that I have boxed myself in by specifying that cruelty is only a human endeavour, ignoring "a considerable literature that documents 'cruelty' in subhuman primates and other mammals."

I am not persuaded. The question is whether the intentionality that is evident in these and other examples, or that chimpanzees are capable of social manipulation (Byrne & Whiten 1988), amounts to a theory of mind (ToM) that enables these demonic males to not only formulate an intention to inflict pain, but to do so *because* that pain would cause the victim to suffer.

Ainslie and **Panksepp,** both reflecting on cat-and-mouse play, share this reservation: "since a real Tom has no ToM, he is presumably not imagining his victim's suffering, much less trying to induce it," writes Ainslie; while Panksepp observes that an animal's ability to reflect on other minds is rudimentary, and its behaviour reflects aroused action tendencies that are not reflectively guided. So, the objections notwithstanding, I hold to the view that animal "cruelty" is more parsimoniously to be interpreted as an extreme form of aggression rather than cruelty. For this reason, I do not think that behaviours such as animal neglect or hoarding (**Herzog & Arluke)** are cruel: They certainly cause suffering, but the intention is absent.

R3. Predation, intraspecific aggression, and cruelty

The commentaries in this group have made me rethink the exclusivity I accorded to predation as cruelty's precursor. Thus, **Zangwill** accepts the predation-cruelty link, but challenges its exclusivity, suggesting that predation may not be the main causal factor, but one among others. I agree. There are likely to be multiple evolutionary pathways leading to cruelty. **Potts'**s comment that something more than the rewards of a predatory animal is needed to explain the scale and universality of human cruelty links with **Potegal'**s suggestion that this something more may be intraspecific aggression (IA), which has deeper roots in animal and human evolution than predation.

A number of commentaries link aggression and cruelty (**de Aguirre**, **Kosloff, Greenberg, & Solomon [Kosloff et al.]**, **Kotchoubey**, **Mouras**, **Ruocco & Platek**), suggesting in effect that cruelty is a special case of aggression; as, for example, **Panksepp**, who writes that cruelty's neuro-causal underpinnings might lie in "intense human and animal aggression." **Behrendt** argues that ritualised intraspecific aggression, not cruelty, is the principle means for the accretion of social power. **Kosloff et al.** go further, claiming that my definition of cruelty is virtually identical to psychological definitions of aggression, that is, behaviour that has the intent to harm another. To say that this is "virtually identical" with my definition of cruelty is inaccurate: The deliberate infliction of pain on a living creature certainly has the intent to harm, but to conflate cruelty with aggression is not helpful for the study of cruelty as a specific subtype of aggression. There are, however, implications for prevention in determining whether or not there is an aggression–cruelty continuum and what this might be in

behavioural terms, as with the link between cruelty and aggressive-sadistic personality disorder (SPD) proposed by Ruocco & Platek.

R4. Nativists, environmentalists, and otherworldliness

There are sharp divisions between the *nativists*, who regard cruelty as an innate, universal human capacity **(Dallman**, **Kraemer**, **Stein**, **Tiger**, and, indirectly, **Herzog & Arluke)**, and the *environmentalists*, who see it as a behaviour acquired through social learning **(Bandura**, **Behrendt**, **Haritos-Fatouros**, **Kosloff et al.**, **Tapper).** This debate has profound implications for the prevention of cruelty.

R4.1. Nativists

The nativist view was elegantly put a century ago by William James, whose intuitions about the instincts deserve to be better known by evolutionary psychologists: Those who reason from above downwards, he writes, as if by inference and associations,

> have missed the root of the matter. Our ferocity is blind, and can only be explained from *below*. . . . The boys who pull out grasshoppers' legs and butterflies' wings and disembowel every frog they catch have no thought at all about the matter. The creatures tempt their hands to a fascinating occupation, to which they have to yield. (James 1890/1998, p. 414)

There is empirical support for this assertion: **Herzog & Arluke** note that childhood animal cruelty may be more common than is usually recognized, with one study reporting that two-thirds of male undergraduates had participated in animal abuse, while **Kraemer** echoes James: "in their play with toys, siblings, friends, and pets," even infants show that they are readily capable of inflicting pain on others, and continues, "Curiosity may be one driver – a wish to find out how much damage the victim can stand, or simply to dismantle it and see what it is made of."

Dallman suggests that cruelty may be a by-product of the need to reduce arousal after the high stress of predation, and return to a sustainable state: "this may occur in both animals and humans by employing aggression [and] real or potential cruelty, to available conspecifics" that reduces the level of stress-induced glucocorticoids.

Tiger writes that a species committed to predation would clearly have the required emotional and physiological correlates, with neurophysiological factors underlying our "chronic interest in accident [and] death. . . . A large precinct of the academy is devoted to claiming that cruelty and its cousins exist mainly because a few bad people contrive to dragoon many people into bad schemes." **Stein** agrees, writing that cruelty and evil "cannot merely be relegated to those who are 'abnormal' or otherwise marginal."

R4.2. Environmentalists

Bandura is representative of the environmentalists, writing, for example, that "extensive training and a multitude of social structural influences are needed to produce cruel perpetrators." Thus also **Haritos-Fatouros,** who holds that human behaviour is also greatly influenced by cognitive processes, and by the resulting situations produced – but goes on to say (as her co-author Zimbardo has shown; cf. Haritos-Fatouros & Zimbardo 2005; Zimbardo 2003) that "torturers do not have to have a certain kind of personality, only exposure to certain kinds of psychological, social, and political conditions," which is squarely nativist (see sect. 6.2 of the target article). **Tapper** acknowledges that predation may help account for the prevalence of cruelty, but is too restrictive: Cruelty also draws on other reinforcers, many of which may stem from resource competition.

Ainslie, **Behrendt**, and **Kosloff et al.** propose a variety of cognitive processes to account for the reward value of cruelty. Behrendt writes that enjoyment of media cruelty is not reinforced by "emotional circuits" adapted to predation, but represents transient relief from culturally determined inhibition of aggression. Similarly, Kosloff et al., citing their terror management theory, suggest that "cruelty stems from the desire to defend one's cultural worldview and to participate in a heroic triumph over evil." Ainslie also suggests that cruelty might be an anxiety reduction mechanism: "There are people with traits that we fear in ourselves. . . . [and] cruelty toward these people might be the handiest way to reduce our sense of potential seduction."

Finally, there is **de Aguirre**'s pathologising view that sees cruelty as a symptom of psychiatric illness, with aggression and cruelty as its symptoms. This fits with a long psychiatric tradition of medicalising problematic human behaviours such as aggression, violence, and cruelty (see, e.g., Filley et al. [2001] in which I am a dissenting voice), thus removing them from the proper ambit of the social sciences (see the views of **Stein** and **Tiger** in the preceding section).

R4.3. Otherworldliness

I am troubled by the otherworldly quality of much of the foregoing, as, for example, **Ainslie's** contention that psychological cruelty is the only kind seen in everyday life, or **Rowan's** that sadistic cruelty is a rare occurrence. Whether or not cruelty is a universal human propensity, the evidence from the historical record – from the International Court of Justice in The Hague and, everywhere in the world, from hospital emergency rooms and mortuaries (where I have had the misfortune to spend rather too much time: Brown & Nell 1992; Butchart et al. 1991; Nell & Butchart 1989) – is that cruelty, often tipping into sadism, makes a large contribution to the sum of human and animal misery; and that this cruelty is perpetrated, as I attempted to show, by manifestly normal and decent people who have not been the subjects of intensive learning or socialisation processes in order to become cruel. Rather, an opportunity or provocation was there, and with no training, this decent person did appalling things. Psychologists and sociologists who argue for elaborate training or an evil predisposition as a precondition for cruelty fail in my opinion to give sufficient weight to this real-world evidence.

Cruelty is no less deserving of careful scientific study than substance abuse or aggression: If my central assertion, that a capacity for cruelty is a universal human propensity, is disproved, then so much the better. But the

research needs to be done, and to treat the topic as an unwelcome intruder to the behavioural science agenda is a disservice to the victims of cruelty.

R5. Hypothesis testing

I am puzzled by the charge **(Kotchoubey**, **Schuster)** that my theory lacks testable hypotheses: I haven't counted, but as **Haritos-Fatouros** kindly remarks, there is "an abundance" of these. The two pillars of the research programme I proposed are to listen to the voices of perpetrators, daunting though this programme is, and, using these materials, to develop a Cruelty Readiness Questionnaire (CRQ; sect. 6.4). **Panksepp** writes that "once we have a good Cruelty Readiness scale, we surely will find genetic factors that facilitate cruelty."

Van den Berghe notes cruelty's seemingly negative correlation with age because of its apparent linkage with testosterone, sex, and dominance and suggests a test of this hypothesis. I am also grateful to **Schuster** for proposing additional hypotheses, among them "to measure and validate the kinds of behaviors that can serve as markers for positive affect associated with acts of cruelty," and to determine whether conditioned pain-blood-death (PBD) stimuli in an animal can provide reinforcement that is additional to the primary reinforcer.

R6. Evil and its pull

Zangwill asks, Why the atomism? Why do I treat cruelty in isolation, ignoring its centrality to the human condition? Well, let's take the next step and relate cruelty to its superordinate category, evil (see also **Stein)** – a term that is absent from modern psychology, though it should not be. Though I avoided using the word *evil*, many passages in the target article point to the contribution cruelty and evil have made to culture and history, though not to the sum of happiness. So I don't believe that I have been atomist, and again, with approval, cite William James:

> May not the claims of tender-mindedness go too far?. . . . Is the last word sweet? Is all "yes, yes" in the universe? Doesn't the fact of "No" stand at the very core of life? Doesn't the very "seriousness" that we attribute to life mean that ineluctable noes and losses form a part of it, that there are genuine sacrifices somewhere, and that something permanently drastic and bitter always remains at the bottom of its cup? (James 1907/2000, p. 129)

To go further along the road to which **Zangwill** has pointed: I tried to indicate in my article that it is impossible to understand cruelty without acknowledging its seductiveness and the strength of the pull we all feel (but shrink from acknowledging) to the "other side," to darkness and evil. Taking **Ainslie's** notion of "negative empathy" a step further, there is a need for a "negative psychology" as a balance to the mandatory optimism of current Western (and especially American) psychology that holds to Enlightenment notions of an inexorable march to perfection, and blocks serious empirical research on, yes, evil, and refuses to acknowledge that this dark study is in fact a human welfare imperative. So, I couldn't agree more with the preambles to Zangwill's questions 3 and 4.

In this context, **van den Berghe's** notion of thanatourism is provocative because it opens the way to some thoughts about how evil creeps in at the back door when it has been locked out of the front: I agree that beneath the "memorialisation" lurks the *frisson* of approaching a scene of pain and bloodshed. Thus in the 1830s, in the first decade the American Abolitionism, "the gruesome tribulations of the body" (Clark 1995, p. 465) became a staple of antislavery literature: "Speakers [at antislavery rallies] often righteously denied any intention to 'harrow up' an audience's feelings before going on to dwell enthusiastically on atrocities" (Clark 1995, p. 467). So, for the respectable citizens of the nineteenth century, as for those who flocked to the exhibition of horrifying torture instruments that toured Europe from 1983 to 1987 (Held 1985), these atrocity tales served as crypto-pornography, disguised by an overlay of moral fervour. *The Tortures and Torments of the Christian Martyrs* by the Roman priest Antonio Gallonio, published in Italian in 1591, is a hagiography that went through many editions, of which the strangest was its revival as a sadomasochistic cult book in 1980 by a pornography publisher in Los Angeles, who had it illustrated by Charles Manson, leader of the "family" of serial murderers that killed Sharon Tate (cf. Gallonio 1591/1989). Good citizens can comfortably go to bed with Held or Gallonio because there is no moral taint – as with thanatourism.

