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FEATURE REVIEW

Chinese Thought from an Evolutionary Perspective

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A Chinese Ethics for the New Century: The Ch'ien Mu Lectures in History and Culture, and Other Essays on Science and Confucian Ethics. By Donald J. Munro. Hong Kong: Chinese University Press, 2005. Pp. xlv + 158.

One of the more noticeable trends in the study of premodern Chinese thought in the past couple of decades has been increased specialization: scholars generally tend to eschew broad generalizations concerning long historical spans in favor of more detailed and historically and philologically specific case studies. This approach has given us, among other things, a picture of the development of Chinese thought that is much more nuanced than the received, official Neo-Confucian account, which sees Chinese thought as coterminous with “Confucianism,” and Confucianism as an unbroken lineage from Confucius to Zi Si and Mencius, through Zhu Xi, and down to contemporary representatives such as Tu Wei-ming. This is surely a positive development, allowing us to see how anachronistic school designations and post hoc lineage constructions have, in many important respects, distorted our picture of the development of Chinese thought. One could also argue, however, that in the rush to distance ourselves from overly broad generalizations or philologically unsupported conjectures, we have perhaps run too far—losing the sort of generosity of vision that would allow us to tie our specialized labors in the sinological trenches into the framework of larger humanistic concerns. Donald Munro remains one of the leaders of a generation of scholars who, in addition to their role as sinologists and historians, also wear the hat of public intellectuals, unafraid to address broad contemporary concerns or tackle large issues spanning the entire history of Chinese thought. The lectures and essays collected in *A Chinese Ethics for the New Century* chart the latest developments in Munro’s remarkable career, and show him to be, as always, at the vanguard of some of the most exciting conceptual innovations in the study of Chinese thought.

Throughout his career Munro has displayed an almost preternatural ability to anticipate—or perhaps, in many cases, to initiate—important trends in the study of traditional Chinese Confucian thought. His classic *The Concept of Man in Early China* (1969) argued that competing conceptions of human nature were at the very heart of early Chinese philosophical debates, and that even when it came to thinkers without explicitly stated views on the subject, it was the job of scholars to extract the implicit theories of human nature lurking in the background. As Liu Xiaogan notes in his helpful introduction to this volume, Munro was the first Western scholar to make

it clear that “any important theory, no matter if it concerns the individual or society, is always based on a particular view of human nature” (p. xxi). Liu observes that Munro’s approach to studying individual Chinese thinkers is to “trace out clearly or not-so-clearly expressed differences in their theories of human nature; other content is worked out from this” (p. xxi), and one can argue that this has become a basic methodological principle for later students of the topic. Munro’s trilogy of monographs, *The Concept of Man in Early China*, *The Concept of Man in Contemporary China* (1977), and *Images of Human Nature: A Song Portrait* (1988), represents a sustained and illuminating effort to apply this approach to the entire history of Chinese thought. Liu notes as well that “scholars like Munro who spend twenty to thirty years covering a focused topic from antiquity to [the] present are few and far between” (p. xviii), and there is undeniably something gained from such large-scale, longitudinal surveys that simply cannot be grasped in the sort of focused, smaller-scale studies that have recently become more the norm in our field.

Another area in which Munro has been a methodological pioneer concerns the fundamental importance of metaphor for understanding early Chinese thinkers. Scholars such as D. C. Lau have recognized the importance of “analogy” in more particular contexts, such as in the famous Mencius-Gaozi debates, but Munro’s *Images of Human Nature* was the first study to recognize the systematic and foundational role of metaphor in a traditional Chinese thinker—in this case, Zhu Xi. As Munro’s review of this argument in Lecture Two of this volume observes, metaphors such as “plant,” “lamp,” and “body” play an irreducible “structural and emotive” role in Zhu Xi’s thought, structuring his conception of the relationship between disparate facts, calling attention to particular features, and—perhaps most importantly—eliciting particular emotional reactions (p. 22). Although Munro to my knowledge never related his view of metaphor to the broader field of cognitive linguistics,¹ his treatment of metaphor in Zhu Xi is quite sophisticated, and in many respects parallels or anticipates the current state of the field in metaphor studies—especially in the way in which it draws attention to the emotive force of conceptual metaphors and calls into question objectivist-rationalist models of cognition. Since Munro’s 1988 work, the structural role of metaphor has become one of the central foci of Western scholarship on Chinese thought, crucially informing the work of such scholars as Sarah Allan, Michael Puett, David Wong, and P. J. Ivanhoe and his students.²

