International Handbook of Anger
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Constituent and Concomitant Biological, Psychological, and Social Processes
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About the Editors

Michael Potegal, Ph.D., L.P. is an associate professor of pediatrics and neurology at the University of Minnesota Medical School. He received his Ph.D. in physiological psychology from MIT in 1969 and held postdoctoral fellowships in neurophysiology at the Columbia University College of Physicians and Surgeons and the University of Amsterdam (the Netherlands). Prior positions include research scientist at the N.Y. State Psychiatric Institute and NRC Senior Resident Research Associate in the Walter Reed Army Institute of Research. Prof. Potegal has served as program chair (1986) and host (2006) of the biennial meetings of International Society for Research on Aggression (ISRA), as ISRA’s representative at the UN, as ISRA council member, and as chair of the Young Investigators Program.

In 1993, Prof. Potegal integrated research and clinical interests by clinical training as a pediatric neuropsychologist, first at the University of Wisconsin and then at the University of Minnesota. He has received numerous university, foundation, federal, and international grant awards, has participated in NICHD review groups, and has published 75 papers and edited 3 books. After early studies on egocentric localization and vestibulo-spatial functions of the caudate nucleus, his research has focused on the time course and neural mechanisms of anger and aggression, most recently in children’s tantrums. Recurrent themes in Prof. Potegal’s research include the internal mechanisms that drive external aggressive behaviors and the cross-species similarity of these mechanisms in humans and other animals.

Gerhard Stemmler, Ph.D. earned his degree in 1984 at the University of Hamburg. After professorships at the University of Freiburg, he became full professor of personality psychology at the University of Marburg (Germany) in 1994. Prof. Stemmler has served as dean of the Faculty of Psychology (1995–1996, 2004–2006), president of the German Psychophysiological Society (1996–1997), and speaker of the Section for Personality Psychology and Psychological Assessment in the German Society of Psychology (2002–2004). His studies of the psychobiology of emotion and personality have identified physiological influences on self-reported experiences and observed behaviors using approaches involving genetic polymorphisms, somatovisceral psychophysiology, and EEG characteristics. In the emotion domain, his work addresses psychophysiological specificity (e.g., anger vs. fear; expectancy-wanting vs. warmth-liking) and strategies of emotion regulation. He has also done work on conflicts in motivational behavior tendencies. Within the personality domain, Prof Stemmler’s recent research addresses agentic extraversion and the effects of dopaminergic neurotransmission on behavior facilitation, positive emotionality, and working memory.

Charles D. Spielberger, Ph.D., ABPP is a distinguished research professor of psychology and director of the Center for Research in Behavioral Medicine and Health Psychology at the University of South Florida, where he has been on faculty since 1972. He previously directed the USF Doctoral Program in clinical psychology and was a tenured faculty member at Duke (1955–1962), Vanderbilt (1963–1966), and Florida State University (1967–1972). Prof. Spielberger is author, co-author, or
editor of more than 400 professional publications, including 6 books on the theory and evaluation of anxiety in sports, education, and across cultures. His *State-Trait Anger Expression Inventory* (1988, 1999) is widely used while his *State-Trait Anxiety Inventory* (1970, 1983) is a standard international measure with translations in 72 languages and dialects. He is also the author of anxiety inventories and surveys for children, tests, and job stress. His research contributions have been recognized in awards from the American Psychological Association (1993), the APA Divisions of Clinical, Community, and International Psychology, the Florida Psychological Association (1977, 1988), the Society for Personality Assessment (1990), and the Lifetime Achievement Award of the International Stress and Anxiety Research Society (STAR, 1998). Prof. Spielberger served as president of the American Psychological Association (1991–1992), the International Association of Applied Psychology (1998–2002), and the International Stress Management Association (1992–2000), as well as six other professional psychology organizations and four APA divisions. He has chaired the National Council of Scientific Society Presidents (1996–1997) and the International Psychology Committee of the National Academy of Science (1996–2000) as well as five APA national committees. Prof. Spielberger’s current research focuses on curiosity, anxiety, depression, and the experience, expression, and control of anger; job stress and stress management; and the effects of stress, emotions, and lifestyle factors on the etiology and progression of hypertension, cardiovascular disorders, and cancer.
Part I
Introduction
Chapter 1
Cross-Disciplinary Views of Anger: Consensus and Controversy

Michael Potegal and Gerhard Stemmler

Abstract The chapters of this book review current research on anger across academic disciplines, including affective neuroscience, business administration, epidemiology, health science, linguistics, political science, psychology, psychophysiology, and sociology. The opening chapters address biological bases of anger; subsequent contributions consider its constituent and concomitant psychological processes. The last chapters address anger in social context. Cross-citations in each chapter highlight similarities and differences in viewpoint among investigators in different disciplines.

The chapters of this book review state-of-the-art research on anger across a number of academic disciplines, including affective neuroscience, business administration, epidemiology, health science, linguistics, political science, psychology, psychophysiology, and sociology. The opening chapters address the biological bases of anger, examining theory and scrutinizing experimental methodology. Subsequent contributions consider constituent and concomitant psychological processes and consequences of anger. Chapters in the last sections address anger in social context. Cross-citations in each chapter refer the reader to allied material elsewhere in the book. These connections are intended to highlight similarities among, and linkages between, the problems and ideas being addressed by investigators in different disciplines using disparate terminologies and citing non-overlapping sources (cf., Wranik & Scherer vs. Tripp & Bies). Across this spectrum of disciplinary perspectives there is satisfyingly great progress toward scientific consensus, but sufficient controversy to invigorate our research efforts and enliven our discourse.

1.1 Triggers and Targets, Functions, and Social Significance of Anger

Novaco notes that the recurrent thwarting of physical, emotional, and interpersonal needs that occur in the custodial care of mentally retarded individuals contributes to their heightened propensity for anger. More generally, there is a quite broad agreement that typical triggers of anger include frustration; threats to autonomy, authority, or reputation; disrespect and insult; norm or rule violation; and a sense of injustice. Some authors subsume these various provocations under a rubric of goal blockage. There is also a general agreement that the expression of anger very much depends on target and...
social circumstance, governed by display rules that are learned in childhood (Lemerise & Harper, Hubbard, et al.). Wranik and Scherer uniquely focus on the unusual characteristics of anger at the self, which occurs with relative frequency.