R7. Compassion and prevention

Swain reviews the neurochemistry of maternal deprivation in rat models from infancy to adulthood, raising the possibility that early trauma may shape long-term mental health in humans. He writes that experience-dependant chromatin plasticity offers a hope that older children and adults, already damaged by child neglect and abuse, might be treated by targeting these molecules; more radically, he believes that cruelty would be prevented through the elimination of child abuse. Likewise, **de Aguirre** addresses the neurobiology of maternal care and its impact on adult behaviour. **Ruocco & Platek** recommend that rehabilitation professionals be aware of the specific neurocognitive deficits associated with antisocial personality disorder (APD) and aggressive-sadistic personality disorder (SPD) and address the ways in which they affect treatment and social reintegration.

Panksepp speculates that the wide psychological scope of dopamine-driven exploratory behaviours may explain why juvenile play-fighting and inter-male aggression "can be as rewarding as predatory stalking and chasing," leading to the suggestion that childhood rough-and-tumble play, under empathic supervision (which links with **Tapper's** observation that school aggression may be reinforced by onlooker responses), could be a means toward the nurturing of more prosocial brains. This is in effect a call for the cultivation of empathy **(Potegal)**, which is in turn a manifestation of compassion. Similarly, **Dallman** advocates formal programs that foster affiliative behaviour that "might, if widely available, result in reduction of the amount of pleasure seeking directed toward cruel behaviors"; **Fox** glosses compassion to mean loving-kindness, "the desire to see the other flourish," as in the humane education movement, which

aims to enhance children's natural tendency to compassion; and **Potts** observes that if cruelty is linked to the evolution of male coalitional aggression, anything enhancing women's role in society "is likely to promote a . . . less cruel society."

I agree with **Potter** that shame is an inappropriate method for cruelty prevention and respond that I did not advocate its use, but rather, a reinforcement of the "automatic, blindly functioning apparatus of self-control," described by Elias (1939/2000, p. 368). Potter goes on to ask whether prevention would be served by listening to the voices of perpetrators: It is certainly true that those who do terrible things misrepresent their motives to themselves and others. But the probe questions I have suggested are not about motives, but gratifications. Though torturers may also block access to the emotions they experienced, this approach cannot be dismissed a priori until there has been a serious attempt to interview perpetrators under conditions of clinical confidentiality and empathy.

R8. Rebuttals

Ainslie doubts if human hunters are rewarded by the suffering of their prey: suffering is an emotive word, and it diverts attention from the question I attempted to answer, which is whether hunters are rewarded by the *death* of their prey – which is necessarily accompanied by blood and pain. I believe that they are – though in hunting, pain, blood, and death are the accompaniments of a different goal-directed activity, which is the death of the prey for nutrition or as a trophy. In cruelty, the goal is pain in itself, for which this evolutionarily old set of reinforcers, the PBD complex, is available. Ainslie also asks whether cat-and-mouse play is cruel, or a challenging game: In terms of my contention that Toms do not have a ToM (to borrow his word-play), this game cannot be cruel (it is not, by the way, a game that is restricted to cats: I have watched a puppy batting a beetle from paw to paw, letting it escape, and pouncing again to continue playing).

Bandura asks why motorcycle racing is a vestige of the pain-blood-death complex. I could equally have cited any number of spectacles in which the risk of injury or death is present: Circus high-wire and trapeze acts without a safety net are paradigmatic of the audience appeal of entertainments over which injury and death hover. And the functional value to the competitors of winning prizes has nothing to do with my argument, which is about the audience appeal of life-threatening displays.

I agree with **Bandura** that the third stage of cruelty requires the most detailed theoretical specification, which, within the *BBS* space limitations given, it gets. So I don't think he is correct in saying that I give surprisingly little attention to the social uses of power; nor do I think that the link from predation to cruelty is enigmatic. I don't think that my argument for the beauty of war can be taken as a dismissal of its horrors and the psychological scars it leaves; but it is also necessary to acknowledge that entire populations can be seduced by the glamour of war. With regard to the gratifications of remote killing, which Bandura doubts, a missile designer once showed me a video of a rocket homing in on a drone and exploding: His pleasure was tangible. Similarly, newspaper accounts of pilots interviewed on their return from high-altitude bombing missions in the Persian Gulf, in which the bomb damage is unseen, speak with exultance of "being effective." Anecdotes, certainly – but again, there is a clear need for research on the psychology of remote killing.

Finally, that cruelty is male gendered (**Herzog & Arluke** observe that animal cruelty is a predominantly male enterprise) does not mean that all males are cruel or violent all the time, as Bandura seems to suggest, or that women are incapable of cruelty; and I don't think that my text suggests either of these outcomes.

I agree with **Behrendt** that pain and blood are unlikely to represent rewards for the sake of which the animal kills. My argument is that pain and blood become attached to the gratification of feeding, and provide some of the reinforcers needed to sustain the heavy time and energy demands of predation.

Kotchoubey's intemperate commentary is remarkable (to quote from his epigraph) for its fury, and repeatedly misrepresents my argument. I didn't suggest that hyenas and lions were cruel or that they "torment" their victims, and I can't follow how he has arrived at this serious misreading of my text despite my definitional restriction of cruelty to hominids. His rebuke that the papers by Haney et al. (1973) and Milgram (1969/1974) are not "examples of empirical work on cruelty" is another misreading: the text there is that these papers show the ease with which situations can overwhelm values and, therefore, can elicit cruelty in otherwise decent people. Why is Milgram's work unrelated to the theme of the target article? – on the contrary, situational press is central to my argument. I am not offended by the suggestion that I am an armchair philosopher or that I write *belles lettres* (which is elegantly aesthetic literature), but I certainly am offended by the accusation that my article is "propaganda": In what cause does Kotchoubey think I might be disseminating deceptive or distorted information?

His most egregious misrepresentation is of my paragraph on the dangers of studying cruelty. The comparison with Freud is apposite, because a universal potential for cruelty in the twenty first century, like infantile sexuality in the nineteenth, is a taboo subject. But how **Kotchoubey** gets from this parallel to the absurd conclusion, quite unrelated to my text, that I am pre-emptively devaluing any criticism of my work, is beyond me. The evidence, if any is needed, is in the number and vigour of the commentaries, including his own.

The most interesting aspect of **Kotchoubey's** commentary is the dichotomy he sets up between science and cultural analysis. Indeed, he is paradigmatic of a hard science approach, arguing that only the evaluation of empirical results can "describe the truth about cruelty," or, presumably, any other psychological topic. This is a view explicitly rejected by *BBS*, which in its publication criteria includes articles "dealing with social or philosophical aspects of the behavioral and brain sciences." I don't believe that that a dogmatic empiricism, reminiscent of the excesses of behaviourism, is appropriate to psychology, which stands with one foot in the laboratory and the other in phenomenology (the investigation and description of the plenitude of conscious experience). Any value my article may have derives

from the vigorous pursuit of a historico-phenomenological approach.

As an executive of a humane society, **Rowan** is in a strong position to comment on my animal-baiting materials. However, I would urge caution in generalising from the findings of the South African study that sadistic cruelty was rare: Organised dogfights in empty swimming pools and incidents of animal torture are reported from time to time in the South African press, but take place behind a veil of secrecy that is not penetrated by animal lovers or humane societies. The true extent of sadistic cruelty to animals may be greater than we would like to think.

I am puzzled by **Zangwill's** objections to my definition of cruelty, and suspect that he may have left his argument unfinished. His first objection is that one cannot exclude certain cases by fiat, as, for example, in medical treatment. But surely it is in the nature of taxonomies not only to define, but also to exclude? He goes on to write that my definition does not fit the human phenomena we call cruel because I need "a notion of cruelty that applies to both human beings and animals." This is not so, because I have carefully excluded animals on the grounds that they may be aggressive but cannot be cruel.

ACKNOWLEDGMENT

I am grateful to the very many friends and colleagues who have, since 1995, reviewed (and listened to) earlier versions of this article, and to the *BBS* referees and commentators (in particular to the referees who became commentators), for helping make the target article – which now incorporates their reviews – and this response what they have become.

References

[The letters "a" and "r" before author's initials stand for target article and response references, respectively.]

Abel, G. G., Barlow, D. H., Blanchard, E. B. & Guild, D. (1977) The components of rapists' sexual arousal. *Archives of General Psychiatry* 34:895–908. [AB]

Adair, J. (1736/2005) *The History of the American Indians*, ed. K. E. Holland Braund. University of Alabama. [GA]

Aiello, L. C. & Wheeler, P. (1995) The expensive tissue hypothesis: The brain and the digestive system in human and primate evolution. *Current Anthropology* 36:199–221. [aVN]

Ainslie, G. (2001) *Breakdown of will*. Cambridge University Press. [GA]

(2005) Précis of *Breakdown of will. Behavioral and Brain Sciences* 28(5):635–50. [GA]

(2006) What good are facts? The "drug" value of money as an examplar of all non-instrumental value. *Behavioral and Brain Sciences* 29(2):176–77. [GA]

Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. & Watson, J. D. (1989) *Molecular biology of the cell*, 2nd edition. Garland. [aVN]

Alland, A., Jr. (1972) *The human imperative*. Columbia University Press. [AB]

Alvarez, A. & Phillips, A. (1998) The importance of play; a child psychotherapist's view. *Child Psychology and Psychiatry Review* 3:99–103. [SKr]

Amato, P. & Fowler, F. (2002) Parenting practices, child adjustment and family diversity. *Journal of Marriage and Family* 64:703–16. [SKr]

American Heritage Dictionary (1992) *The American heritage dictionary of the English language.* Houghton Mifflin. [MFD]

(2000) *American heritage dictionary of the English language*, 4th online edition. Available at: www.education.yahoo.com/reference/dictionary/. [MAF]

American Psychiatric Association. (2000) *Diagnostic and statistical manual of mental disorders, 4th edition. Text Revision.* American Psychiatric Association. [HH]

Anderson, C. A., Deuser, W. E. & DeNeve, K. M. (1995) Hot temperatures, hostile affect, hostile cognition, and arousal: Tests of a general model of aggression. *Personality and Social Psychology Bulletin* 21:434–48. [SKo]

Andreae, B. (1978) *The art of Rome.* Macmillan. [aVN]

Anonymous (1999) *Taking animal welfare seriously: Minimizing pain and distress in research animals.* A Report by the Animal Research Issues Section; Humane Society of the United States, Washington, DC. [ANR]

Applbaum, A. I. (1995) Professional detachment: The executioner of Paris. *Harvard Law Review* 109:458–86. [aVN]