The majority of this volume is dedicated to more recent lectures and essays that document the latest twist in Munro’s career, what Ambrose Y. C. King terms Munro’s “biological turn,” aimed at putting “the Confucian theory of ethics on a scientifically informed biological basis” (p. x) by relating it to recent work in cognitive science and evolutionary psychology. Munro argues that that the Mencius-inspired, Neo-Confucian morality that has dominated China for centuries derives remarkable support from recent developments in the cognitive sciences, and in his role as public intellectual he endeavors to explore some of the implications of this for both China and the world. His central argument is that this Mencius-derived morality is an important resource for the formulation of an empirically responsible modern ethics,

and that it can shed important light on discoveries in the cognitive and natural sciences, but that to play a role in modern intellectual life it needs to be modified by emphasizing its biological grounding and dropping the theological references. By virtue of his position at the University of Michigan, Munro has benefited from his proximity to colleagues in Michigan's Evolution and Human Adaptation program, and has become the first Western scholar of Chinese thought both to acquire a familiarity with recent trends in the cognitive sciences and to see the relevance of this work to traditional Chinese models of ethics.

As Munro notes, recent work in evolutionary approaches to ethics have focused on the primacy of kin relations; the existence of apparently universal moral emotions based, in part, on empathy; and the predisposition of human beings to share and cooperate with non-kin through reciprocal altruism. To turn to the first of these themes, any student of traditional Confucianism is aware of the manner in which basic kin relations, particularly between father and son and older and younger brother, are seen as the model for broader social relations. Organic metaphors for this relationship are found as early as *Analects* 1.2, and of course the manner in which affection for kin should be extended to encompass broader and broader concentric circles of humanity is, as Munro explains, a central theme in the *Mencius* and later texts in the Mencian tradition. Munro argues that there is a strong parallel between traditional Confucian models of moral development and kin-selection-based accounts of prosocial behavior coming out of recent work in evolutionary theory and psychology.

What is the significance of this parallel? Munro argues quite convincingly that the points of contact between modern evolutionary psychology and traditional Confucian ethics point to the potential for Confucianism to serve as an empirically responsible alternative to the deontological and utilitarian theories that currently dominate ethical discourse in the West. The "Mencian legacy," he explains, is "important for world culture today because many of its claims are based on accurate descriptions of human social life. Only those social policies that are consistent with the way human beings really live have a reasonable chance of long term success" (p. 8). Utilitarianism, with its demand that "each person should count as one, and no more," ignores our natural and ineradicable disposition to strongly favor kin over strangers, and both utilitarianism and deontology ignore the role that emotion plays in any sort of effective moral deliberation and action.

To turn to the specific critique of utilitarianism, Munro argues that the central concern of the Confucian tradition, and one that should be properly seen as *the* central human moral problematique, is how people are to balance the competing claims of preferential affection for kin with the demands of altruistic caring for non-kin others (p. 22). As Munro argues, the Confucian tradition that extends from Mencius down to Zhu Xi has typically dealt with this concern by arguing that the individual can, through proper reflection and training, harness the positive empathetic and respectful emotions felt toward kin and gradually extend them to non-kin. This is, of course, the import of the famous exchange between Mencius and King Xuan of Qi in *Mencius* 1A7, where the king is urged to "take this heart here

and apply it over there.” It is also no doubt the sense behind Confucius’ comment that, for the ritually-correct person, “everyone within the Four Seas” is a brother (*Analects* 12.5). This problem of kin versus larger social cooperation is also at the heart of contemporary anthropological and evolutionary psychological speculations about how humans pulled off the relatively recent transition from the smaller, tightly knit tribal units of our Pleistocene ancestors to large-scale agricultural societies, which require the coordination of huge numbers of strangers over extended periods of time. Interestingly, such concern about how to extend natural kin affection to the artificial and contingent lord-minister relationship appears as a unifying theme among the previously unknown “Confucian” texts discovered in the Guodian tomb—a powerful validation of Munro’s claim that this is a venerable and central concern of traditional Chinese thought.

The finding emerging from cognitive science that has perhaps the greatest importance for ethics is the crucial role that appears to be played by the emotions in moral reasoning and action. Munro relies primarily on the work of Antonio Damasio in his discussion of this topic, with additional references to Steven Pinker and the evolutionary theorist Robin Trivers. As Munro notes, there is an emerging consensus in Western cognitive science that mirrors traditional Mencian views of morality, namely that “moral concepts owe much more to innate social emotions than western psychologists or ethicists have traditionally recognized” (p. 52). Much of the recent work on the cognitive science of emotions has stressed an aspect that is presented as quite surprising: that emotions are not simply blind reflexes, but actually possess cognitive content—they are “fast and frugal” responses to the perception of value in the environment and bring with them a suite of adaptive motivational impulses.