The idea that anger in its most typical context serves to reinforce hierarchical social structure is given credence by some. The view that it functions to forestall transgression against the individual and prevent her/his subordination is more widely shared among our authors (e.g., Stemmler). Fessler in particular argues that the “male flash of anger” evolved as an important adaptation which sidesteps time-consuming conscious deliberation and vacillation and more-or-less automatically commits individuals to immediate, risky, but potentially reputation- and/or life saving reactions to challenge. Novaco lists the attention and motivation enhancing actions of anger, Litvak et al. document its energizing and optimism-mobilizing effects, and Lewis argues for its utility in problem solving. A number of authors cite Averill’s well-known finding that anger can help motivate constructive social interaction. The historical controversy about the beneficial vs. the baleful effects of anger continues in these pages, contrasting the foregoing views with a broad consensus about the widespread, mostly adverse and sometimes lethal effects of anger on individual health (Fernandez & Wasan, Williams), in the struggles of daily life (Scheiman), harsh child-rearing and adverse developmental outcomes (Snyder et al.), peer rejection and victimization (Lemerise & Harper), intimate partner discord (Dutton), disrupted negotiation (Van Kleef), workplace rumination and revenge (Tripp & Bies), assaults and injuries in psychiatric facilities (Novaco), and political strife and warfare (Petersen & Zukerman). Accordingly, Fernandez reviews psychotherapeutic approaches to helping people manage their anger.

1.2 Constituents of Anger

Most authors hold that anger, like other emotions, consists of distinct components with variable degrees of situation-dependent coupling among them. These components include patterns of peripheral physiological responses and brain activation, physical sensations, subjective feelings and experience, cognitions, and action tendencies. The intensely experienced physical sensations and subjective feelings associated with anger (Tripp & Bies) are captured in metaphors of a hot liquid under pressure that occur in many languages (Koveces); there is a notable congruence between these linguistic metaphors and the distinctive autonomic physiology of anger that involves increased blood pressure, total peripheral resistance, and facial warming (Stemmler). While Lewis argues that, by definition, anger must involve adaptive, problem-solving responses that can be seen as early as 2 months of age, perhaps, many authors share the view that the evolutionarily derived, ontogenetically primitive action tendency associated with anger is aggression (e.g., Berkowitz, Fessler, Litvak et al., Potegal & Qui). Neurophysiologically, Harmon-Jones et al. note that the differential activation of left frontal cortex that is characteristic of anger is maximized when there is a possibility of angry action.

Nonetheless, most authors distinguish sharply between anger and aggression at a theoretical level. It is certainly possible to be aggressive without being angry; this is aggression in its “proactive” form (Hubbard et al.). Conversely, anger without overt aggression is the norm in many cultures; the other, more prosocial responses to anger typical of well-enculturated adults are taught and learned during early social development. In psychological studies of emotional states, anger has been isolated from aggression. The situation is different with regard to trait anger, however, which was so strongly
correlated with aggression in Spielberger’s questionnaire studies that it defined an Anger–Hostility–Aggression (AHA) complex. In some fields in which the bases of behavioral traits are investigated, such as genetics (Reuter) and neurochemistry (Bond & Wingrove), correlations of biological variables are almost exclusively to AHA rather than to anger per se. AHA in adults may correspond to “reactive” aggression in children (Hubbard et al.)

1.3 Anger – Quantity, Quality, and Time Course

Most authors agree that anger ranges along a dimension of intensity, from frustration and annoyance to rage. Dutton and colleagues distinguished between “subanger” (frustration, annoyance, and irritation) and anger. As reported by Scheiman, sociological studies have compared the demographic prevalence of three levels of anger: feeling annoyed, feeling angry, and shouting. Potegal and Qiu propose to quantify the intensity range using a statistical model that is based strictly upon observed behaviors. Anger clearly varies in intensity within an episode. At extreme intensity, people become swept up in their anger, do things they might not otherwise do, and experience these acts as at least partially involuntary. Fessler argues that it is exactly this potential that makes anger so effective a social threat. Potegal and Stemmler suggest that actions committed in such “blind rages” involve not just a disinhibition of aggression, but a capture of decision making by orbitofrontal cortex and related limbic structures which replace the usual control by more dorsal regions and thereby generate the seemingly ego-alien quality of these experiences.

With regard to time course, a number of authors consider rumination, which can prolong anger well beyond the triggering incident. Potegal (Chapter 22) and Novaco (Chapter 27) both address the legal implications of persisting anger. Litvak et al. point out the sometimes pervasive and persisting effects of anger, noting that following a national crisis, it can become a national mood. Potegal sketches the rise and fall of anger, addressing mechanisms of escalation and metaphoric processes of decay, quenching, and the still controversial notion of catharsis. Fernandez incorporates a form of anger catharsis into his treatment for anger. Petersen & Zukerman introduce a framework for political scientists showing how anger supersedes rational economic choice and plays into violent, tit-for-tat struggles of dominance and revenge within and between communities. They suggest the hypothetical processes of anger decline as possible guides to appropriate political intervention in, e.g., La Violencia in Columbia.

In contrast to the strictly unidimensional view, Lewis argues that rage is a specific response to shame which is qualitatively different from anger in being more intense, prolonged, and diffuse. Wranik and Scherer propose that there are many different shades and blends of anger and other emotions depending upon person and circumstance. In particular, they differentiate among constructive, malicious, and fractious action tendencies. Potegal and Novaco note the historical recurrence of the idea that there are separate “good” and “bad” forms of anger. Fessler suggests that moral outrage is a particular form of anger that functions to discourage social deviance.

1.4 Valence and Motivation

Anger is generally held to be a negative (aversive) emotion, but one that involves active approach, in contrast to the negative emotions of sadness and fear which involve inhibition and withdrawal, respectively. While anger itself is generally negative, it can be accompanied by positive feelings, such
as increased alertness, strength, confidence, determination, and pride (Harmon-Jones et al.; Litvak et al.). These observations are consistent with the idea of anger as an approach-related emotion. Litvak et al. demonstrate that anger increases the taking of risks and optimism about the outcomes of that risk taking. These authors also hypothesize that anger is retrospectively unpleasant (when one looks back its source), but prospectively pleasant (when one contemplates future actions motivated by it).

Hemispheric asymmetries in the cerebral mediation of emotion are well established. Alternative views in which the left hemisphere is associated with positive emotion, or approach, and the right with negative emotion, or withdrawal, have focused on anger as test case of an emotion which is negative but often involves approach. Harmon-Jones et al. conclude that left frontal activation is associated with anger-motivated approach but right frontal activation is associated with anger-motivated withdrawal. Behaviorally, anger-motivated withdrawal appears as running away in children’s tantrums (Potegal & Qiu) and psychological distancing in adults (Novaco.)