Apter, M. J. (1979) Human action and theory of psychological reversals. In: *Aspects of consciousness*, ed. G. Underwood & R. Stevens. Academic Press. [aVN]

Archer, J. (1988) *The behavioural biology of aggression.* Cambridge University Press. [aVN]

(1995) What can ethology offer the psychological study of human aggression? *Aggressive Behavior* 21:243–55. [KT]

Ardrey, R. (1961) *African genesis.* Atheneum. [LT]

Ariès, P. (1960/1962) *Centuries of childhood: A social history of family life.* Knopf. [arVN]

(1981) *The hour of our death.* Allen Lane. [arVN]

Aristotle (1985) *Nicomachean ethics*, trans. T. Irwin. Hackett. [NNP]

Arluke, A. (2002) Animal abuse as dirty play. *Symbolic Interaction* 25:405–30. [HH]

(2004) *Brute force: Animal police and the challenge of cruelty*. Purdue University Press. [HH]

(2006) *Just a dog: Understanding animal cruelty and ourselves*. Temple University Press. [HH]

Arluke, A., Levin, J., Luke, C. & Ascione, F. (1999) The relationship of animal abuse to violence and other forms of antisocial behavior. *Journal of Interpersonal Violence* 14:963–75. [HH]

Arluke, A. & Luke, C. (1997) Physical cruelty toward animals in Massachusetts, 1975–1996. *Society and Animals* 5:195–204. [HH, ANR]

Arsuaga, J. (2002) *The Neanderthal's necklace: In search of the first thinkers*. Four Walls Eight Windows. [MPott]

Ascione, F. R. (2001) Animal abuse and youth violence. *Juvenile Justice Bulletin* (September issue):1–15. [HH]

Attili, G. & Hinde, R. A. (1986) Categories of aggression and their motivational heterogeneity. *Ethology and Sociobiology* 7:17–27. [MPote]

Bailey, K. G. (1995) The sociopath: Cheater or warrior hawk? *Behavioral and Brain Sciences* 18:542–43. [aVN]

Bandura, A. (1973) *Aggression: A social learning analysis*. Prentice Hall. [AB, MH-F]

(1986) *Social foundations of thought and action: A social cognitive theory*. Prentice Hall. [AB]

(1990) Mechanisms of moral disengagement. In: *Origins of terrorism: Psychologies, ideologies, theologies, states of mind*, ed. W. Reich, pp. 161–91. Cambridge University Press. [MH-F, aVN]

(1999) Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review* 3:193–209. [AB]

Baron, R. A. (1971a) Exposure to an aggressive model and apparent probability of retaliation from the victim as determinants of adult aggressive behavior. *Journal of Experimental Social Psychology* 7:343–55. [AB]

(1971b) Magnitude of victim's pain cues and level of prior anger arousal as determinants of adult aggressive behavior. *Journal of Personality and Social Psychology* 17:236–43. [SKo]

(1971c) Reducing the influence of an aggressive model: The restraining effects of discrepant modeling cues. *Journal of Personality and Social Psychology* 20:240–45. [AB]

Barr, C. S., Newman, T. K., Shannon, C., Parker, C., Dvoskin, R. L., Becker, M. L., Schwandt, M., Champoux, M., Lesch, K. P., Goldman, D., Suomi, S. J. & Higley, J. D. (2004) Rearing condition and rh5-HTTLPR interact to influence limbic-hypothalamic-pituitary-adrenal axis response to stress in infant macaques. *Biological Psychiatry* 55(7):733–38. [JES]

Barry, C. T., Frick, P. J., DeShazo, T. M., McCoy, M. G., Ellis, M. & Loney, B. R. (2000) The importance of callous-unemotional traits for extending the concept of psychopathy to children. *Journal of Abnormal Psychology* 109:335–40. [MPote]

Barton, C. A. (1993) *The sorrows of the ancient Romans.* Princeton University Press. [aVN]

Basoglu, M., ed. (1992) *Torture and its consequences: Current treatment approaches.* Cambridge University Press. [aVN]

Bass, A. H. & McKibben, J. R. (2003) Neural mechanisms and behaviors for acoustic communication in teleost fish. *Progress in Neurobiology* 69:1–26. [MFD]

Baumeister, R. F. (1999) *Evil: Inside human violence and cruelty.* Owl Books. [DJS]

Becerra, L., Breiter, H. C., Wise, R., Gonzalez, R. G. & Borsook, D. (2001) Reward circuitry activation by noxious thermal stimuli. *Neuron* 32:927–46. [aVN]

Becker, E. (1973) *The denial of death*. Free Press. [SKo]

(1975) *Escape from evil*. Free Press. [SKo]

Becker, K. D., Stuewig, J., Herrera, V. M. & McCloskey, L. A. (2004) A study of fire setting and animal cruelty in children: Family influences and adolescent

outcomes. *Journal of the American Academy of Child and Adolescent Psychiatry* 43:905–12. [HH]
Bekoff, M. (1974) Social play and play-soliciting by infant canids. *American Zoologist* 14:323–40. [MPote]
Bekoff, M. & Byers, J. A. (1998) *Animal play: Evolutionary, comparative, and ecological perspectives*. Cambridge University Press. [RS]
Berkowitz, L. (1968) Impulse, aggression and the gun. *Psychology Today* 2:19–22. [SKo]
Berkowitz, L. & Geen, R. G. (1966) Film violence and the cue properties of available targets. *Journal of Personality and Social Psychology* 3:525–30. [SKo]
Bernstein, L, Garzone, P. D., Rudy, T., Kramer, B., Stiff, D. & Peitzman, A. (1995) Pain perception and serum beta-endorphin in trauma patients. *Psychosomatics* 36:276–84. [aVN]
Berridge, K. C. & Robinson, T. E. (1998) What is the role of dopamine in reward: Hedonic impact, reward learning or incentive salience? *Brain Research Reviews* 28:309–69. [R-PB]
Bersani, L. & Dutoit, U. (1985) *The forms of violence: Narrative in Assyrian art and modern culture.* Schocken. [aVN]
Bertalanffy, L. (1958) Comments on aggression. *Bulletin of the Menninger Clinic* 22:50–57. [SKo]
Bettencourt, B. A. & Kernahan, C. (1997) A meta-analysis of aggression in the presence of violent cues: Effects of gender differences and aversive provocation. *Aggressive Behavior* 23:447–56. [AB]
Bettencourt, B. A. & Miller, N. (1996) Gender differences in aggression as a function of provocation: A meta-analysis. *Psychological Bulletin* 119:422–47. [AB]
Bevans, K., Cerbone, A. B. & Overstreet, S. (2005) Advances and future directions in the study of children's neurobiological responses to trauma and violence exposure. *Journal of Interpersonal Violence* 20(4):418–25. [JES]
Bifulco, A., Brown, G. W. & Adler, Z. (1991) Early sexual abuse and clinical depression in adult life. *British Journal of Psychiatry* 159:115–22. [JES]
Binford, L. R. (1987) Were there elephant hunters at Torralba? In: *The evolution of human hunting*, ed. M. H. Nitecki & D. V. Nitecki, pp. 47–105. Plenum. [aVN]
Bjorkqvist, K., Lagerspetz, K. & Kaukianen, A. (1992) Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior* 18:117–27. [KT]
Blair, R. J. (1997) A cognitive developmental approach to morality: Investigating the psychopath. In: *The maladapted mind: Classic readings in evolutionary psychopathology*, ed. S. Baron-Cohen, pp. 85–114. Psychology Press. [aVN]
Blair, R. J. R. (2004) The roles of orbital frontal cortex in the modulation of antisocial behavior. *Brain and Cognition* 55:198–208. [MIdA]
Blake, P. & Grafman, J. (2004) The neurobiology of aggression. *Lancet* 364:12–13. [ACR]
Blanchard, D., Spencer, C., Weiss, R. L., Scott, M., Blanchard, S. C., McEwen, R. J., Sakai, B. & Randall, R. (1995) Visible burrow system as a model of chronic social stress: Behavioral and neuroendocrine correlates. *Psychoneuroendocrinology* 20:117–34. [aVN]
Blanchard, R. J., Flannelly, K. J. & Blanchard, D. C. (1988) Life span studies of dominance and aggression in established colonies of laboratory rats *Physiology & Behavior* 43:1–7. [MPote]
Boesch, C. (1994) Hunting strategies of Gombe and TaV chimpanzees. In: *Chimpanzee cultures*, ed. R. W. Wrangham, W. C. McGrew, F. B. M. de Waal & P. G. Heltne, pp. 77–92. Harvard University Press. [aVN]
Bohstedt, J. (1994) The dynamics of riots: Escalation and diffusion/contagion. In: *The dynamics of aggression: Biological and social processes in dyads and groups*, ed. M. Potegal & J. F. Knutson, pp. 257–306. Erlbaum. [MPote]
Bourke, J. (1999) *An intimate history of killing*. Basic Books. [GA]
Boyle, J. (1977) *A sense of freedom.* Pan. [aVN]
Brady, K. T. & Sinha, R. (2005) Co-occurring mental and substance use disorders: The neurobiological effects of chronic stress. *American Journal of Psychiatry* 162:1483–93. [MIdA]
Brain, C. K. (1981) *The hunters or the hunted: An introduction to African cave taphonomy.* University of Chicago Press. [aVN]
(2001) *Do we owe our intelligence to a predatory past?* (James Arthur Lecture on the Evolution of the Human Brain.) American Museum of Natural History. [aVN]
Brain, C. K., ed. (1993) *Swartkrans: A cave's chronicle of early man.* Transvaal Museum Monograph (no. 8). [aVN]
Bremner, J. D., Krystal, J. H., Southwick, S. M, & Charney, D. S. (1996) Noradrenergic mechanisms in stress and anxiety: II. Clinical studies. *Synapse* 23(1):39–51. [JES]
Brett, L. P. & Levine, S. (1979) Schedule-induced polydipsia suppresses pituitary-adrenal activity in rats. *Journal of Comparative Physiology and Psychology* 93:946–56. [MFD]
Brown, D. S. O. & Nell, V. (1992) Diffuse traumatic brain injury in Johannesburg: A concurrent prospective study. *Archives of Physical Medicine and Rehabilitation* 73:758–70. [rVN]
Brown, G. R. & Anderson, B. (1991) Psychiatric morbidity in adult inpatients with childhood histories of sexual and physical abuse. *American Journal of Psychiatry* 148(1):55–61. [JES]
Browning, C. R. (1993) *Ordinary men: Reserve Police Battalion 101 and the Final Solution in Poland.* Harper. [aVN]
Bufkin, J. L. & Luttrell, V. R. (2005) Neuroimaging studies of aggressive and violent behavior: Current findings and implications for criminology and criminal justice. *Trauma, Violence and Abuse* 6:176–91. [BK]
Buford, B. (1992) *Among the thugs: The experience, and seduction, of crowd violence*. W. W. Norton (original work published in 1990). [MPote, MPott]
Burkert, W. (1983) *Homo necans: The anthropology of ancient Greek sacrificial ritual and myth.* University of California Press. [SKo]
Butchart, A., Nell, V., Yach, D., Johnson, K. & Radebe, B. (1991) The epidemiology of non-fatal trauma in Johannesburg-Soweto. I. Methodology and materials; II. Incidence and determinants. *South African Medical Journal* 78:466–79. [rVN]
Buss, D. M. (1999) *Evolutionary psychology: The new science of the mind.* Allyn & Bacon. [aVN]
(2005) *The murderer next door: Why the mind is designed to kill*. The Penguin Press. [aVN]
Byrne, R. (1995) *The thinking ape: Evolutionary origins of intelligence.* Oxford University Press. [RS]
Byrne, R. W. & Whiten, A. (1988) Tactical deception of familiar individuals in baboons. In: *Machiavellian intelligence: Social expertise and the evolution of intellect in monkeys, apes, and humans*, ed. R. W. Byrne & A. Whiten. Oxford University Press. [rVN]
Campbell, M. & Potts, M. (2003) Important step for global security. *The Lancet* 362:76. [MPott]
Chagnon, N. (1988) Life histories, blood revenge and warfare in a tribal population. *Science* 239:985–92. [MPott]
Chagnon, N. A. (1983) *Yanomamö: The fierce people*, 3rd edition. Holt, Rinehart and Winston. [aVN]
Chambers, R. A., Taylor, J. R. & Potenza, M. N. (2003) Developmental neurocircuitry of motivation in adolescence: A critical period of addiction vulnerability. *American Journal of Psychiatry* 160:1041–52. [DJS]
Chen, T. J., Blum, K., Mathews, D., Fisher, L., Schnautz, N., Braverman, E. R., Schoolfield, J., Downs, B. W. & Comings, D. E. (2005) Are dopaminergic genes involved in a predisposition to pathological aggression? Hypothesizing the importance of "super normal controls" in psychiatric genetic research of complex behavioral disorders. *Medical Hypotheses* 65(4):703–707. [HM]
Choca, J. (2004) *Interpretive guide to the Millon Clinical Multiaxial Inventory*. American Psychological Association. [ACR]
Chrousos, G. P. (1995) Seminars in medicine of the Beth Israel Hospital, Boston: The hypothalamic-pituitary-adrenal axis and immune-mediated inflammation. *New England Journal of Medicine* 332:1351–62. [MIdA]
Clark, E. B. (1995) "The sacred rights of the weak": Pain, sympathy, and the culture of individual rights in antebellum America. *Journal of American History* 82:463–93. (September issue.) [rVN]
Coetzee, J. M. (1974) *Dusklands.* Ravan Press. [R-PB, SKo, aVN]
(2003) *Elizabeth Costello: Eight lessons*. Secker & Warburg. [aVN]
Cole, P. M. & Zahn-Waxler, C. (1992) Emotional dysregulation in disruptive behavior disorders. In: *Rochester Symposium on Developmental Psychopathology, vol. 4: Developmental perspectives on depression*, ed. D. Cicchetti & S. L. Toth, pp. 173–209. University of Rochester Press. [MPote]
Coleman, K. M. (1990) Fatal charades: Roman executions staged as mythological enactments. *Journal of Roman Studies* 80:44–73. [aVN]
(1993) Launching into history: Aquatic displays in the early empire. *Journal of Roman Studies* 83:48–74. [aVN]
Conner, R. L., Vernikos-Danellis, J. & Levine, S. (1971) Stress, fighting and neuroendocrine function. *Nature* 234:564–66. [MFD]
Conroy, J. (2000) *Unspeakable acts, ordinary people: The dynamics of torture*. Knopf. [NNP]
Costello, J. (1985) *Love sex and war: Changing values 1939–45*. Collins. [MPott]
Crick, N. & Grotpeter, J. (1995) Relational aggression, gender and social-psychological adjustment. *Child Development* 66:710–22. [KT]
Daly, M. & Wilson, M. (1988) *Homicide.* De Gruyter. [aVN]
Dart, R. A. (1953) The predatory transition from ape to man. *International Anthropological and Linguistic Review* 1:201–19. [aVN]
(1957) *The osteodontokeratic culture of Australopithecus prometheus.* Transvaal Museum Memoir, No. 10. [aVN]
Darwin, C. (1872/1965) *The expression of the emotions in man and animals.* University of Chicago Press. [aVN]
Davidson, R. J., Jackson, D. C. & Kalin, N. H. (2000a) Emotion, plasticity, context, and regulation: Perspectives from affective neuroscience. *Psychological Bulletin* 126(6):890–909. [HM]
Davidson, R. J., Putman, K. M. & Larson, C. L. (2000b) Dysfunction in the neural circuitry of emotion regulation – A possible prelude to violence. *Science* 289:591–94. [MIdA]