While perhaps surprising in light of a dominant Western philosophical tradition that sees the emotions as simply negative barriers to clear thought, the cognitive, evaluative role of emotion is of course nothing new to the Mencian tradition, which bases its ethics on the normative “four heart-mind” reactions such as the feeling of “alarm and distress” that accompanies the sight of a small child crawling toward an open well (2A6), or the simultaneous revulsion and rejection that follows from the perception of a foul odor. Reflecting on the work of Damasio and his colleagues, Munro also notes that the study of the brain systems that support ethical reasoning can hopefully “put a final stop to the Platonic legacy that moral reasoning, or any reasoning, can occur without the emotions playing a role” (p. xiv). One is struck by the “prominence of the emotions in Mencian moral deliberation and its relative absence in prominent western systems” like Kantianism and utilitarianism, Munro observes (p. 66), and he suggests that this is one of several reasons why the Mencian legacy can serve as an important resource for the development of a more empirically responsible and ecologically valid model of ethical education and action. Modern cognitive science has taught us much about ourselves, but the results coming out of this field can best be understood and digested with the help of the perspective gained from China’s “twenty-five hundred year history of writers focusing on moral psychology and human nature” (p. xv).

This is not to say that Munro views the Confucian tradition as entirely unproblematic; indeed, significant parts of several of the essays are devoted to outlining what Munro feels needs to be changed in Chinese Confucian thought before it can fulfill its potential as a resource for the “new century.” To begin with, more needs to be done to work out the tension in traditional Confucian thought between the egalitarian ideal of equal worth and actual social practice. Munro’s sensitivity to the active cognitive role played by metaphor serves him well in his analysis of some shortcomings in the Confucian ethical scheme, as he illustrates how both the strengths and weaknesses of Confucian thought can be traced back to a small set of foundational metaphors. Zhu Xi, for instance, borrows a variety of agricultural metaphors from Mencius, arguing that family affection can be extended to others on the analogy of plant growth. This metaphor is not entirely unproblematic, as Munro notes, because “the psychological implication” of the plant-growth metaphor is that “being altruistic does not take much effort. Take care of the family love and the altruism will almost automatically follow. This may be a weak link in this ethics. This is because it treats altruism as an inevitable by-product of self-growth. The plant image does not require the individual to think about what specific method of outreach will work, because he believes his effort in the prior stages ensures satisfactory progress” (p. 28). The limitations of the plant metaphor need to be recognized, and faith in a natural unfolding of society-wide affection needs to be supplemented by institutions—for instance, law and oversight agencies (p. 121) and legal guarantees of “negative freedoms” guarding individual rights (p. 123)—that would work to assure that this extension actually occurs and that it not lead to the suppression of difference or to systematic nepotism.

Additionally, Munro feels that traditional Confucian ethics needs to “shift its basis from *tiandao* to biology” (p. 14)—that is, replace its traditional religious grounding with a naturalistic one founded on a scientific understanding of the world. “I would urge Chinese ethicists who wish to join the international discourse on values to focus on our common biological nature,” he writes. “The Confucian Heaven is not likely to be understood clearly or be engaged by the international audience” (p. 17). In this regard, he notes that the thought of Mencius seems to be more easily reconciled with a naturalistic stance than the more metaphysically oriented Zhu Xi, although even in Mencius there still exist metaphysical beliefs and religious language that would need to be purged. In response to his self-posed question of how much of Mencian thought might endure and remain relevant to the global intellectual community in the new century, Munro responds that it is “those aspects that are compatible with evolutionary psychology that will survive a sifting to become for the new century the essence of the *Mencius* text, separated from what will then be disregarded as the dross”—the “dross” being religious references to Heaven and the Heavenly Mandate, which, Munro feels, can be clearly segregated from the biological claims (p. 63).