1.5 Information Processing, Appraisal, and Blame

Even more than other emotions, state and trait anger has been shown to narrow and direct attention, skew information processing, and bias judgment of both expressers and perceivers (Litvak et al.; Schultze et al.) Neurologically, a number of authors cite the role of the amygdala in the perception of threateningly angry faces. Wranik and Scherer have contributed to and present a prevailing view (cf., Litvak et al.; Tripp & Bies) that a stagewise series of appraisal processes are intrinsic to the elicitation and experience of emotion, recursively proceeding and accompanying its evocation. They propose that appraisals occur on levels from the sensorimotor through the propositional, and are often automatic, rapid, and unconscious (especially if the anger is a well-practicied response to recurring situations, as in many familial conflicts.) Berkowitz asserts several important theoretical and experimental caveats to the notion that such “top-down” appraisal processes are necessary for the emotion of anger in particular. He argues that appraisal does not satisfactorily account for such “bottom-up” phenomena such as the augmentation of anger by somatosensory feedback from gesture, vocalization, and facial expression. In his alternative neo-assocationistic model, activation of one or another node of an anger network by insult, discomfort, or other aversive stimuli will activate other nodes in the network, e.g., impulses to action, like aggression (cf., Litvak et al.). Potegal and Stemmler propose the intermediate position that processing along known neurological pathways constitutes obligatory appraisals of certain sorts, but that, e.g., evocation of memories within the temporal lobe might have a neo-assocationistic cast.

The question of blame is a particular issue. One of the sequentially activated components of Wranik and Scherer’s appraisal model is an assessment of who is responsible for the offending event, and whether their action was intentional. (Tripp & Bies distinguish between bad-enough selfish intent and more egregious malevolent intent.) Berkowitz cites evidence that while blame may commonly precede anger, it is neither necessary nor sufficient. In some cases it may be, quite literally, an afterthought; we become angry first and then search for someone or something to blame our anger upon. Berkowitz offers the case of pain-elicited anger as a counterargument to the necessity for cognitive appraisals that include blame. However, Fernandez and Wasan argue that acute pain involves a necessary, if brief and unconscious, attribution of blame, perhaps even the personified pain itself. In chronic pain, rumination leads the individual to blame, e.g., the person responsible for the injury/illness, the medical healthcare provider, insurance carrier, employer, significant other, self, and/or God.
1.6 Development, Gender, Personality, and Psychopathology

Litvak et al. note that anger has such potential social impact that even 10–week olds are equipped to distinguish it from other negative emotions. Authors agree that the expression of anger appears in the first year of life, can play an important negative role in parent–child interactions (Snyder et al.) and peer relations (Hubbard et al.) and becomes socialized for most children into more acceptable forms during development by appropriate parenting; children who cannot learn to self-regulate their anger are at risk for externalizing psychopathology (Lemerise & Harper). Although there appear to be few gender differences in the experience of anger (as opposed to the experience of other emotions), by 4 or 5 years of age, girls are more likely to mask anger, and to cry, and are less likely to be physically aggressive, than boys (Fischer & Evers, Scheiman). Some authors suppose that these differences are determined by gender differences in size and strength and by women’s fear of disrupted relationships and social opprobrium; but Fessler argues that it is mostly due to the biological necessity for mothers to protect their own survival in order to raise their children to the point where they can pass their genes into the next generation. There is substantial agreement that trait anger varies across individuals (Spielberger and Reheiser), that it has biological roots (Reuter; Bond & Wingrove), and that some of the physiological and psychological characteristics of anger are seen most clearly, or sometimes only in, high trait anger individuals (Schultz et al.). Wranik and Scherer suggest that individual differences in trait anger may be logically traceable to differences in appraisal bias. What may be adaptive as a brief flash becomes psychopathological as an unremitting glare; Novaco’s review highlights the accentuation of anger in dementia and depression; its prominence in PTSD as well as in several personality disorders, and its centrality in Intermittent Explosive Disorder.

1.7 Other Emotions

Most authors distinguish anger from other emotions, in keeping with one or another version of Differential Emotions Theory. Anger is often associated or blended with other strong emotions, such as fear (Snyder et al.; Tripp & Bies) or sadness (“distress” Potegal & Qiu); according to the clinical literature, it has an especially powerful interaction with shame. The general distinction among emotions is based upon decades of painstakingly accumulated and exhaustively analyzed evidence for differences in their facial (Matsumoto et al.) and vocal (Green et al.) expression as well as their somatovisceral physiology (Stemmler). Evidence for differences in the neural substrates of various emotions has begun to emerge much more recently (Potegal & Stemmler), although Wranik and Scherer raise some questions about the specificity of these behavioral and physiological observations. Working with quite different sorts of data, Matsumoto et al., Green et al., and Kövecses express the consensus that anger and other emotions are broadly similar across cultures, although there can be notable local, cultural modifications of the expression and perception of these presumably biologically based universals.

Variations of, and alternatives to Differential Emotions Theory, e.g., that anger and other emotions refer to prototypes or scripts for feelings and behavior or families or fuzzy hierarchies of emotion, are noted by several authors. Some authors note, and Green et al. describe in detail, an alternative to the differential emotions view in which “core affects” (pleasure or displeasure) are the basis upon which experiences of emotion are socially constructed. Supporters of this perspective tend to downplay the substantial and still emerging evidence for biological rootedness and physiological specificity of anger. Time will tell which model(s) invigorate the most productive research and yield the most insightful results.
Chapter 2
A Brief History of Anger

Michael Potegal and Raymond W. Novaco

Abstract  Stories, myths, and religious beliefs reveal the powerful role that anger has played in human affairs since the beginning of recorded history. The projections of anger into the supernatural by ancient and pre-literate societies trying to account for the terrifying vagaries of nature testify to their experience with, and appreciation of, the baleful influence of anger in the human sphere. It has served as an instrument of the moral order, as cast in religious narratives and works of art, literature, and drama, and as legitimized in social rules. Various philosophies of human nature, moral conduct, and the search for perfection in human behavior have struggled to determine the essentials of anger. It is fundamentally linked to our representations of personal and societal order and disorder.

Stories, myths, and religious beliefs reveal the powerful role that anger has played in human affairs since the beginning of recorded history. The projections of anger into the supernatural by ancient and preliterate societies trying to account for the terrifying vagaries of nature testifies to their experience with, and appreciation of, the baleful influence of anger in the human sphere. It has served as an instrument of the moral order, as cast in religious narratives and works of art, literature, and drama, and as legitimized in social rules. Various philosophies of human nature, moral conduct, and seeking of perfection in human behavior have struggled to determine the essentials of anger. It is fundamentally linked to our representations of personal and societal order and disorder. Woven into the historical tapestry of human affairs are certain recurrently thematic ideas about anger. We present some of these here.

2.1 Anger: Supernatural and Superhuman

One indicator of the recurrent concern with anger is its projection onto animistic ghosts, spirits, and demons; the gods of the polytheistic pantheons; and the divinities of the modern monotheisms. The specific attributes of these projections served to illuminate anger’s effects on social organization and life. Other indicators include extensive lexicons for anger as well as cultural interdictions against it.