De Bellis, M. D. (2005) The psychobiology of neglect. *Child Maltreatment* 10(2):150–72. [JES]
De Jong, J., ed. (2002) *Trauma, war, and violence: Public mental health in socio-cultural context.* Kluwer Academic. [aVN]
de Quervain, D. J., Fischbacher, U., Treyer, V., Schellhammer, M., Schnyder, U., Buck, A. & Fehr, E. (2004) The neural basis of altruistic punishment. *Science* 305:1246–47. [DJS]
de Waal, F. (1989) *Peacemaking among the primates.* Harvard University Press. [aVN]
(2000) *Chimpanzee politics*. Johns Hopkins University Press. [MFD]
de Waal, F. & Lanting, F. (1997) *Bonobo. The forgotten ape.* University of California Press. [MFD]
Defleur, A., White, T., Valensi, P., Slimak, L. & Crégut-Bonnoure, E. (1999) Neanderthal cannibalism at Moula-Guercy, Ardèche, France. *Science* 286(5437):128–31. [MPott]
Diamond, J. (1993) New Guineans and their natural world. In: *The biophilia hypothesis*, ed. S. R. Kellert & E. O. Wilson, pp. 251–71. Island Press. [HH]
(2005) *Collapse. How societies choose to fail or survive.* Allen Lane. [KT]
Diener, E. & DeFour, D. (1978) Does television violence enhance program popularity? *Journal of Personality and Social Psychology* 36:333–41. [AB]
Donald, M. (1993) Précis of *Origins of the modern mind: Three stages in the evolution of culture and cognition. Behavioral and Brain Sciences* 16:737–91. [aVN]
Duman, R. S. (2002) Pathophysiology of depression: The concept of synaptic plasticity. *European Psychiatry* 17:306–10. [MIdA]
Durant, W. (1950) *The age of faith.* Simon & Schuster. [aVN]
Edgerton, R. (2000) *Warrior women: The Amazons of Dahomey and the nature of war*. Westview Press. [MPott]
Edgerton, S. Y. (1985) *Pictures and punishment: Art and the criminal prosecution during the Florentine Renaissance.* Cornell. [aVN]
Eibl-Eibesfeld, I. (1989) *Human ethology*. de Gruyter. [BK]
(1996) *Love and hate*. de Gruyter. [BK]
Elias, N. (1939/2000) *The civilizing process: Sociogenetic and psychogenetic investigations*, trans. E. Jephcott. Blackwell. [arVN]
Ellis, B. E. (1991) *American psycho.* Vintage. [aVN]
Euripides (c. 406 BC/1970) *Bacchae*, trans. R. F. Kirk. Prentice-Hall. [aVN]
Eysenck, H. J. & Gudjonsson, G. (1989) *The causes and cures of criminality.* Plenum. [aVN]
Fanon, F. (1968) *Wretched of the Earth.* Grove. [aVN]
Felthous, A. R. & Kellert, S. R. (1987) Childhood cruelty to animals and later aggressive behavior against people: A review. *American Journal of Psychiatry* 144:710–17. [ANR]
Ferguson, T., Eyre, H. & Ashbaker, M. (2000) Unwanted identities: A key variable in shame-anger links and gender differences in shame. *Sex Roles* 42(3–4):133–57. [NNP]
Fiering, N. S. (1976) Irresistible compassion: An aspect of 18th century sympathy and humanitarianism. *Journal of the History of Ideas* 37:195–218. [aVN]
Filley, C. M., Price, B. H., Nell, V., Antoinette, T., Morgan, A. S., Bresnahan, J. F., Pincus, J. H., Gelbort, M. M., Weissberg, M. & Kelly, J. P. (2001) Toward an understanding of violence: Neurobehavioral aspects of unwarranted physical aggression. Aspen Neurobehavioral Conference Consensus Statement. *Neuropsychiatry, Neuropsychology, and Behavioural Neurology* 14:1–14. [rVN]
Finlay, J. M., Zigmond, M. J., & Abercrombie, E. D. (1995) Increased dopamine and norepinephrine release in medial prefrontal cortex induced by acute and chronic stress: Effects of diazepam. *Neuroscience* 64:619–28. [MFD]
Fish, E. W., DeBold, J. F. & Miczek, K. A. (2005) Escalated aggression as a reward: Corticosterone and GABA-A receptor positive modulators in mice. *Psychopharmacology*182:116–27. [MFD]
Foucault, M. (1975/1979/1986) *Discipline and punish: The birth of the prison.* Penguin/Vintage. [MH-F, aVN]
Fraser, A. (1996) *The gunpowder plot: Terror and faith in 1605.* Weidenfeld & Nicholson. [aVN]
Freud, S. (1917/1957) Mourning and melancholia. In: *The standard edition of the complete psychological works of Sigmund Freud, vol. 14*, ed. and trans. J. Strachey, pp. 237–58. Hogarth Press. [R-PB]
(1924/1985) The economic problem of masochism. In: *On metapsychology*, ed. A. Richards, pp. 409–26. Penguin. [aVN]
(1930/1994) *Civilization and its discontents.* Dover. [NZ]
Freyd, J. J., Putnam, F. W., Lyon, T. D., Becker-Blease, K. A., Cheit, R. E., Siegel, N. B. & Pezdek K. (2005) Psychology: The science of child sexual abuse. *Science* 308(5721):501. [JES]
Friedländer, L. J. (1871/1964) *Roman life and manners*, trans. J. H. Freese & L. A. Magnus. Routledge. [aVN]
Frison, G. C. (1998) Paleoindian large mammal hunters on the plains of North America. *Proceedings of the National Academy of Sciences USA* 24:14576–83. [aVN]
Fromm, E. (1973) *The anatomy of human destructiveness*. Holt, Rinehart and Winston. [BK, SKo]
Gallonio, A. (1591/1989) *Tortures and torments of the Christian martyrs*. Feral House. (Original work published in 1591). [rVN]
Gallup, G. (1982) Self-awareness in primates. *American Journal of Primatology* 2:237–48. [MPott]
Gardner, R. & Heider, K. G. (1969) *Gardens of war: Life and death in the New Guinea stone age.* Random House. [AB]
Gardo, M. L. (1987) *Confesiones para un genocidio.* Tae Editorial. [aVN]
Gargaglioni, L. H., Pereira, A. S. & Hoffmann, A. (2001) Basal midbrain modulation of tonic immobility in the toad *Bufo paracnemis. Physiology and Behavior* 72:297–303. [aVN]
Geen, R. G. (1970) Perceived suffering of the victim as an inhibitor of attack-induced aggression. *Journal of Social Psychology* 81:209–16. [AB, SKo]
Geen, R. G. & Stonner, D. (1973) Context effects in observed violence. *Journal of Personality and Social Psychology* 25:145–50. [SKo]
Gerard, M. S. & Higley, J. D. (2002) Evolutionary underpinnings of excessive alcohol consumption. *Addiction* 97:415–25. [DJS]
Gerbasi, K. (2004) Gender and nonhuman animal cruelty convictions: Data from Pet-Abuse.com. *Society and Animals* 12:359–65. [HH]
Gibbon, E. (1776/1903) *The decline and fall of the Roman Empire* (7 volumes). Henry Frowde. [aVN]
Gifford, B. & O'Connor, B. (1987) The interpersonal circumplex as a behavior map. *Journal of Personality and Social Psychology* 52:1019–26. [MPote]
Gilligan, J. (1996) *Violence: Reflections on a national epidemic*. Vintage Books. [NNP]
Goeders, N. E. (2003) The impact of stress on addiction. *European Neuropsychopharmacology* 13:435–41. [MIdA]
Goodall, J. (1986) *The chimpanzees of Gombe: Patterns of behavior*. Harvard University Press. [MPott]
(1990) *Through a window: Thirty years with the chimpanzees of Gombe.* Weidenfeld & Nicholson. [aVN]
Goranson, R. E. (1970) Media violence and aggressive behavior: A review of experimental research. In: *Advances in experimental social psychology, vol. 5*, ed. L. Berkowitz. Academic Press. [SKo]
Grandin, T. (1988) Behavior of slaughter plant and auction employees towards the animals. *Anthrozoos* 1:205–13. [ANR]
Gray, J. G. (1998) *The warriors: Reflections on men in battle*. University of Nebraska Press. [MPott]
Greenberg, J., Pyszczynski, T. & Solomon, S. (1986) The causes and consequence of a need for self-esteem: A terror management theory. In: *Public self and private self*, ed. R. F. Baumeister, pp. 189–207. Springer-Verlag. [SKo]
Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S. & Lyon, D. (1990) Evidence for terror management theory II: The effects of mortality salience on reactions to those who threaten or bolster the cultural worldview. *Journal of Personality and Social Psychology* 58:308–18. [SKo]
Grossman, D. (1995) *On killing.* Little, Brown. [GA]
(1996) *On killing: The psychological cost of learning to kill in war and society.* Little, Brown. [aVN]
Haller, J., Halasz, J., Mikics, E. & Kruk, M. R. (2004) Chronic glucocorticoid deficiency-induced abnormal aggression, autonomic hypoarousal, and social defeat in rats. *Journal of Neuroendocrinology* 16:550–57. [MFD]
Haller, J., Halasz, J., Mikics, E., Kruk, M. R. & Makara, G. B. (2000) Ultradian corticosterone rhythm and the propensity to behave aggressively in male rats. *Journal of Neuroendocrinology* 12:937–40. [MFD]
Hanawalt, B. (1976) Violent death in 14th and early 15th century England. *Comparative Studies in Society and History* 18:297–320. [aVN]
Haney, C., Banks, W. C. & Zimbardo, P. G. (1973) Interpersonal dynamics in a simulated prison. *International Journal of Criminology and Penology* 1:69–97. [arVN]
Haney, C. & Zimbardo, P. G. (1998) The past and future of U.S. prison policy: 25 years after the Stanford Prison Experiment. *American Psychologist* 53:709–27. [aVN]
Hanson, V. (1991) *Hoplites: The classical Greek battle experience.* Routledge. [MPott]
Haritos-Fatouros, M. (2003) *The psychological origins of institutionalized torture.* Routledge. [AB, MH-F, aVN]
Haritos-Fatouros, M., Huggins, M. & Zimbardo, P. G. (1994) *The official torturer under the military regime in Brazil (1964–1985): Final research report.* Stiftung für Fordering von Wissenschaft und Kultur. [aVN]
Haritos-Fatouros, M. & Zimbardo, P. (2005) The Iraqi torturers: A commentary and an analysis. Paper read at the International Society of Political Psychology (ISPP) Conference, Toronto, Canada. [MH-F, rVN]
Harlow, H. (1953) Mice, monkeys, men, and motives. *Psychological Review* 60:23–32. [RS]
Hawkes, K., O'Connell, J. F. & Blurton Jones, N. G. (2001) Hadza meat sharing. *Evolution and Human Behavior* 22:113–42. [aVN]
Hayes, S. C., Barnes-Holmes, D. & Roche, B. (2001) *Relational frame theory: A post-Skinnerian account of human language and cognition.* Kluwer Academic/Plenum. [KT]