Here one might wish to temper somewhat Munro’s enthusiasm for Mencius as a contemporary resource. The normative force of the Mencian “four sprouts” comes from their origin in Heaven, which renders them unquestionably desirable and ahis-

toric values. While philosophers working within the new naturalist framework have argued quite convincingly that the “naturalist fallacy” does not block us from deriving normative values from empirical claims about human nature, in the absence of Heavenly endowment or revelation the problem of how to assign relative values to the panoply of often mutually contradictory human drives, desires, and cognitive modules is not entirely unproblematic. Mencian ethics cannot simply be stripped from its religious context and sent out happily into the modern world. The absence of religious warrants for ethical claims can only be filled by a new set of contingent normative claims worked out in a long and probably interminable cross-cultural conversation—which is not to say that it is impossible, but only a bit more complicated than Munro would have it.³

Despite this skepticism concerning how easy might be the process of naturalizing traditional Confucian ethics, I find most of Munro’s arguments quite compelling. My other concerns have to do primarily with quibbles regarding the degree to which Munro’s position would be better served by a broader exploration of the relevant secondary literature. The direction in which Munro is pointing the student of Chinese thought—toward a consideration of the mutual relevance of traditional Confucianism and modern cognitive science—is so potentially rich and rewarding that I think it helpful to provide a quick overview of what further dimensions might be discovered by someone following his lead.

To begin with, beyond Damasio’s well-known contributions (esp. 1994, 2000), there exists a vast literature on the role of emotions and implicit heuristics in human moral reasoning and action, and engaging some of this work would strengthen and sharpen Munro’s arguments in many ways.⁴ For instance, in his discussion of the importance of emotion in guiding human behavior, Munro quotes E. O. Wilson’s doubts about the existence of “stone psychopaths” (p. 68), but in fact complete psychopaths do seem to exist and live among us (Blair 1995, Blair et al. 1997, Blair 2001, Anderson et al. 1999). Recent work that has been done on psychopathy both supports Munro’s claims for the importance of intact emotional capacities for moral action and provides a concrete example of what someone with nonexistent Mencian sprouts might look like. Nonhuman-animal behavior researchers have shown that moral emotions such as empathy and righteous indignation—characterized in a manner that looks very much like the Mencian *ren* 仁 and *yi* 義—are not merely human universals, but appear to be shared by other species.⁵ Similarly, Jonathan Haidt’s work on the categories of moral emotions and Paul Rozin’s work on moral “core disgust”—to take just two prominent examples—make Mencian psychology look remarkably contemporary.⁶ Munro also fails to mention the vast literature on the revival of “virtue ethics” in the West that centers on the role of emotions and perception in morality and opposes the intellectualist bias of modern Western deontology and utilitarianism. Engaging with this literature would also strengthen and enrich his argument, especially since Mencius is arguably a much better resource as moral psychologist than Aristotle, the premodern thinker to whom contemporary virtue ethics typically turns.

In some respects, a broader engagement with cognitive science, evolutionary psychology, and recent philosophical literature would suggest a need to revise some of Munro's claims. For instance, despite his treatment of Robert Trivers's work on reciprocal altruism (the mechanisms that led to cooperation of non-kin) (pp. 51, 76), Munro sometimes seems to suggest that reciprocal altruism is simply an extension of kin selection (e.g., p. 49): "The Confucian and the biologist," he declares, share the view that "altruism begins in the family and spreads outward" (pp. 50, 75). In fact, it does not appear that all prosocial behavior can or should be traced back to kin selection, and much of the work of Trivers (1971) and other evolutionary theorists has been dedicated to developing models of how cooperation between non-kin might have evolved and be sustained. Mathematical models suggest that cooperation between non-kin is a stable evolutionary strategy as long as free riders can be recognized and punished, and as long as those who fail to punish them are also punished (Boyd and Richerson 1992, Gintis 2000, Fehr and Gächter 2000 and 2002, Henrich and Boyd 2001). Findings in evolutionary psychology and cognitive science are making it increasingly clear that "altruistic punishment" is psychologically distinct from "altruistic helping" (O'Gorman et al. 2005), and that humans possess specific mechanisms for facilitating non-kin cooperation. These mechanisms appear to include enhanced facial recognition for cheaters (Mealey, Daood, and Krage 1996), specific cognitive adaptations for social contract reasoning and cheater detection (Cosmides 1989; Sugiyama, Tooby, and Cosmides 2002), and a specialized emotion, "righteous indignation," which consists of an "irrational" drive to punish cheaters or violators of the social contract even at considerable cost to oneself. This emotion seems functionally specialized for dealing with the free-rider problem (Price, Cosmides, and Tooby 2002; Sanfey et al. 2003; De Quervain et al. 2004), and appears to be more prominent in males than females (Singer et al. 2006).