_The gods must be angry._ In many preliterate, animist cultures, angry, malevolent spirits were (and are) believed to cause misfortune. Some were modeled on dangerous wildlife. In the pre-Hispanic
American Southwest, where water was rare and precious, Pueblo Indians believed that intrusion into springs inhabited by horned serpent spirits would provoke these irascible entities into retaliation by drought or flood (Phillips, VanPool, & VanPool, 2006). Other spirits are more anthropomorphic. As one of the innumerable examples, among the Celts, sudden shooting pains localized to a particular area of the body with no visible cause were “elfshot,” the pain of a magical arrow shot by angry elves (Froud & Lee, 1978). In Korea, ghosts are not entitled to chesa (feast food), whether they are ancestors who haunt their own households or wandering strangers. Always hungry and full of han (resentment and sorrow at having died unsatisfied), they are held responsible for sickness and injury suffered by individuals and households (Kendall, 1985).

The anger of the gods is more dangerous that the anger of the spirits. Anthropomorphically jealous or vengeful gods are found in a number of elaborated mythologies. Was it that early people could only conceive of gods with human characteristics? Alternatively or additionally, the projection of human emotions into supernatural beings served as explanation for frightening, uncontrollable, and otherwise inexplicable, social and natural disasters, especially in cultures where both fortune and misfortune imply agency. In Assyrian cuneiform accounts (circa 1200 BCE), their conquest of Babylonian cities meant that those cities had been abandoned by their guardian deities; the messengers of the departing gods were demons who brought wind, plague, and other calamities (Buchan, 1980). When the east coast of Sri Lanka becomes excessively hot, bringing drought and disease, the goddess Pattini must be angry (Leslie, 1998). Floods of China’s Yellow River were attributed to the anger of the river god, Ho Po (Lai, 1990). Aegir, the Norse ocean god, caused storms with his anger. Thunder and lightning were attributed to the anger of the original Zeus of Greece, Thor in the Norse pantheon, and the Mayan Chac. Shango, the Nigerian Yoruba god of thunder and war, carries a lightning spear. He is still worshipped in the African-derived cults of Central America and Brazil and in the Santeria religion of Cuba (Wescott & Morton-Williams, 1962).

Specific words in ancient Hebrew (‘anaph) and Greek (Mĕnis) distinguished the power of divine anger, “dreadful, often fatal . . . to be feared and avoided” (Considine, 1986), from merely human irk. In certain versions or stages of the elaborated polytheistic mythologies, anger itself becomes personified as a deity. In Zoroastrianism, a religion dating at least to ninth/tenth century BCE, Aeshma (Aĕšma, he of the bloody mace) is the demon of wrath. In Hindu mythology, Manyu is one of the 12 aspects of Siva who was himself born of the anger of Brahma. In the Greek parsing of the varieties of anger, Nemesis was the goddess of righteous anger and divine retribution against those guilty of hubris, i.e., the fault of assuming god-like characteristics. The three female Erinyes, supernatural personifications of the vengeful anger of the dead, become the Roman Furies. Lyssa was the goddess of insane rage in the Greek pantheon; Ira is her Roman equivalent. Rabies derives from the Latin rabere (madness), the virus that makes dogs rabid was designated a genus of Lyssavirus.

What the gods were angry about. The polytheistic deities had recognizable human motivations. Poseidon felt himself the equal of Zeus and was angered by his brother’s power over the Olympians. However, what wrathful gods were most often wrathful about was disloyalty (worship of other gods) and disobedience (failure to observe rituals and prohibitions). Some insight into the nature of that projection is that anger about disloyalty/disobedience is especially characteristic of parents and chiefs. While community members may experience anger at the social deviance of others, expressing that anger is the particular province of dominant individuals and leaders who are deemed to be justified in doing so. Consider, for example, the role of chiefs’ song (justified anger) as moral guidance for Ifaluk islanders (Lutz, 1988) or the routine early morning moral instruction of younger band members by a Yanomami pata (leader/elder) whose angry shouts about their antisocial behaviors oblige them to placate him (Alés, 2000). Similarly, military training drill instructors are notorious for their (orchestrated) angry bark at the performance imperfections of recruits under their command.
The fearsomely angry personage featured in Greek and Roman stories is most often a monarch. The Roman emperor Caligula, infamous for his anger and insane murderou

cness, blended myth and terrifying reality when he declared himself a god (cf. Seneca, 44/1817).

Do people really believe in angry gods? The Airo-Pai, another Amazonian group, quiet their angry children by telling them that their shouts will attract huati, spirit monsters who feed on human souls (Belaunde, 2000). Where and when in history the anger of the gods was interpreted literally, metaphorically, or was used to frighten the children is unknown. Evidence for a literal interpretation comes from hundreds of sixth century and later Greco-Roman “curse tablets” in which people invoked various gods to wreak vengeance upon specific individuals for specific offenses (Harris, 2001). Stronger evidence is the widespread occurrence of appeasement rituals and ceremonies to abate supernatural anger ranging from the fourteenth century BCE Hittite appeasement prayers (Singer, 2002) to the still current offering of “cooling” rituals and foods to Sri Lanka’s Pattini. The hungry, angry ghosts of Korea are placated with occasional bits of food, and, when they become really noisome, by the raucous, female-dominated ritual of kut. Horses were sacrificed to Ho Po as late as the Han dynasty (206 BCE–220 CE, Lai, 1990). At least a fraction of the human sacrifices that were once prevalent in the Old World, infamously numerous in the New (Davies, 1981) and said to persist in isolated places today (Tierney, 1989), were meant to prevent or reverse natural disasters and appease the anger of the gods. The Aztecs, for example, sacrificed children to the rain god, Tlaloc – the children’s tears were thought to be a good omen (Duverger, 1983). For the affront of worshipping Baal, God says to Moses “Take all the chiefs of the people and impale them in the sun before the Lord, in order that the fierce anger of the Lord may turn away from Israel” (Numbers 25:4, New Revised Standard Version). If people did not fully believe in divine anger, they were concerned enough to hedge their bets. And, by implication, the gods not only become angry like humans, but they can be appeased like us, too.

Divine anger, one at a time. As the multiplicity of gods were banished from the Mid-East and Europe by the major monotheistic religions, deity gradually became less anthropomorphic, less sexualized, and more detached from the local landscape, distant, and abstract. Interestingly, however, Yahweh (later God) retained great capacity for anger. In the Older Testament (Hebrew Bible), Yahweh spent a lot of time being mad at people, individually and collectively. He banished Adam and Eve from the garden for disobedience and must have been really angry because he sentenced Adam and all his descendents to life at hard labor with no chance of parole. In anger, Yahweh unleashed the flood upon the world, destroyed Sodom and Gomorrah, visited plagues upon the Egyptians for not freeing the Israelites, then punished the Israelites for making the golden calf (Deut. 9:8,19,22) and on and on. In the Requiem mass (the Latin Mass of the Dead or Missa de Profundis), God’s anger is represented in the Dies Ire (Days of Rage) segment of the liturgy. So familiar is God’s anger that it is referred to as “the wrath” without further attribution.