Heilbroner, H. L. (1992) Economic systems. *The new Encyclopaedia Britannica* 17:906–13. [aVN]

Heim, C., Owens, M. J., Plotsky, P.M. & Nemeroff, C.B. (1997a) Persistent changes in corticotropin-releasing factor systems because of early life stress: Relationship to the pathophysiology of major depression and post-traumatic stress disorder. *Psychopharmacology Bulletin* 33(2):185–92. [JES]

(1997b) The role of early adverse life events in the etiology of depression and posttraumatic stress disorder: Focus on corticotropin-releasing factor. *Annals of the New York Academy of Sciences* 821:194–207. [JES]

Held, R. (1985) *Inquisition: A bilingual guide to the exhibition of torture instruments from the Middle Ages to the Industrial Era, presented in various European cities in 1983–87* Qua d'Arno. [arVN]

Hemingway, E. (1932/1996) *Death in the afternoon.* Simon & Schuster. [NZ]

(1939/1994) *Death in the afternoon.* Arrow. [aVN]

Herr, M. (1978) *Dispatches.* Pan. [aVN]

Herzog, H. A. (1985) Cockfighting in Southern Appalachia. *Appalachian Journal* 12:114–26. [HH]

Herzog, H. & Cheek, P. B. (1979) Grit and steel: The anatomy of cockfighting. *Southern Exposure* 7(2):36–40. [aVN]

Hirschman, A. (1977) *The passions and the interests*. Princeton University Press. [GA]

Hobbes, T. (1651/1996) *Leviathan.* Oxford University Press. [aVN]

Holmberg, A. R. (1950) *Nomads of the long bow: The Siriono of eastern Bolivia.* U.S. Government Printing Office. [aVN]

Holmes, S. J. & Robins, L. N. (1988) The role of parental disciplinary practices in the development of depression and alcoholism. *Psychiatry* 51(1):24–36. [JES]

Holt, S. E., Meloy, J. R. & Strack, S. (1999) Sadism and psychopathy in violent and sexually violent offenders. *Journal of the American Academy of Psychiatry and the Law* 27:23–32. [ACR]

Homer (c. 800 BC/1990) *The Iliad*, trans. R. Fagles. Penguin. [aVN]

Hoptman, M. J. (2003) Neuroimaging studies of violence and antisocial behavior. *Journal of Psychiatric Practice* 9(4):265–78. [HM]

Hori, N., Yuyama, N. & Tamura, K. (2004) Biting suppresses stress-induced expression of corticotropin-releasing factor (CRF) in the rat hypothalamus. *Journal of Dental Research* 83(2):124–28. [MFD]

Hornblower, S. & Spawforth, A. (1999) *The Oxford classical dictionary.* Oxford University Press. [aVN]

Horvitz, J. C. (2000) Mesolimbocortical and nigrostriatal dopamine responses to salient non-reward events. *Neuroscience* 96:651–56. [R-PB]

Hubbard, J., Smithmeyer, C. M., Ramsden S. R., Parker, E. H., Flanagan, K. D., Dearing K. F., Releya, N. & Simons, R. F. (2002) Observational, physiological and self-report measures of children's anger: Relations to reactive versus proactive aggression. *Child Development* 4:1101–18. [MPote]

Huggins, M. K. (2000) Legacies of authoritarianism: Brazilian torturers' and murderers' reformulation of memory. *Latin American Perspectives* 27:57–78. [aVN]

Huizink, A. C., Mulder, E. J. H. & Buitelaar, J. K. (2004) Prenatal stress and risk for psychopathology: Specific effects or induction of general susceptibility? *Psychological Bulletin* 130:115–42. [MIdA]

Humphreys, A. P. & Smith, P. K. (1987) Rough and tumble, friendship, and dominance in schoolchildren: Evidence for continuity and change with age. *Child Development* 58:201–12. [MPote]

Huot, R. L., Gonzalez, M. E., Ladd, C. O., Thrivikraman, K. V. & Plotsky, P. M. (2004) Foster litters prevent hypothalamic-pituitary-adrenal axis sensitization mediated by neonatal maternal separation. *Psychoneuroendocrinology* 29(2):279–89. [JES]

Hyde, J. S. (1984) How large are gender differences in aggression? A developmental meta-analysis. *Developmental Psychology* 20:722–36. [AB]

Ikemoto, S. & Panksepp, J. (1999) The role of nucleus accumbens DA in motivated behaviour: A unifying interpretation with special reference to reward-seeking. *Brain Research Reviews* 31:6–41. [R-PB, JP]

Ingle, D. (2004) Recreational fighting. In: *Encyclopedia of Recreation and Leisure in America: vol. 2*, ed. G. S. Cross, pp. 198–200. Scribner. [MPote]

Jackson, D. C., Malmstadt, J. R., Larson, C. L. & Davidson, R. J. (2000) Suppression and enhancement of emotional responses to unpleasant pictures. *Psychophysiology* 37(4):515–22. [HM]

Jackson, R. R. & Pollard, S. D. (1996) Predatory behavior of jumping spiders. *Annual Review of Entomology* 1:287–308. [aVN]

James, W. (1890/1998) *The principles of psychology: Vol. II.* Henry Holt. [rVN, JP]

(1907/2000) *Pragmatism and other writings.* Penguin. [rVN]

Johnson, A. W. & Earle, T. (1987) *The evolution of human societies: From foraging group to agrarian state.* Stanford University Press. [aVN]

Joseph, B. (1986) Envy in everyday life. *Psychoanalytic Psychotherapy* 2:13–22. [R-PB]

Kaminer, D. & Stein, D. J. (2001) Sadistic personality disorder in perpetrators of human rights abuses: A South African case study. *Journal of Personality Disorders* 15:475–86. [DJS]

Kaufman, G. (1985) *Shame: The power of caring*, 2nd edition. Schenkman Books. [NNP]

Kaufman, J. & Charney, D. (2001) Effects of early stress on brain structure and function: Implications for understanding the relationship between child maltreatment and depression. *Development and Psychopathology* 13(3):451–71. [JES]

Kaufman, J., Yang, B. Z., Douglas-Palumberi, H., Houshyar, S., Lipschitz, D., Krystal, J. H. & Gelernter, J. (2004) Social supports and serotonin transporter gene moderate depression in maltreated children. *Proceedings of the National Academy of Sciences USA* 101(49):17316–21. [JES]

Kavaliers, M. & Colwell, D. D. (1994) Parasite infection attenuates nonopioid mediated predator-induced analgesia in mice. *Physiology and Behaviour* 55:505–10. [aVN]

Kavaliers, M., Colwell, D. D. & Choleris, E. (1998) Sex differences in opioid and N-methyl-D-aspartate mediated nonopioid biting fly exposure induced analgesia in deer mice. *Pain* 77:163–71. [aVN]

Kellert, S. R. & Felthous, A. R. (1985) Childhood cruelty toward animals among criminals and noncriminals. *Human Relations* 38:1113–29. [HH]