One of Munro's central contentions is that we should follow Mencius and Zhu Xi in recognizing that any viable ethic is going to have to be based on and consistent with an accurate picture of human nature. Regarding ethical rules, for instance, he notes that "only those consistent with human nature will survive in the long term" (p. 63). This is, of course, the same argument made by Mencius against the Mohists and neo-Mohists, and is also a central theme in the revival of virtue ethics in the West and the recent "naturalist" movement in philosophy.⁷ This literature supplements Munro's discussion in important ways. For instance, Munro suggests that when it comes to sources of ethical justification, our choices are either human nature or divine commands (pp. 71–72), but there are clearly other choices, such as the deontological reliance on universal, *a priori* rationality. One of the many contributions of the naturalist movement in philosophy is to address the issue of ethical justification in a manner that fully takes into account the modern, rationalist developments of divine imperative–based moralities, while ultimately showing their limitations.

We might also further nuance Munro's treatment of utilitarianism. Despite his criticism of the excessive intellectualism of utilitarianism, the ultimate position advo-

cated by Munro in this collection of essays is what he calls a “modified utilitarianism” that “recognizes our shared interest in avoiding pain and maximizing happiness and approves of it” (p. 77), arguing that the primary element that needs to be “modified” in utilitarianism is the fact that it does not take into account gradations of emotional attachment (p. 74). One could argue that this is not the only weakness of utilitarianism, and that Munro might be better served by abandoning even a modified form of it altogether. The whole idea that pleasure is good and suffering is bad, and that right and wrong are a function of pain-versus-pleasure consequences (following Bentham, Mill, and Singer), is rather questionable—the whole question of how one would assign relative values to pain and pleasure aside. Here again is a reason for paying more attention to Mencius, for he himself pointed out this limitation of utilitarianism in observing that, when push comes to shove and we have properly cultivated ourselves, our moral intuitions impel us to choose rightness over life (6A10). Human beings are clearly capable and inclined to go against their own hedonic interests in certain circumstances, and this is, indeed, what one would expect from evolution. As Richard Dawkins has so lucidly argued (1999), emotions and desires are designed to propagate the genes, not assure the happiness of the bearer of those genes, which means that we have not necessarily evolved to be happy or maximize our own pleasure. If Mencius is correct, what we approve of ultimately is rightness, not the avoidance of pain, and any naturalist model of ethics is going to have to take into account powerful and apparently universal emotions that cause individuals to act in ways that profoundly *detract* from their own proximate pleasure and interests.

Munro recognizes that taking the sort of naturalistic stance toward the human being that is required from the standpoint of evolutionary psychology or cognitive science is potentially destabilizing to our intuitive picture of human beings as responsible agents possessing free will, but his treatment of free will as simply “uncaused” or “uncoerced” (pp. 9–10, 48) could also be further developed, and would benefit from familiarity with the growing literature addressing the potential tensions involved in viewing the human being as ultimately a physical system produced by evolution (see esp. Dennett 1991, 1995, 2003; Flanagan 1992, 2002). Munro’s model of human nature also arguably relies too heavily and exclusively on the work of E. O. Wilson. Munro is, I believe, quite right in arguing that evolutionary psychologists and cognitive scientists have accumulated a mountain of evidence suggesting that any strong version of social constructivism is untenable, and that human nature is certainly more than a passive blank slate to be inscribed by culture.⁸ To offer as the alternative, however, the metaphor of genetics as “hard-wired” (p. 62) is probably going too far. In place of E. O. Wilson’s notorious “developer fluid” model of human nature—expose it to the world and it develops—we might be better served by going all the way back to Mencius’ metaphor of the “sprout” (*duan* 端): a pre-given but fragile tendency, subject to being damaged, twisted, or altered by the environment, which itself is in a constant process of being transformed.

“Consistent with human nature” certainly sets important limits, but is perhaps not as restrictive as more hard-line evolutionary psychologists such as Wilson might

have it. Human beings are constantly changing their environment and society, and these changes in turn have an effect on how human nature manifests itself in the world. New technologies such as strength-augmenting machines or breast pumps and refrigerators have the potential to fundamentally alter traditional gender patterns in the work environment, and new modes of production coupled with technologies such as birth control give rise to all sorts of novel and “unnatural” life-styles—such as that of highly successful but childless yuppies or academics who have chosen to forego reproducing at a “normal” age in order to complete their education and professional training.