In context and form, Yahweh’s anger is as it was for earlier gods. The sin of verbally disrespecting him has its own name, “blasphemy.” He punishes the Israelites as a father would punish errant family members; the avatars of his anger include wild beasts, famine, pestilence, and war. In a more nuanced interpretation of scripture, the destruction of the temple, devastating to the writers of the Bible because of its centrality to Jewish spiritual life, could not possibly be because the Babylonian gods were stronger than almighty Yahweh, but must be because he allowed it. Therefore, he must have been angry at the Jews for their disloyal and disobedient breaking of the covenant (worship me and you will have land and children). In the New Testament, God’s less frequent but still considerable anger is focused on disloyal non-believers (e.g., Rom. 10:14,17). Such beliefs persist, as indicated by the claims of a few Christian clergy that, e.g., the terrorist attacks of Sept. 11, 2001 or the flooding and deaths in New Orleans and other Gulf Coast cities following Hurricane Katrina in 2005 indicated God’s anger at American sins. The biblical future is as fraught as its past: On Judgment Day, 7 vials
of God’s wrath (plagues) will be poured upon the antichrist, the wicked shall be resurrected in order to be burned in anger along with the earth, and so forth (Rev 16: 15–16).

The Bible is full of God’s wrath, yet the disturbed and impulsive anger of everyday human experience is inconsistent with divine perfection. Some clerics argued that his anger did not involve revenge and that he was in control of his mind and emotions. Justification of God’s anger as the divine version of “righteous” anger, discussed below, appears in various books of the Bible, such as Psalms, Zephaniah, and Ezekiel. Faced with this knotty theological problem, some Stoic philosophers and Christian ecclesiasts (e.g., Augustine) simply denied that God could be angry.

The Qur’an is replete with talk of rejection, slander, ridicule, curses, threats, punishment, torment, fighting, killing, and the burning of unbelievers in hellfire, at least in English translation. Anger itself is remarkably rare. The Al-Fatiha Surah (opening chapter) is recited five times a day by devout Muslims who ask to be shown the “... straight path, not the path of those who have earned Allah’s anger” (Qur’an 1:11). His “Wrath upon Wrath” at unbelievers appears in Surah 2:89–91. The wrath of the unbelievers themselves is noted a few times [in Surah 3:119 they bite (off) their fingertips in rage], as is Moses’ anger at the Hebrew’s worship of the golden calf. The notable paucity of anger in the Qur’an, in contrast to its abundance in the Judeo-Christian Bible, may reflect its common denial in Arab cultures (e.g., Somer & Saadon, 2000). However, in ninth century hadith literature, the Prophet’s anger was key in acceptance into, or rejection from, the umma (community of believers, Ghazzal, 1998). After the 2005 earthquake in Pakistan killed more than 90,000 people, the mass media there promulgated the belief that the quake was Allah’s punishment for sinful behavior. The mullahs incited followers to smash television sets, which had provoked Allah’s anger and hence the earthquake.

When gods may be angry, but people may not. In some belief systems, anger may be a supernatural prerogative, to be expected of ghosts or gods but unacceptable for mortals. Cultural restrictions on expressing, or sometimes even experiencing, anger exist in many cultures around the world. These prohibitions generally emerge from three interrelated beliefs: (1) fear of social and/or physical reprisal and, especially in cultures where all harm is thought to result from the malicious action of others, or retaliation by witchcraft; (2) harboring anger invites ill-health and misfortune; and (3) expressing anger is inappropriate for adults; it is irrational, amoral, bestial and/or childish, and very shameful.

Despite the tensions, animosities, and suspicions of malevolent intent that are commonplace in band and village life, people in these groups are careful to maintain cordial social relations. Multiple anthropological accounts attest to these beliefs in Tahiti where they are a part of general pattern of harm avoidance (e.g., Levy, 1973). Variants are found throughout Indonesia and Malaysia, e.g., Java and Bali (Hollan, 1988). Among the Kenyan Taita, unwitting but dangerous “anger in the heart,” engendered by violations of a person’s jural or kinship rights and revealed by divination, was expelled in the Kutasa ritual by drinking and then spitting out beer (for men) or cane juice (for women); consuming the animal sacrifice that followed restored peace and harmony and brought the blessings of children and well-being (Harris, 1978). Notable examples also occur among indigenous people of the New World. The small number of Inuit in the Utku band belies their renown as exemplars of people who do not show anger even in situations that would outrage others; they describe the angry behavior of foreigners as “childish” (Briggs, 1970). Their ultimate sanction of ostracism is potentially fatal in a group whose members must cooperate for survival in an extremely hostile environment. The highland Maya of Mexico similarly maintain an ideal of cool individual non-reactivity and non-confrontational interpersonal relations based on the threat of “buried” anger of the “fevered heart” (Groark, 2008). For the Airo-Pai, as for other groups living along the Amazon, anger is taken as a sign of aggression, and its display is deemed a most significant offense against the community (Overing & Passes, 2000). The Airo-Pai believe that the angry individual loses all moral sense, treats
kinfolk as prey or enemy, and is no longer in a human state. Anger leads to sorcery; e.g., it invites the *huati* to mislead the individual into hunting other people like they were forest game. The Airo-Pai remind themselves aloud that anger against kinfolk is vain and purposeless and that one ought not be angry. Conversely, mastery of anger represents a successful transformation of inimical spirits (Belaunde, 2000). Historically, each time the Delaware Indians were displaced westward by white settlers, they became concerned about *kwulakan*, a taboo against anger instituted to prevent divine retribution (Miller, 1975). In the American Southwest, during the year-long preparation for the winter solstice festival, *Shalako*, the members of the Zuni priesthood of “sacred clown” impersonators must refrain from all negative emotions, including anger, lest it disturb these most dangerous of deities (Tedlock, 1983).

From whence comes the belief that anger may be expected of gods, but is unacceptable for people? The Airo-Pai fear the anger of infants whose cries may enrage their parents to the point of infanticide; their creation myths contain just such an event (Belaunde, 2000). What the Yanomami *patas* harangue about are antisocial behaviors, such as theft from gardens and propositioning married women, which can engender anger, group fissioning, and/or homicide (Ałés, 2000). Perhaps, even before the rise of the state and organized religion, repeated experience in family groups and tribal life over the millennia generated a deep understanding that the divisive and disruptive effects of anger lead to social disorganization and intragroup aggression. This understanding is expressed in early taboos against anger. This may be especially true for collectivist cultures as opposed to individualist/egalitarian cultures. In any event, such prohibitions have subsequently been imposed from above by religious and other governing hierarchies with vested interests in stability and social control (a group’s healthy fear of divine anger tends to keep their priesthood in business).

*The Greeks had many words for it.* National (cultural) epics, based on oral traditions predating written history, provide the oldest depictions of human behavior extant. Albeit stylized by narrative conventions, they are rife with references to anger and its expression. In the oldest epic extant (circa 2700 BCE), when Gilgamesh, god-king of Sumer, rejects the advances of treacherous Ishtar, she angrily calls upon her father, the god Anu, to release the Bull of Heaven to destroy him. Rejection and insult trigger anger, which motivates indirect aggression. How modern!