Kelley, A. E. (2004) Memory and addiction: Shared neural circuitry and molecular mechanisms. *Neuron* 44:161–79. [MIdA]

Kiefer, O. (1938) *Sexual life in ancient Rome.* Routledge. [aVN]

Kimbrough, R., ed. (1972) *Heart of Darkness: An authoritative text, backgrounds and sources, criticism.* Norton. [aVN]

Klimley, A. P. (1994) The predatory behavior of the white shark. *American Scientist* 82:122–33. [aVN]

Klinger, E. (1971) *Structure and functions of fantasy.* Wiley. [aVN]

Krebs, J. R. & Davies, N. B. (1993) *An introduction to behavioral ecology*, 3rd edition. Blackwell. [RS]

Kropotkin, P. (1908) *Mutual aid: A factor of evolution*. Heinemann. (Originally published as essays 1890–96.) [MAF]

Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B. & Lozano, R. (2002) *World report on violence and health.* World Health Organisation. [aVN]

Kruuk, H. (1972) *The spotted hyena: A study of predation and social behaviour.* University of Chicago Press. [aVN]

Kuhnen, C. M. & Knutson, B. (2005) The neural basis of financial risk taking. *Neuron* 47:1–8. [JP]

Ladd, C. O., Owens, M. J. & Nemeroff C. B. (1996) Persistent changes in corticotropin-releasing factor neuronal systems induced by maternal deprivation. *Endocrinology* 137(4):1212–18. [JES]

Lafaye, G. (1896) Gladiator. In: *Dictionnaire des antiquités Grecques et Romaines.* Librairie Hachette. [aVN]

Landau, M. J., Solomon, S., Greenberg, J., Cohen, F., Pyszczynski, T., Arndt, J., Miller, C., Ogilvie, D. M. & Cook, A. (2004) Deliver us from evil: The effects of mortality salience and reminders of 9/11 on support for President George W. Bush. *Personality and Social Psychology Bulletin* 30:1136–50. [SKo]

Lea, S. E. G. (1999) The background to hominid intelligence. In: *The descent of mind: Psychological perspectives on hominid evolution*, ed. M. C. Corballis & S. E. G. Lea. pp. 16–39. Oxford University Press. [aVN]

LeBlanc, S. & Register, K. (2003) *Constant battles: The myth of the peaceful, noble savage*. St. Martin's Press. [MPott]

Lee, R. B. (1968) What hunters do for a living, or, How to make out on scarce resources. In: *Man the hunter*, ed. R. B. Lee & I. DeVore. Aldine. [aVN]

(1984) *The Dobe !Kung.* Holt, Rinehart & Winston. [aVN]

(1979) *!Kung San: Men, women, and work in a foraging society.* Cambridge University Press. [aVN]

Lee, R. B. & DeVore, I., eds. (1968) *Man the hunter.* Aldine. [aVN]

Lena, I., Parrot, S., Deschaux, O., Muffat, S., Sauvinet, V., Renaud, B., Suaud-Chagny, M. F. & Gottesmann, C. (2005) Variations in the extracellular levels of dopamine, noradrenaline, glutamate and aspartate across the sleep-wake cycle in the medial prefrontal cortex and nucleus accumbens of freely moving rats. *Journal of Neuroscience Research* 81:891–99. [JP]

Lerner, J. S., Tiedens, L. Z. and & Gonzalez, R. M. (in press) Portrait of the angry decision maker: How appraisal tendencies shape anger's influence on cognition. *Journal of Behavioral Decision Making*, No. 2. [GA]

Levy, R. I. (1969) On getting angry in the Society Islands. In: *Mental health research in Asia and the Pacific*, ed. W. Caudill and T.-Y. Lin, pp. 358–80. East-West Center Press. [AB]

Lockwood, R. & Ascione, F. R. (1997) *Cruelty to animals and interpersonal violence: Readings in research and application.* Purdue University Press. [ANR]

Lorenz, K. Z. (1963/2002) *On aggression.* Harcourt/Routledge. [aVN, R-PB]

Lowe, C. G., Bray, R. N. & Nelson, D. R. (1994) Feeding and associated electrical behavior of the Pacific electric ray *Torpedo californica* in the field. *Marine Biology* 120:161–69. [aVN]

Luk, E., Staiger, P., Wong, L. & Mathai, J. (1999) Children who are cruel to animals: A revisit. *Australian and New Zealand Journal of Psychiatry* 33:29–36. [SKr]

Lutwak, N., Panish, J., Ferrari, J. & Razzino, B. (2001) Shame and guilt and their relationship to positive expectations and anger expressiveness. *Adolescence* 33(144):641–53. [NNP]

Macdonald, L. (1983) *Somme*. Dorset Press. [MPott]

Machado, C. J. & Bachevalier, J. (2003) Non-human primate models of childhood psychopathology: The promise and the limitations. *Journal of Child Psychology and Psychiatry* 44:64–87. [R-PB]

Machiavelli, N. (1513/1940) *The Prince.* Modern Library. [aVN]

Makara, G. B. & Haller, J. (2001) Non-genomic effects of glucocorticoids in the neural system. Evidence, mechanisms and implications. *Progress in Neurobiology* 65:367–90. [MFD]

Malatesta, C. Z. & Haviland J. M. (1982) Learning display rules: The socialization of emotion expression in infancy. *Child Development* 53:991–1003. [SKr]

Malcolmson, R. W. (1973) *Popular recreations in English society, 1700–1850.* Cambridge University Press. [aVN]

Manchanda, S. K., Poddar, A., Saha, S., Bhatia, S. C., Kumar, V .M. & Nayar, U. (1995) Predatory aggression induced by hypothalamic stimulation: Modulation by midbrain periaqueductal gray (PAG). *Neurobiology (BP)* 3:405–17. [aVN]

Manion, J. (2003) Girls blush, sometimes: Gender, moral agency, and the problem of shame. *Hypatia: A Journal of Feminist Philosophy* 18(3):21–41. [NNP]

McDougall, W. (1924) *An outline of psychology*, 2nd edition. Methuen. [R-PB]

McEwen, B. S. (2003) Early life influences on life-long patterns of behavior and health. *Mental Retardation and Developmental Disabilities Research Reviews* 9(3):149–54. [JES]

McGregor, H. A., Lieberman, J. D., Greenberg, J., Solomon, S., Arndt, J., Simon, L. & Pyszczynski, T. (1998) Terror management and aggression: Evidence that mortality salience motivates aggression against worldview-threatening others. *Journal of Personality and Social Psychology* 74:590–605. [SKo]

Mead, G. H. (1934) Mind, self, and society from the standpoint of a social behaviorist. In: *Works of George Herbert Mead, vol. 1.* University of Chicago Press. [MAF]

Mead, M. (1937) *Cooperation and competition among primitive peoples*. McGraw-Hill. [MAF]

Mealey, L. (1995) The sociobiology of sociopathy: An integrated evolutionary model. *Behavioral and Brain Sciences* 18:523–99. [aVN]

Meaney, M. J. & Szyf, M. (2005) Maternal care as a model for experience-dependent chromatin plasticity? *Trends in Neuroscience* 28(9):456–63. [JES]

Meloy, J. R. (1997) The psychology of wickedness: Psychopathy and sadism. *Psychiatric Annals* 27:630–33. [ACR]

Merz-Perez, L. & Heide, K. M. (2004) *Animal cruelty: Pathway to violence against people*. Altamira Press. [HH]

Mesquite, C. & Weiner, N. I. (1997) Male age composition and severity of conflicts. *Politics and the Life Sciences* 18:181–89. [MPott]

Milgram, S. (1969/1974) *Obedience to authority: An experimental view.* Harper & Row/Tavistock. [AB, MH-F, arVN, MPott]

Miller, A. L. & Olson, S. L. (2000) Emotional expressiveness during peer conflicts: A predictor of social maladjustment among high-risk preschoolers. *Journal of Abnormal Child Psychology*, 28:339–52. [MPote]

Miller, K. & Knutson, J. (1997) Reports of severe physical punishment and exposure to animal cruelty by inmates convicted of felonies and by university students. *Child Abuse and Neglect* 21:59–82. [HH]

Miller, W. I. (1993) *Humiliation and other essays on honor, social discomfort, and violence.* Cornell University Press. [aVN]

Millon, T., Davis, R. D. & Millon, C. (1997) *Millon Clinical Multiaxial Inventory-III manual*, 2nd edition. National Computer Systems. [ACR]

Mills, M. G. L. (1990) *Kalahari hyenas: Comparative behavioural ecology of two species*. Chapman & Hall. [aVN]

Mills, M. G. L. & Harvey, M. (2001) *African predators.* Struik. [aVN]

Milton, J. (1994) Abuser and abused: Perverse solutions following childhood abuse. *Psychoanalytic Psychotherapy* 8:243–55. [R-PB]

Mitani, J. C. & Watts, D. P. (1999) Demographic influences on the hunting behavior of chimpanzees. *American Journal of Physical Anthropology* 109:439–54. [aVN]

Mitchell, A., ed. (1997) *The Amazon journal of Roger Casement.* Anaconda. [aVN]

Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A. & Wager, T. D. (2000) The unity and diversity of executive functions and their contributions to complex "frontal lobe" tasks: A latent variable analysis. *Cognitive Psychology* 41:49–100. [ACR]

Mock, D. W. & Parker, G. A. (1998) Siblicide, family conflict and the evolutionary limits of selfishness. *Animal Behaviour* 56:1–10. [MPote]

Moerk, E. L. (1995) Acquisition and transmission of pacifist mentalities in Sweden: Peace and conflict. *Journal of Peace Psychology* 1:291–307. [AB]

Moll, J., Zahn, R., de Oliveira-Souza, R., Krueger, F. & Grafman, J. (2005) The neural basis of human moral cognition. *Nature Review Neuroscience* 6:799–809. [BK]

Morgan, A. B. & Lilienfeld, S. O. (2000) A meta-analytic review of the relation between antisocial behavior and neuropsychological measures of executive function. *Clinical Psychology Review* 20:113–36. [ACR]

Moya-Albiol, L. (2004) Bases neurales de la violencia humana. *Revista de Neurología* 38:1067–75. [MIdA]

Musurillo, H. (1979) *The acts of the Christian martyrs.* Oxford University Press. [aVN]

National Geographic (1995) *The new chimpanzees.* National Geographic Films. [aVN]

Nell, V. (2004) Compassion. In: *Oxford companion to the mind*, 2nd edition, ed. R. Gregory, pp. 193–95. Oxford University Press. [aVN]

Nell, V. & Butchart, A. (1989) Studying violence in a South African city. *Critical Health* 28:44–49. [rVN]

Niehoff, D. (1999) *The biology of violence.* Free Press. [aVN]

Nietzsche, F. (1886/1973) *Beyond good and evil.* Penguin. [NZ]

Nissenbaum, L. K., Zigmond, M. J., Sved, A. F., & Abercrombie, E. D. (1991) Prior exposure to chronic stress results in enhanced synthesis and release of hippocampal norepinephrine in response to a novel stress. *Journal of Neuroscience* 11:1478–84. [MFD]

Nussbaum, M. (2004) *Hiding from humanity: Disgust, shame, and the law.* Princeton University Press. [NNP]