These concerns about some of the details of Munro’s scholarly support and arguments should be balanced against the fact that *A Chinese Ethics for the New Century* is not a single monograph developing a detailed argument, but rather a somewhat heterogeneous collection of mostly independent essays. It consists of Munro’s 2003 Chi’en Mu public lectures along with other miscellaneous recent essays, many of them originally published in Chinese and intended for a popular audience. This work is thus deliberately written for a more generalist audience, and by its very nature cannot delve into the level of detail that one would expect of a more typical academic press monograph or journal article. Quibbles aside, the vision that Munro presents of a revitalized Mencian ethics taking its place on the global stage is an inspiring and prophetic one, and it gives us an exciting glimpse of where our field might be headed in the twenty-first century. This vision has implications not merely for the study of Chinese thought, but also for the humanities in general, which can only be enriched by a serious engagement with relevant findings coming out of the cognitive and natural sciences. As has often been the case in his long and illustrious career, Munro has taken the first step in what promises to be a very fruitful new direction.

Notes

- 1 – Best known to the general academic public through the work of Lakoff and Johnson (1980, 1999).
- 2 – See Allan 1997, Puett 2000, Ivanhoe 2000, Slingerland 2003 and 2005, Wong 2002, Csikszentmihalyi 2005.
- 3 – See Nussbaum 1988 for an early attempt to sketch out a set of “non-relative virtues.”
- 4 – For just a sampling, see de Sousa 1987; Gigerenzer and Selten 2001; Kahneman, Slovic, and Tversky 1982; Kahneman and Tversky 2000; Le Doux 1996; Nussbaum 2001; Ortony et al. 1990; Rorty 1980; and Solomon 2003, 2004. For an example of recent fMRI studies concerned with the role of emotion in moral reasoning, see Greene et al. 2001.
- 5 – For empathy, see the general review in Preston and de Waal 2002; for righteous indignation, see Brosnan and de Waal 2003.

- 6 – Haidt 2001; Haidt, Koller, and Dias 1993; Greene and Haidt 2002; Haidt et al. 1997; Rozin 1996; Rozin et al. 2000.
- 7 – See, for instance, Flanagan (1991) for his “Principle of Minimal Psychological Realism”; Johnson 1993; or the essays collected in Goldman 1993 and May 1996.
- 8 – See Brown 1991; Pinker 2002; Barkow, Tooby, and Cosmides 1994; Buss 2005.

References

- Allan, Sarah. 1997. *The Way of Water and Sprouts of Virtue*. Albany: State University of New York Press.
- Anderson, Steven, Antoine Bechara, Hannah Damasio, Daniel Tranel, and Antonio Damasio. 1999. “Impairment of Social and Moral Behavior Related to Early Damage in the Human Prefrontal Cortex.” *Nature Neuroscience* 2 : 1032–1037.
- Blair, R. James. 1995. “A Cognitive Developmental Approach to Morality: Investigating the Psychopath.” *Cognition* 57 : 1–29.
- . 2001. “Neurocognitive Models of Aggression, the Antisocial Personality Disorders, and Psychopathy.” *Journal of Neurology, Neurosurgery, and Psychiatry* 71 : 727–731.
- Blair, R. James, et al. 1997. “The Psychopathic Individual: A Lack of Responsiveness to Distress Cues?” *Psychophysiology* 34 : 192–198.
- Boyd, Robert, and Peter Richerson. 1992. “Punishment Allows the Evolution of Cooperation (or Anything Else) in Sizable Groups.” *Ethology and Sociobiology* 13 : 171–195.
- Brosnan, Sarah, and Frans de Waal. 2003. “Monkeys Reject Unequal Pay.” *Nature* 425 : 297–299.
- Brown, Donald. 1991. *Human Universals*. New York: McGraw-Hill.
- Buss, David, ed. 2005. *The Handbook of Evolutionary Psychology*. Hoboken, NJ: John Wiley and Sons.
- Cosmides, Leda. 1989. “The Logic of Social Exchange: Has Natural Selection Shaped How Humans Reason? Studies with the Watson Selection Task.” *Cognition* 31 : 187–276.
- Csikszentmihalyi, Mark. 2005. *Material Virtue: Ethics and the Body in Early China*. Leiden: Brill.
- Damasio, Antonio. 1994. *Descartes’ Error: Emotion, Reason, and the Human Brain*. New York: G. P. Putnam’s Sons.
- . 2000. *The Feeling of Things: Body and Emotion in the Making of Consciousness*. New York: Harvest.