The *Iliad* of Homer (circa eighth to seventh century BCE, trans 2004) begins with the phrase “Wrath (*Mēnis*) of Achilles.” Thus, the first word in the Western canon is anger! The use of “*Mēnis*” recognizes Achilles’ semi-divine parentage and the intensity of his anger. Anger in the *Iliad* is described in full-blown complexity; it arises from various social causes (e.g., insults to honor, killing of a friend), and its many manifestations include facial expressions (“blazing eyes,” frowns, tearing of hair, and so forth) and a panoply of verbal (complaints, insults, threats) and physical acts (aggression and homicide). Literary critics have regarded the *Iliad* as an extended meditation on anger. Most (2003, p. 54) notes “Agamemnon’s haughtily self-righteous fury, Achilles’ astonished indignation, sullen resentment, uncontrollable rage and glacial wrath . . . Theristes’ obstreperous defiance . . . Odysseus’ irate disdain . . . Helen’s partly relieved contempt . . . Apollo’s bland vengefulness . . . Aphrodite’s admonitory scorn . . . Ares’ insane ferocity . . .” All of these are perfectly recognizable to modern audiences. In contrast to later works of antiquity, characters in the *Iliad* moderate or master anger relatively rarely. Indeed, characters are criticized for showing anger insufficient to the provocation (Cairns, 2003). This is notably different from the millennium older epic whose central theme is the close bond of friendship that arises between Gilgamesh and the wild man Enkidu when he masters his own anger and declares his respect for the god-king.

The ancient Greek texts pose a challenge for the appropriate translation of many words connoting variations in the intensity, context, and meaning of anger; such multiplicity has been taken as one indicator of their pre-occupation with this emotion. Besides *Mēnis* and *Nemesis*, there is *chalepaineo*
(annoyance), kotos (resentment), cholos (bitterness, literally “bile”), thumos (in the more general context of zeal or energy), orgê for intense anger, sometimes bordering on madness, and others. These words were at least partially overlapping in meaning, sometimes used interchangeably, and changed over time (cf., Harris, 2001). Note that even preliterate cultures have assortments of words for variations in anger (e.g., Briggs, 1970; Lutz, 1988). In comparing 47 non Indo-European languages that differed in the number of emotion categories that were labeled, Hupka, Lenton, and Hutchison (1999) found that anger, along with guilt, were the first categories of emotion to be labeled. However, different languages and cultures may have no exact equivalents of English emotion words, including “anger.” Among the Philippine Ilongot, liget indicates both anger and grief and is seen as providing the energy needed for, e.g., a retaliatory headhunting raid (note the similarity in connotation to the Greek thumos). Words in other cultures/languages may also be conditioned by the triggers for and motivation of the anger, social roles, and context (e.g., directed against kin or non-kin), classification as justified or unjustified, and so forth (e.g., Harkins & Wierzbicka, 2001; Myers, 1988).

Anger and manhood in other warrior cultures. In stark contrast to cultures that reject anger and aggression, in principle or in practice, are warrior cultures in which anger was cultivated as a special trance-like state that produced indifference to wounds and fearlessness in battle. The best known examples are the Norse or Viking “berserkers,” the armor-scorning fighters of myth and history whose rabid fury was described in Hall’s (1899) classic treatise on anger. The berserkers’ periodic insanity was perhaps enhanced or engendered by ingesting mushrooms, which would account for the psychotic features of their rages (including visual hallucinations, Fabing, 1956). Whatever the cause, the dangerousness of these fighters would dissuade kinsmen of individuals killed by a beserker from their culturally mandated revenge (Dunbar, Clark, & Hurst, 1995). Speidel’s (2002) extensive historical analysis traces mad, recklessly fighting, shape-shifting “true berserkers” from the second millennium BC, including Assyrians, Hittites, Thracians, Celts, tribes of Italic, Germanic, and Anglo people, and Aztecs. Various berserker groups fanned their fury with dances, a possible remnant of which is the Maori haka with its facial contortions, eye-bulging, tongue gyrations, body slapping, and grunts, all of which convey a wild and fearless, if stylized, ferocity.

“Wild man” and “amok” are related syndromes of highly systematized, eruptive, and frenzied violence in Micronesia and other Pacific Island societies. Amok in southeast Asia derives from a Malay word for a murderous frenzy with intense rage. Kon (1994) traced its origins on the Malay Archipelago in the mid-sixteenth century and its subsequent appearance in other societies, including a seventeenth century warrior class in southern India (cf. Spores, 1988). It is almost exclusively a male syndrome, suggesting that it may be a cultural exaggeration of the “male flash of anger” whose adaptive value Fessler discusses in this book. However, amok and allied phenomena are viewed as temporary insanity, even in these cultures (e.g., Carr & Tan, 1976; Gaw & Bernstein, 1992); as described in Novaco’s chapter, they can involve deep psychopathology and persisting psychosis.

2.2 The Philosophy and Psychology of Anger

As anger came under rational scrutiny, and was detached from the supernatural, competing interpretations emerged. Anger as a bestial passion rooted in biology can be contrasted with anger as integral to manhood and with anger as a motivator of just action. The metaphor of bestial passion has not been abandoned, but has been transformed into more modern views of anger in the context of development and gender, as well as in insanity, sin, or demonic possession. The view of anger as
integral to manhood and as in support of moral order also continues, as still seen in its role in the maintenance of social hierarchy.

The earliest literature. The Iliad’s concerns with anger continued through the philosophies of classical Greek antiquity (fifth to fourth century BCE) and subsequent Greco-Roman commentary, drama, and oration. Why? Although fourth century Athens was famously rough and competitive, anger may have been no more rampant there than in, say, contemporary Washington, DC. Noting no evidence that Athenians went armed to the marketplace, Harris (2001) conjectures that this Greek preoccupation might have been due to the baleful effects of the anger of tyrants, as well as the disruptive consequences of anger on stability within, and competition among, their newly formed and relatively fragile city states. (For an empirically based view of the effects of anger in political context, see Chapter 32 by Petersen & Zukerman, this book.) In any event, the ideas introduced during that period continue to inform contemporary thinking and research. For example, Allen (2003, p. 79) translates Aristotle’s definition of anger (orgê) as “...a desire, commingled with pain, to see someone punished, and which is provoked by an apparent slight to the angered person, or to something or someone that belongs to him, when that slight is not justified...” This definition includes injustice as a crucial trigger (e.g., Chapter 19 by Schieman and Chapter 24 by Tripp & Bies, this book), requires an appraisal of the situation (e.g., Chapter 17 by Litvak et al. and Chapter 15 by Wranik & Scherer, this book), and stipulates a response tendency of aggression (e.g., Chapter 16 by Berkowitz, Chapter 21 by Fessler, and Chapter 14 by Hubbard et al., this book).