Ochsner, K. N. & Feldman Barrett, L. (2001) A multiprocess perspective on the neuroscience of emotion. In: *Emotions. Current issues and future directions*, ed. T. J. Mayne & G. A. Bonanno, pp. 38–81. Guilford Press. [ACR]

O'Connell, J. F., Hawkes, K. & Blurton Jones, N. G. (1999) Grandmothering and the evolution of Homo erectus. *Journal of Human Evolution* 36:461–85. [aVN]

Olsson, A., Ebert, J. P., Banaji, M. R. & Phelps, E. A. (2005) The role of social groups in the persistence of learned fear. *Science* 309:785–87. [MPott]

Ovid (c. 8 AD/1997) *Tales from Ovid: Twenty-four passages from the* Metamorphoses, trans. T. Hughes. Faber and Faber. [aVN]

Panksepp, J. (1971a) Drugs and "stimulus-bound" attack. *Physiology and Behavior* 6:317–20. [JP]

(1971b) The control of fighting between passive and aggressive rats. *Communications in Behavioral Biology* 6:233–35. [JP]

(1993) Rough-and-tumble play: A fundamental brain process. In: *Parents and Children Playing*, ed. K. B. MacDonald, pp. 147–84. SUNY Press. [JP]

(1998) *Affective neuroscience: The foundations of human and animal emotions.* Oxford University Press. [aVN, JP]

(2005) On the embodied neural nature of core emotional affects. *Journal of Consciousness Studies* 12:161–87. [JP]

Panksepp, J. & Burgdorf, J. (2003) "Laughing" rats and the evolutionary antecedents of human joy? *Physiology and Behavior* 79:533–47. [RS]

Panksepp, J., Jalowiec, J., DeEskinazi, F. G. & Bishop, P. (1985) Opiates and play dominance in juvenile rats. *Behavioral Neuroscience* 99:441–53. [JP]

Panksepp, J. & Panksepp, J. B. (2000) The seven sins of evolutionary psychology. *Evolution and Cognition* 6:108–31. [aVN]

Panksepp, J. & Zellner, M. (2004) Towards a neurobiologically based unified theory of aggression. *Revue Internationale de Psychologie Sociale/International Review of Social Psychology* 17:37–61. [JP]

Paolucci, E. O., Genuis, M. L. & Violato, C. (2001) A meta-analysis of the published research on the effects of child sexual abuse. *Journal of Psychology* 135:17–36. [DJS]

Pardon, M.-C., Gould, G. G., Garcia, A., Phillips, L., Cook, M. C., Miller, S. A., Mason, P. A. & Morilak, D. A. (2002) Stress reactivity of the brain noradrenergic system in three rat strains differing in their neuroendocrine and behavioral responses to stress: Implications for susceptibility to stress-related neuropsychiatric disorders. *Neuroscience* 115:229–42. [MFD]

Parkinson, J. A., Cardinal, R. N. & Everitt, B. J. (2000) Limbic cortical-ventral striatal systems underlying appetitive conditioning. *Progress in Brain Research* 126:263–85. [R-PB]

Patterson, G. R., Littman, R. A. & Bricker, W. (1967) Assertive behavior in children: A step toward a theory of aggression. *Monographs of the Society for Research in Child Development* 32:1–36. [KT]

Pedersen, C. A. (2004) Biological aspects of social bonding and the roots of human violence. *Annals New York Academy of Science* 1036:106–27. [MIdA]

Pellis, S. M. & Pellis, V. C. (1998) Play fighting of rats in comparative perspective: A schema for neurobehavioral analyses. *Neuroscience and Biobehavioral Reviews* 23:87–101. [MPote]

Pietrini, P., Guazzelli, M., Basso, G., Jaffe, K. & Grafman, J. (2000) Neural correlates of imaginal aggressive behavior assessed by positron emission tomography in healthy subjects. *American Journal of Psychiatry* 157(11):1772–81. [HM]

Pine, D. S., Mogg, K., Bradley, B. P., Montgomery, L., Monk, C. S., McClure, E., Guyer, A. E., Ernst, M., Charney, D. S. & Kaufman, J. (2005) Attention bias to threat in maltreated children: Implications for vulnerability to stress-related psychopathology. *American Journal of Psychiatry* 162(2):291–96. [JES]

Piper, H. (2003) The linkage of animal abuse with interpersonal violence: A sheep in wolf's clothing? *Journal of Social Work* 3:161–77. [HH]

Platt, J. R. (1964) Strong inference. *Science* 146(3642):347–53. [BK]

Plotkin, H. C. (1996) Nongenetic transmission of information: Candidate cognitive processes and the evolution of culture. *Behavioural Processes* 35:207–13. [aVN]

Plummer, T. & Stanford, C. B. (2000) Analysis of a prey bone assemblage made by wild chimpanzees in Gombe National Park. Unpublished paper. [aVN]
Plutarch (c.100 AD/1988) Lycurgus. In *Plutarch on Sparta*, ed. R. J. A. Talbert. Penguin. [aVN]
Popper, K. R. (1963) *Conjectures and refutations*. Routledge and Kegan Paul. [BK]
Potegal, M. (1979) The reinforcing value of several types of aggressive behavior: A review. *Aggressive Behavior* 5:353–73. [MPote]
(1994) Aggressive arousal: The amygdala connection. In: *The Dynamics of aggression: Biological and social processes in dyads and groups*, ed. M. Potegal & J. F. Knutson, pp.73–111. Erlbaum. [MPote]
Premack, D. (1988) "Does the chimpanzee have a theory of mind?" revisited. In: *Machiavellian intelligence: Social expertise and the evolution of intellect in monkeys, apes, and humans*, ed. R. W. Byrne & A. Whiten. Oxford University Press. [aVN]
Preston, S. D. & de Waal, F. B. M. (2002) Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences* 25:1–20. [DJS]
Puppi, L. (1991) *Torment in art.* Rizzoli. [aVN]
Pyszczynski, T., Abdolahi, A., Solomon, S., Greenberg, J., Cohen, F. & Weise, D. (2006) Mortality salience, martyrdom, and military might: The great Satan versus the axis of evil. *Personality and Social Psychology Bulletin* 32(4): 525–37. [SKo]
Quinlisk, J. A. (1999) Animal abuse and family violence. In: *Child abuse, domestic violence, and animal abuse: Linking the circles of compassion for prevention and intervention*, ed. F. R. Ascione & P. Arkow, pp. 168–75. Purdue University Press. [ANR]
Raine, A., Buchsbaum, M. S., Stanley, J., Lottenberg, S., Abel, L. & Stoddard, J. (1994) Selective reductions in prefrontal glucose metabolism in murderers. *Biological Psychiatry* 36(6):365–73. [HM]
Raine, A., Meloy, J. R., Bihrle, S., Stoddard, J., LaCasse, L. & Buchsbaum, M. S. (1998) Reduced prefrontal and increased subcortical brain functioning assessed using positron emission tomography in predatory and affective murderers. *Behavioral Sciences and the Law* 16(3):319–32. [HM]
Rawls, J. (1971) *A theory of justice*. Cambridge University Press. [NNP]
Reich, W., ed. (1990) *Origins of terrorism: Psychologies, ideologies, theologies, states of mind.* Cambridge University Press. [AB]
Remage-Healey, L. & Bass, A. H. (2004) Rapid, hierarchical modulation of vocal patterning by steroid hormones. *Journal of Neuroscience* 24:5892–900. [MFD]
Richards, M. P., Pettitt, P. B., Trinkaus, E., Smith, F. H., Paunovic, M. & Karavanic, I. (2000) Neanderthal diet at Vindija and Neanderthal predation: The evidence from stable isotopes. *Proceedings of the National Academy of Sciences USA* 2097(13):7663–66. [aVN]
Ricks, T. (1998) *Making the corps*. Simon & Shuster. [MPott]
Ridley, M. (1993) *The Red Queen: Sex and the evolution of human nature.* Viking. [aVN]
Rind, B., Tromovitch, P. & Bauserman, R. (1998) A meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychological Bulletin* 124:22–53. [HH]
Robbins, R. H. (1960) *Encyclopaedia of witchcraft and demonology.* Crown. [aVN]
Rolls, E. T. (1999) *The brain and emotion.* Oxford University Press. [aVN]
Roozendaal, B., de Quervqin, E.-F., Ferry, B., Setalo, G. & McGaugh, J. L. (2001) Basolateral amygdala-nucleus accumbens interactions in mediating glucocorticoid enhancement of memory consolidation. *Journal of Neuroscience* 21:2518–25. [MFD]
Rowan, A. N. (1999) Cruelty and abuse to animals: A typology. In: *Child abuse, domestic violence, and animal abuse: Linking the circles of compassion for prevention and intervention*, ed. F. R. Ascione & P. Arkow, pp. 328–34. Purdue University Press. [ANR]
Roy, A. (2005) Childhood trauma and impulsivity: Possible relevance to suicidal behavior. *Archives of Suicide Research* 9(2):147–51. [JES]
Ruocco, A. C. & Swirsky-Sacchetti, T. (in press) Personality disorder symptomatology and neuropsychological function in closed head injury. *The Journal of Neuropsychiatry and Clinical Neurosciences*. [ACR]
Sade, Marquis de (1798/1968) *Juliette.* Grove Weidenfeld. [aVN]
Sallustius (361 AD/1926) *Concerning the gods and the universe*, ed. A. D. Nock. Longmans. [aVN]
Salmivalli, C., Lagerspetz, K., Bjorkqvist, K., Osterman, K. & Kaukianen, A. (1996) Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior* 22:1–15. [KT]
Sanday, P. R. (1981) The socio-cultural context of rape: A cross-cultural study. *The Journal of Social Issues* 37:5–27. [AB]
Sandler, J. & Quagliano, J. (1964) Punishment in a signal avoidance situation. Paper presented at the Meeting of the Southeastern Psychological Association, Gatlinburg, TN. [AB]
Sapolsky, R. M. & Share, L. J. (2004) A pacific culture among wild baboons: Its emergence and transmission. *Public Library of Science, Biology* 2:0534–541. [MFD]
Scarry, E. (1985) *The body in pain: The making and unmaking of the world*. Oxford University Press. [NNP]
Schaller, G. B. (1972) *The Serengeti lion: A study of predator-prey relations*. University of Chicago Press. [RS]
(1973) *Serengeti: A kingdom of predators.* Collins. [aVN]
Schopenhauer, A. (1841/1965) *On the basis of morality*, trans. E. F. J. Payne. Bobbs-Merrill/Library of Liberal Arts. (First published in 1841.) [MAF]
Schuster, R. (1969) A functional analysis of conditioned reinforcement. In: *Conditioned reinforcement*, ed., D. P. Hendry, pp. 191–234. Dorsey Press. [RS]
Schuster, R. & Perelberg, A. (2004) Why cooperate? An economic perspective is not enough. *Behavioral Processes* 66:261–77. [RS]
Scriptores Historiae Augustae (c. 500 AD/1961). Heinemann. [aVN]
Scruton, R. (1998) *On hunting.* Yellow Jersey. [NZ]
Selby, D. (1995) *EarthKind: A teacher's handbook on humane education*. Trentham Books. [MAF]
Seligman, M. E. (1971) Phobias and preparedness. *Behavior Therapy* 2:307–20. [KT]
Shakur, S. (1993) *Monster: The autobiography of an L.A. gang member*. Atlantic Monthly Press. [MPott]
Silk, J. B. (2002) Practice random acts of aggression and senseless acts of intimidation: The logic of status contests in social groups. *Evolutionary Anthropology* 11:221–25. [MPote]
Sinha, R., Lacadie, C., Skudlarski, P. & Wexler, B. E. (2004) Neural circuits underlying emotional distress in humans. *Annals New York Academy Science* 1032:254–57. [MIdA]
Sinha, R., Talih, M., Malison, R., Cooney, N., Anderson, G. M. & Kreek, M. J. (2003) Hypothalamic-pituitary-adrenal axis and sympatho-adreno-medullary responses during stress-induced and drug cue-induced cocaine craving states. *Psychopharmacology* 170:62–72. [MIdA]
Skinner, B. F. (1953) *Science and human behavior*. Macmillan. [KT]
Skyrms, B. (1996) *Evolution of the social contract*. Cambridge University Press. [MAF]
Solomon, S., Greenberg, J. & Pyszczynski, T. (1991) Terror management theory of self-esteem. In: *Handbook of social and clinical psychology: The health perspective*, ed. C. R. Snyder & D. Forsyth, pp. 21–40. Pergamon. [SKo]
Soloviev, S. (2002) Russian society under Ivan the Terrible. In: *History of Russia: Vol. 12*, trans. T. A. Smith. Academic International Press. [BK]
Spillius, E. B. (1993) Varieties of envious experience. *International Journal of Psychoanalysis* 74:1199–212. [R-PB]
Sroufe, A. (1983) Infant-caregiver attachment and patterns of adaptation in preschool: The roots of maladaptation and competence. In: *The Minnesota symposium on child psychology, vol. 16*, ed. M. Perlmutter, pp. 41–83. Erlbaum. [MPote]
Stanford, C. B. (1999) *The hunting apes: Meat eating and the origins of human behaviour.* Princeton University Press. [aVN]
Stanford, C. B., Wallis, J., Mpongo, E. & Goodall, J. (1994) Patterns of predation by chimpanzees on red colubus monkeys in the Gombe National Park, 1982–1991. *American Journal of Physical Anthropology*, 94:213–28. [aVN]
Stein, D. J. (1996) The philosophy of psychopathy. *Perspectives in Biology and Medicine* 39:569–80. [DJS]
(2000) The neurobiology of evil: Psychiatric perspectives on perpetrators. *Ethnicity and Health* 5:305–15. [DJS]
(2005) Empathy: At the heart of the mind. *CNS Spectrums*.10:780–83. [DJS]
Stein, D. J., Harvey, B. H., Uys, J. & Daniels, W. (2005) Suffer the children: The psychobiology of early adversity. *CNS Spectrums* 10:612–15. [DJS]
Stein, D. J., Seedat, S. & Emsley, R. A. (2002) Violence in the world: What is a doctor to do? *South African Medical Journal* 92:789–90. [DJS]
Sternberg, J. (2005) *Infant observation at the heart of training.* Karnac Books. [SKr]
Stone, L. J. & Hokanson, J. E. (1969) Arousal reduction via self-punitive behavior. *Journal of Personality and Social Psychology* 16:319–28. [AB]
Suetonius (100 AD/1984) *The Twelve Caesars*, trans. R. Graves. Penguin. [aVN]
Tapper, K. & Boulton, M. J. (2002) Studying aggression in school children: The use of a wireless microphone and micro-video camera. *Aggressive Behavior* 28:356–65. [KT]
(2004) Sex differences in levels of physical, verbal and indirect aggression amongst primary school children and their associations with beliefs about aggression. *Aggressive Behavior* 30:123–45. [KT]
(2005) Observed victim and peer responses to physical, verbal, indirect and relational aggression amongst primary school children. *Aggressive Behavior* 31:238–53. [KT]
Tatar, M. M. (1995) *Lustmord: Sexual murder in Weimar Germany.* Princeton University Press. [aVN]
Taussig, M. T. (1986) *Shamanism, colonialism, and the wild man: A study in terror and healing.* University of Chicago Press. [aVN]
Taylor, G. T. (1977) Affiliation in highly aggressive domestic rats. *Journal of Comparative and Physiological Psychology* 91:1128–35. [MPote]