- Dawkins, Richard. 1999. *The Selfish Gene*. New York: Oxford University Press.
- De Sousa, Ronald. 1987. *The Rationality of Emotion*. Cambridge: Cambridge University Press.
- De Quervain, Dominique, Urs Fischbacher, Valerie Treyer, Melanie Schellhammer, Ulrich Schnyder, Alfred Buck, and Ernst Fehr. 2004. "The Neural Basis of Altruistic Punishment." *Science* 305 : 1254–1258.
- De Waal, Frans. 1996. *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Cambridge, MA: Harvard University Press.
- Dennett, Daniel. 1991. *Consciousness Explained*. Boston: Little Brown.
- . 1995. *Darwin's Dangerous Idea: Evolution and the Meaning of Life*. New York: Simon and Schuster.
- . 2003. *Freedom Evolves*. New York: Viking.
- Fehr, Ernst, and Simon Gächter. 2000. "Fairness and Retaliation: The Economics of Reciprocity." *Journal of Economic Perspectives* 14 : 159–181.
- . 2002. "Altruistic Punishment in Humans." *Nature* 415 : 137–140.
- Flanagan, Owen. 1991. *Varieties of Moral Personality: Ethics and Psychological Realism*. Cambridge, MA: Harvard University Press.
- . 1992. *Consciousness Reconsidered*. Cambridge, MA: MIT Press.
- . 2002. *The Problem of the Soul: Two Visions of Mind and How to Reconcile Them*. New York: Basic Books.
- Gigerenzer, Gerd, and Reinhard Selten, eds. 2001. *Bounded Rationality: The Adaptive Toolbox*. Cambridge, MA: MIT Press.
- Gintis, Herbert. 2000. "Strong Reciprocity and Human Sociality." *Journal of Theoretical Biology* 206 : 169–179.
- Goldman, Alvin, ed. 1993. *Readings in Philosophy and Cognitive Science*. Cambridge, MA: MIT Press.
- Greene, Joshua, and Jonathan Haidt. 2002. "How (and Where) Does Moral Judgment Work?" *Trends in Cognitive Science* 6 : 517–523.
- Greene, Joshua, Brian Sommerville, Leigh Nystrom, John Darley, and Jonathan Cohen. 2001. "An fMRI Investigation of Emotional Engagement in Moral Judgment." *Science* 293 : 2105–2108.
- Haidt, Jonathan. 2001. "The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment." *Psychological Review* 108 : 813–834.
- Haidt, Jonathan, Silvia Koller, and Maria Dias. 1993. "Affect, Culture, and Morality, or Is It Wrong to Eat Your Dog?" *Journal of Personality and Social Psychology* 65 : 613–628.

- Haidt, Jonathan, Paul Rozin, Clark McCauley, and Sumio Imada. 1997. "Body, Psyche, and Culture: The Relationship between Disgust and Morality." *Psychology and Developing Societies* 9 : 107–131.
- Henrich, Joseph, and Robert Boyd. 2001. "Why People Punish Defectors: Weak Conformist Transmission Can Stabilize Costly Enforcement of Norms in Cooperative Dilemmas." *Journal of Theoretical Biology* 208 : 79–89.
- Ivanhoe, Philip J. 2000. *Confucian Moral Self Cultivation*. 2nd ed. Cambridge: Hackett Publishing Company.
- Johnson, Mark. 1993. *Moral Imagination: Implications of Cognitive Science for Ethics*. Chicago: University of Chicago Press.
- Kahneman, Daniel, Paul Slovic, and Amos Tversky, eds. 1982. *Judgement under Uncertainty: Heuristics and Biases*. Cambridge: Cambridge University Press.
- Kahneman, Daniel, and Amos Tversky. 1982. "On the Study of Statistical Intuitions." *Cognition* 11 : 123–141.
- . 2000. *Choices, Values, and Frames*. Cambridge: Cambridge University Press.
- Lakoff, George, and Mark Johnson. 1980. *Metaphors We Live by*. Chicago: University of Chicago Press.
- . 1999. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books.
- LeDoux, Joseph. 1996. *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. New York: Simon and Schuster.
- May, Larry, Marilyn Friedman, and Andy Clark, eds. 1996. *Mind and Morals: Essays on Ethics and Cognitive Science*. Cambridge, MA: MIT Press.
- Mealey, Linda, Christopher Daood, and Michael Krage. 1996. "Enhanced Memory for Faces of Cheaters." *Ethology and Sociobiology* 17 : 119–128.
- Munro, Donald. 1969. *The Concept of Man in Early China*. Stanford: Stanford University Press.
- . 1977. *The Concept of Man in Contemporary China*. Ann Arbor: University of Michigan Press.
- . 1988. *Images of Human Nature: A Song Portrait*. Princeton: Princeton University Press.
- Nussbaum, Martha. 1988. "Non-relative Virtues: An Aristotelian Account." In Peter French, ed., *Midwest Studies in Philosophy*, vol. 13, *Ethical Theory: Character and Virtue*, pp. 32–53. Notre Dame: University of Notre Dame Press. Reprinted in Amartya Sen and Martha Nussbaum, eds., *Quality of Life*, pp. 242–269. Oxford: Oxford University Press, 1993.
- . 2001. *Upheavals of Thought: The Intelligence of the Emotions*. Cambridge: Cambridge University Press.