Anger as bestial passion (and what to do about it). Anger is the prototype for the classical view of emotions as “passions” that seize the personality, disturb judgment, alter bodily conditions, and imperil social interaction. The “consensus theory,” which developed in the centuries following the Roman era and held sway into medieval times, was that anger is the strongest of the “ spirited” or “irascible” emotions whose function it is to obtain pleasure and avoid pain under conditions of difficulty (Kemp & Strongman, 1995). The theme of anger as a bestial passion or irascible emotion is followed logically by the theme that anger must be mastered by reason, will, and self-control. Lucius Seneca (44/1817), arguably the first scholar of anger, sought its eradication in the quest for tranquility of mind. So did the Roman Cicero before him and the Greek Plutarch after him. Earlier Greeks, such as Pythagoras, had taught that consciously restraining one’s anger (refraining from speaking or acting when angry) would encourage temperance and self-control; this ancient prescription for anger management remains an element in current approaches (see Chapter 28 by Fernandez, this book). Pythagoras recommended music therapy, countering rage with melody. In Plato’s Phaedrus, the charioteer of reason must master the wanton black horse of passion (trans. 1975); the verses of the Dhammapada, claimed to have been spoken by Buddha himself, contain a very similar metaphor (circa 500–400 BCE, Vernezze, 2008). In Freud’s (1933) version, the rider is the ego who must control the horse, the id. The metaphor of “rider” above mastering “horse” below re-emerges, albeit fortuitously, in the contemporary neuroanatomical evidence for a balance of functional control, which varies reciprocally between the dorsal areas of lateral and medial frontal cortex that mediate cognition and executive control and the more ventral limbic structures that mediate emotion (e.g., Dolcos & McCarthy, 2006.)

The idea that anger is an irrational, even bestial, passion has a number of implications:

Anger as irrational/maladaptive. Although conflict and combat are fraught with provocations to anger that can motivate vigorous (or desperate) action, historical commentators have cautioned that anger is to be avoided because of its concomitant impairments in judgment. Seneca and others expressed the view that both in sport and in war, the disciplined combatants defeat the angry ones. The military strategy writings attributed to Sun Tzu (fourth century BC) depicted anger as a
fault upon which military commanders could capitalize. In his *Meditations*, Marcus Aurelius, second-century Roman Emperor and a Stoic philosopher himself, wrote that yielding to anger was a sign of weakness. Likewise, postponing vengeance until one is calm is a frequently recurring admonition.

**Development and gender.** Although overt expression of anger is more typically associated with men, children and women were thought by some classical and medieval writers to be prone to excessive anger due to their lack of moral instruction, cognitive immaturity, or poorly developed rational faculties (Kemp & Strongman, 1995). The ancient Greeks believed that babies experienced anger from their first days (Hanson, 2003; see Chapter 11 by Lewis, this book for more modern views); Galen warned that anger was a precursor of severe disease in infants. As chronicled by Stearns & Stearns (1986), the first written use of “tantrums” is in British plays some years after 1748 where the term was used to belittle adult bouts of anger. As used by followers of Darwin through the 1860s, “tantrums” came to refer to children’s anger. In the West, such tantrums and other misbehaviors were commonly met with harsh and angry punishment, disciplinary tactics meant to “break the child’s will”; if he became enraged, he was punished further. Of course, such discipline taught children not to express anger to parents, but that anger and physical punishment were suitable responses to subordinates (such shaping of behavior is analyzed in detail by Snyder et al., this book (Chapter 29)).

In Classical Greek thought, men’s *orgê* was forthright, hot-blooded, and immediate while women’s *cholos* was weak, cold, and delayed (i.e., women schemed and were vengeful, Allen, 2003). Although some debate about the existence and nature of sex differences in anger remains, recent research generally indicates that women experience anger at least as intensely as men, and express it as least as often, but differ somewhat in the triggers and modes of expression (Chapter 20 by Fischer & Evers, Chapter 21 by Fessler, this book). Women are less likely to become physically aggressive, but more likely to cry and to express anger indirectly (through “relational” aggression). The Greek version of sex differences may have correctly identified these response elements, although their interpretation of these (and most other) social phenomena was relentlessly misogynistic. Whatever else it might be, women’s anger was always unacceptable. This tradition remains widespread. *Ngôn* [speech] is the third of four culturally prescribed virtues for Vietnamese women, e.g., it means to speak softly and never raise the voice – particularly in front of the husband or his relatives (Rydstrom, 2003).

**Insanity, sin, or demonic possession?** In the *Iliad*, when Achilles learns of the death in battle of his close friend Patroclus, he is engulfed in a “black stormcloud of pain . . . (he) tore his hair with both hands” (p. 430), and he becomes “mad with rage” (Homer, 2004, p. 468). He viciously kills a prince of Troy, Hector, and defiles his body, unflinchingly dismissing Hector’s admonition that such defilement will anger the gods.

*Orgê* was regarded as a form of irrationality, illness, or insanity most notably by Herodotus, later by Galen, and by Seneca who endorsed the view of anger as a “short madness” (p. 222). Galen’s (1963) treatise on “passions and errors of the soul” frequently construes anger episodes as marked by madness, including the behavior of his personal friends, his mother, and the Roman Emperor Hadrian – “rage is a madness” (p. 42). As argued by Novaco (Chapter 27, this book), recent offshoots of this line of thought include (1) Fava’s (1998) “anger attacks,” which connote being seized by a pathological/disease entity that “explains” aggressive behavior and is then suitably “treated” by medication, (2) the general issue of the role of anger in psychopathology, and (3) the proposal that there should be specific diagnostic categories of anger (e.g., Kassinove et al., 1995).

In another recent incarnation of anger as irrationality, it, like other “visceral factors” (Lowenstein, 2000), is seen to impair rational economic reckoning, in part by disrupting normal time discounting of reward value. A neuroanatomical basis for this psychological phenomenon is suggested by Potegal
& Stemmler (this book). In any case, the result is behavior that may appear, and be experienced as, out of the individual’s control or, conversely, as anger that has seized control of the individual (anger as a “daimonic,” Diamond, 1996). The legal interpretations and implications of anger as form of mental defect are noted by Wranik & Scherer (Chapter 15), by Novaco (Chapter 27), and by Potegal (Chapter 22), this book.

A main line of Buddhist thought is that anger is a moral “blemish” that must be eschewed at all times to attain the tranquility of enlightenment. Anger is also seen as a form of suffering that arises from appraisals that one has been insulted, hurt, defeated, or robbed by another. It can be remedied by “binding the mind” to dismiss these thoughts. Among the reasons for doing so are that we have doubtless offended against others in our past lives, and being offended by others in this life is no more than just desserts (Vernezze, 2008).