Tertullian (197 AD/1958) *Apology* and *De Spectaculis.* Harvard University Press. [aVN]
Tester, K. (1997) *Moral culture.* Sage. [aVN]
Tiger, L. (1992) *The pursuit of pleasure*. Little, Brown. [LT]
Timerman, J. (1981) *Prisoner without a name, cell without a number.* Knopf. [aVN]
Tomasello, M., Call, J. & Gluckman, A. (1998) Comprehension of novel communicative signs by apes and human children. *American Journal of Primatology* 46:85–101. [aVN]
Tremblay, R. E. & Nagin, D. S. (2005) The developmental origins of physical aggression in humans. In: *Developmental origins of aggression*, ed. R. E. Tremblay, W. W. Hartup & J. Archer, pp. 83-106. Guilford Press. [MPote]
Trinkaus, E. (1992) Neanderthals. *The new Encyclopaedia Britannica* 18:836–38. [aVN]
Ulrich, H. M., Randolph, M. & Acheson, S. K. (in press) Child sexual abuse: A reexamination of the meta-analytic examination of child sexual abuse by Rind, Tromovitch, and Bauserman (1998). *Scientific Review of Mental Health Practice.* [HH]
Vaca-Guzman, M. & Arluke, A. (2006) Normalizing cruelty: The excuses and justifications of animal horders. *Anthrozoös* 18:338–57. [HH]
Valentino, R. J., Foote, S. L. & Aston-Jones, G. (1983) Corticotropin-releasing factor activates noradrenergic neurons of the locus coeruleus. *Brain Research* 270:363–67. [MFD]
Van Lawick, H. (1977) *Savage paradise: The predators of Serengeti.* Collins. [aVN]
Vermeulen, H. & Odendaal, J. S. J. (1993) A typology of companion animal cruelty. *Anthrozoos* 6:248–57. [ANR]
Victor, J. (1981) *Confesiones de un torturador.* Editorial Laia. [aVN]
Virgin, C. E. J. & Sapolsky, R. M. (1997) Styles of male social behavior and their endocrine correlates among low-ranking baboons. *American Journal of Primatology* 42:25–39. [MFD]
Volavka, J. (1999) The neurobiology of violence: An update. *Journal of Neuropsychiatry and Clinical Neurosciences* 11(3):307–14. [HM]
Volkow, N. D., Tancredi, L. R., Grant, C., Gillespie, H., Valentine, A., Mullani, N., Wang, G. J. & Hollister, L. (1995) Brain glucose metabolism in violent psychiatric patients: A preliminary study. *Psychiatry Research* 61(4):243–53. [HM]
Walker, P. L. (1989) Cranial injuries as evidence of violence in prehistoric southern California. *American Journal of Physical Anthropology* 80:313–23. [aVN]
Watt, D. F. (2005) Social bonds and the nature of empathy. *Journal of Consciousness Studies* 12:188–212. [JP]
Watts, D. P. & Mitani, J. C. (2001) Boundary patrols and intergroup encounters in wild chimpanzees. *Behaviour* 138:299–327. [RS]
Webster, M. (1963) *Webster's Seventh New Collegiate Dictionary*. Merriam Webster. [MFD]
Weinberg, J., Erskine, M. & Levine, S. (1980) Shock-induced fighting attenuates the effects of prior shock experience in rats. *Physiology and Behavior* 25:9–16. [MFD]
Weiner, S., Shaikh, M. B., Shaikh, A. B. & Siegel, A. (1991) Enkephalinergic involvement in periaqueductal gray control of hypothalamically elicited predatory attack in the cat. *Physiology and Behavior* 49:1099–1105. [aVN]
Weiss, F. (2005) Neurobiology of craving, conditioned reward and relapse. *Current Opinion in Pharmacology* 5:9–19. [MIdA]
White, T. D. (1985) *Acheulian man in Ethiopia's Middle Awash Valley: The implications of cutmarks on the Bodo cranium.* Netherlands Museum. [aVN]
Williams, J. L. (1999) Effects of conspecific and predator odors on defensive behavior, analgesia, and spatial working memory. *Psychological Record* 49:493–536. [aVN]
Wilson, E. O. (1975/2000) *Sociobiology: The new synthesis.* Harvard. [aVN]
Wilson, M. L., Hauser, M. D. & Wrangham, R. W. (2001) Does participation in intergroup conflict depend on numerical assessment, range location, or rank for wild chimpanzees? *Animal Behaviour* 61:1203–16. [aVN]
Wistrand, M. (1992) *Entertainment and violence in ancient Rome: The attitudes of Roman writers of the first century A.D.* Acta Universitatis Gothoburgensis. [aVN]
Wong, M. T., Fenwick, P. B., Lumsden, J., Fenton, G. W., Maisey, M. N., Lewis, P. & Badawi, R. (1997) Positron emission tomography in male violent offenders with schizophrenia. *Psychiatry Research* 68(2–3):111–23. [HM]
World Animal Net (n.d.) Humane education. Available at: http://worldanimal.net/humane-ed.html. [MAF]
Worsnop, J. (1990) A reevaluation of the "problem of surplus women" in nineteenth century England. *Women's Studies International Forum* 13:21–31. [MPott]
Worthman, C. M., & Kuzara, J. (2005) Life history and the early origins of health differentials. *American Journal of Human Biology* 17(1):95–112. [JES]
Wrangham, R. (1999) Evolution of coalitionary killing. *American Journal of Physical Anthropology* 29(Suppl.):1–30. [MPott]
Wrangham, R. & Peterson, D. (1996) *Demonic males: Apes and the origins of human violence.* Houghton Mifflin/Mariner. [aVN, MPott, RS, NZ]
Wüst, S., Federenko, I. S., Van Rossum, E. C., Koper, J. W., Kumsta, R., Entringer, S. & Hellhammer, D. H. (2004) A psychobiological perspective on genetic determinants of hypothalamus-pituitary-adrenal axis activity. *Annals of the New York Academy of Science* 1032:52–62. [MIdA]
Zimbardo, P. (1970) The human choice: individuation, reason and order versus deindividuation, impulse and chaos. In: *Nebraska Symposium on Motivation.* University of Nebraska Press. [MH-F]
(1972) Pathology of imprisonment. *Trans-Action* 9:4–8. [MPott]
Zimbardo, P. G. (2003) Foreword. In: *The psychological origins of institutionalized torture*, ed. M. Haritos-Fatouros, pp. xv–xviii. Routledge. [arVN]
(2004) A situationist perspective on the psychology of evil: Understanding how good people are transformed into perpetrators. In: *The social psychology of good and evil*, ed. A. G. Miller, pp. 21–50. Guilford Press. [AB]
Zimbardo, P. G. & White, G. (1972) *Stanford Prison Experiment Slide-Tape Show*. Stanford University. [SKo]
Zimrin, H. (1986) A profile of survival. *Child Abuse and Neglect* 10:339–49. [ANR]