- O’Gorman, Rick, David Wilson, and Ralph Miller. 2005. “Altruistic Punishment and Helping Differ in Sensitivity to Relatedness, Friendship, and Future Interactions.” *Evolution and Human Behavior* 26 : 375–387.
- Ortony, Andrew, Gerald L. Clore, and Allan Collins. 1990. *The Cognitive Structure of Emotion*. Cambridge: Cambridge University Press.
- Pinker, Steven. 2002. *The Blank Slate: The Modern Denial of Human Nature*. New York: Viking.
- Preston, Stephanie, and Frans de Waal. 2002. “Empathy: Its Ultimate and Proximate Bases.” *Behavioral and Brain Sciences* 25 : 1–72.
- Price, Michael, Leda Cosmides, and John Tooby. 2002. “Punitive Sentiment as an Anti-Free Rider Psychological Device.” *Evolution and Human Behavior* 23 : 203–231.
- Puett, Michael. 2000. *The Ambivalence of Creation: Debates Concerning Innovation and Artifice in Early China*. Stanford: Stanford University Press.
- Rorty, Amélie Oksenberg, ed. 1980. *Explaining Emotions*. Berkeley: University of California Press.
- Rozin, Paul. 1996. “Towards a Psychology of Food and Eating: From Motivation to Module to Model to Marker, Morality, Meaning, and Metaphor.” *Current Directions in Psychological Science* 5 : 18–24.
- Rozin, Paul, Jonathan Haidt, and Clark McCauley. 2000. “Disgust.” In Michael Lewis and Jeannette Haviland-Jones, eds., *Handbook of Emotions*, 2nd ed., pp. 637–653. New York: Guilford Press.
- Sanfey, Alan, James Rilling, Jessica Aronson, Leigh Nystrom, and Jonathan Cohen. 2003. “The Neural Basis of Economic Decision-Making in the Ultimatum Game.” *Science* 300 : 1755–1758.
- Singer, Tania, Ben Seymour, John O’Doherty, Klaas Stephan, Raymond Dolan, and Chris Frith. 2006. “Empathic Neural Responses Are Modulated by the Perceived Fairness of Others.” *Nature* 439 : 466–469.
- Slingerland, Edward. 2003. *Effortless Action: Wu-wei as Conceptual Metaphor and Spiritual Ideal in Early China*. New York: Oxford University Press.
- . 2005. “Conceptual Blending, Somatic Marking, and Normativity: A Case Example from Ancient Chinese.” *Cognitive Linguistics* 16 (3): 557–584.
- Solomon, Robert, ed. 2003. *What Is an Emotion? Classic and Contemporary Readings*. New York: Oxford University Press.
- . 2004. *Thinking about Feeling: Contemporary Philosophers on Emotion*. New York: Oxford University Press.
- Sugiyama, Lawrence, John Tooby, and Leda Cosmides. 2002. “Cross-cultural Evidence of Cognitive Adaptations for Social Exchange among the Shiwiari of

- Ecuadorian Amazonia." *Proceedings of the National Academy of Sciences* 99:11537–11542.
- Tooby, John, and Leda Cosmides. 1992. "Psychological Foundations of Culture." In Jerome Barkow, Leda Cosmides, and John Tooby, eds., *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, pp. 19–136. New York: Oxford University Press.
- Trivers, Robert. 1971. "The Evolution of Reciprocal Altruism." *Quarterly Review of Biology* 46:35–57.
- Tversky, Amos, and Daniel Kahneman. 1974. "Judgment under Uncertainty: Heuristics and Biases." *Science* 185:1124–1131.
- Wong, David. 2002. "Reasons and Analogical Reasoning in Mencius." In Xiusheng Liu and Philip J. Ivanhoe, eds., *Essays on the Moral Philosophy of Mengzi*, pp. 187–220. Cambridge, MA: Hackett Publishing Company.