Anger as a mortal sin was introduced to Christianity in Paul’s letter to the Galicians (circa 50 CE) naming anger as the fourth of the seven deadly sins (Galicians 5:19–21 NRSV). The precepts in this letter, which were later to have such a large impact on Catholic belief and practice, had deep historical roots, e.g., in ideas found in Proverbs (6:16–19), some of which can be traced, in turn, to Egyptian writings as early as the second millennium BCE. In Dante’s Inferno (1308 CE), the wrathful damned claw each other through eternity in the fifth circle of hell, a burning Stygian marsh (the sullenly angry wind up buried in the marsh). But anger was never the most important of sins [Paul does allow Christians to be briefly angry, but warns them “to not let the sun set upon their anger” (Eph. 4:26.)] After the twelfth century, however, humility and its concomitant of anger control were no longer required of Catholic saints (Stearns & Stearns, 1986). One could be both angry and holy. Since the eighteenth century (e.g., Bellers, 1702), some Protestant denominations have re-focused attention on the evils of anger.

Anger as part of demonic possession, as opposed to mental illness, appears in ancient Egyptian and Hebrew sources (Isaacs, 1987). In the European “Age of the Demonic” (1550–1650 ACE), possession became more prominent in Jewish as well as Christian communities; “diabolic distemper” (excessive anger) was one sign of being a witch. During the Salem, Massachusetts witchcraft episode in the late seventeenth century, Pastor Samuel Parrish wrote in his church book that “The Devil has been raised among us, and his Rage is vehement and terrible…” (Trask, 1975). Remarkably, reports of demonic possession continue to the present. In 24 observed or recalled exorcisms by clerics in Rome, Italy, and Berkeley, California, all “possessed” individuals showed facial expressions described as angry, hate-filled, or “distorted” and had furious outbursts in which they might attack religious objects (they also exhibited other, more dramatic, and bizarre behaviors, Isaacs, 1987; Ferracuti, Sacco, & Lazzari, 1996). Clearly, the “script” for being possessed involves displays of anger.

The endpoint of this line of reasoning remains the vexing issue of anger control, which has been addressed in disparate ways by Stoic philosophers, Psalmists, Scholastics, Mayans, philosophers of the Enlightenment, American colonists, Victorians, Existentialists, early North American psychology, Dr. Spock, and by psychodynamic and cognitive-behavioral therapists, to name a few. Interventions for problematic anger have progressed substantially from common language prescriptions throughout the ages and across cultures. As Fernandez (Chapter 28, this book) describes, contemporary therapeutic intervention is theoretically anchored, assessment driven, and evidence based. Meta-analyses of anger treatment have found medium to strong effect sizes (e.g., Beck & Fernandez, 1998; Del Vecchio & O’Leary, 2004; DiGuiseppe & Tafrate, 2003; Sukhodolsky, Kassinove, & Gorman, 2004), indicating that approximately 75% of those receiving anger treatment improve, compared to controls. There is certainly a cause for optimism.

Personality and biology. The observation that some individuals are consistently anger-prone invites explanations in terms of personality. The oldest parsing of anger characteristics that we have
come across is a distinction, written in Egyptian hieroglyphics, between... “angry (like a) monkey” and “angry (like a) bull”: The angry monkey is loud and showy, but not dangerous; the angry bull is not as flamboyant, but is threatening and very dangerous (Goldwasser, 2005). In contemporary Arab Tunisia, one must beware the angry camel (Maleej, 2004). In the Aristotelian view, personality is shaped by environment and experience, as ironically illustrated by Achilles’ anger at the jibe that his chronic cholos was a result of having been “nursed on bile” (Hanson, 2003). The contrasting Platonic view of character as predetermined is a precursor to rooting trait anger in biology. This view is strengthened by the reification of anger in acute physiology. Thus, for example, biblical Hebrew terms for anger that refer to the nostril (‘ap) or involve hard breathing (‘anaph) capture this particular physiological aspect of anger (Harrison, 1979). Green et al. (Chapter 9, this book) present this view in modern dress as the idea of embodiment.

Hippocrates’ concept of four humors as the basis of physiology and medicine, later popularized by Galen as integrated patterns of physiology and physiognomy, dominated Western thought until the mid-nineteenth century. In humoral theory, the sharp-featured, anger-prone, “choleric” (from cholos) person is ambitious, energetic, and dominant in social exchange. The choleric pattern results from an excess of yellow bile, which also corresponds to fire (more exactly, excess heat, cf. Irwin, 1947) in the four element theory of matter. A similar personality profile in India’s Ayurvedic system results from an excess of Pitta, the fire-related one of the three “Doshas” or elemental forces. Mythophysiology aside, the choleric combination of psychological features presages the empirical identification of Type A personality (Chapter 25 by Williams, this book).

Aristotle’s association of anger with heating of the blood around the heart (Kemp & Stongman, 1995) was a little closer to a telltale organ system (cf., Chapter 7 by Stemmler and Chapter 10 by Kövecses, this book). The recent discoveries associating anger and Type A personality with cardiovascular disease (Chapter 25 by Williams, this book) is one of the few current ideas with little historical precedent. As illustrated in chapters by Potegal and Stemmler, and by Harmon-Jones et al., and Stemmler, modern methodology has increased the focus on the neural bases of anger and clarified its peripheral physiological signs.

Anger in support of moral order: Aristotle and afterward. As Plato is a main source for the view of anger as bestial passion, Aristotle is cited for the alternative, conditional view that “...anger at the right person, on the right occasion, in the right manner...” can be appropriate, virtuous and ethically justified (Nicomachean Ethics, Book 4, Chapter 5, 1126b5–10). The admonition, noted above, to postpone revenge until one is calm, has not been universally accepted. In classical Athens, where reputations were always at stake and insults had to be met forthrightly, orators routinely argued that justice should be meted out quickly, “in hot blood,” after the crime. A favorite trope was that the law itself was angry at the accused, and you, the spectator, should be angry at him as well (Allen, 2003). In this rhetorical flourish, the idea of justified anger becomes commingled with, if not equivalent to, justice itself.

Experimental demonstrations that anger increases optimism and risk taking that can, in turn, prompt corrective action are relatively recent (Chapter 15 by Wranik & Scherer and Chapter 17 by Litvak et al., this book). However, the idea that anger triggered by injustice to the self or others generates the zeal and discipline for constructive action (Kemp & Strongman, 1995) has historical roots that are wide and deep. The Ifaluk word song means anger that is justified by threats to moral order; it is the only socially acceptable form of anger in that culture (Lutz, 1988). The Exnet of Paraguay, who abjure anger and rarely express it against community members, find it acceptable for shamans to direct their anger against malevolent witches and evil spirits (Kidd, 2000). Anger is also acceptable in confronting missionaries and government officials for the common good. In Greece, historically, nemesis came to suggest the resentment associated with injustice, which could not be allowed to go unpunished. More recent examples of good works motivated by righteous anger