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Preface

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In March 2014, we welcomed dozens of scholars from the North America, Europe, and Africa to join us at Oakland University in Rochester, Michigan for a day-long interdisciplinary conference on “The Evolution of Morality.” We invited as panelists some of the leading scholars in morality from many different disciplines, including psychology, neuroscience, criminology, biology, anthropology, archeology, law, philosophy, and medicine. Each of these scholars had conducted and published substantial work addressing morality from an evolutionary perspective. This volume showcases the groundbreaking empirical and theoretical work from several of these panelists and other distinguished conference guests. With deep sadness, this volume is dedicated to the memory of Randy Hansen, co-organizer of this and two previous conferences and much else at Oakland University, who died suddenly and unexpectedly in December 2014.

The volume is presented in five parts. Part I includes three chapters that focus on psychological adaptation and developmental processes. In chapter 1, Kelly Asao and David Buss propose a tripartite theory of Machiavellian morality in which moral judgment, moral influence, and moral conscience are functionally distinct moral adaptations. The authors argue that moral judgment is an adaptation designed to determine how exploitative or benefit-bestowing a conspecific is and to use that information when selecting relationship partners. Moral influence is designed to identify cost-effective means of altering the behavior of others to be less cost-inflicting and more benefit-bestowing. Moral conscience is an adaptation designed to guide one’s own behavior towards others to avoid ramifications from other’s moral judgment and influence mechanisms. The authors illustrate the application of this tripartite framework of Machiavellian morality with two examples, sexual infidelity and property theft. Asao and Buss close with a thoughtful discussion of the potential for this framework to clarify some of the ambiguity in the morality literature and to refocus attention on novel areas of research.

In chapter 2, Oliver Scott Curry presents a new theory of morality as cooperation. This theory uses the mathematics of cooperation to identify the many distinct problems of cooperation and their solutions; and it predicts that it is the solutions deployed by humans that constitute “morality.” According to Curry, therefore, morality is a collection of biological and cultural solutions to the problems of cooperation and conflict evolutionarily recurrent in human social life. This theory generates a comprehensive taxonomy of moral values – what Curry refers to as a Periodic Table of Ethics – that includes obligations to family, group loyalty, reciprocity, bravery, respect, fairness, and property rights. Curry argues that morality-as-cooperation generates predictions about the structure and content of human morality and that these predictions can be tested against those of rival theories, thereby revealing that the study of morality is simply another branch of science.

Chapter 3 rounds out the first part of the volume. In this chapter, developmental psychologist Gustavo Carlo and colleagues open by noting that most theoretical accounts of human morality emphasize the role of biological, psychological, environmental, or developmental processes. The authors concede that these theories have guided much research and have advanced our understanding of morality. However, theories and research examining the role of culture-related processes are less common, and, according to the authors, there is a need for integrative approaches. Carlo and colleagues briefly review biologically-based and developmental research, discuss definitional issues, and present a model that incorporates culture-related processes. The model highlights biological, cultural, and environmental mechanisms, sociocognitive and socioemotive traits, and culture-related processes. The authors close the chapter with calls for research that addresses biology X environment interactions and refinements in conceptualizations of morality and moral behaviors.

Part II of the volume includes four chapters that broadly address philosophical and ethical perspectives on morality. In chapter 4, Gregory Gorelik and Todd Shackelford advance the concept of “evolutionary awareness,” a metacognitive framework that examines human thought and emotion from a naturalistic, evolutionary perspective. The authors begin by discussing the evolution and current functioning of the moral foundations on which their framework rests. Next, they address the possible applications of such an evolutionarily-informed ethical framework to several domains of human behavior: sexual maturation, mate attraction, intrasexual competition, culture, and the separation between various academic disciplines. Gorelik and Shackelford close their chapter with a discussion of the ways in which an evolutionary awareness can inform our cross-generational activities—which they refer to as “intergenerational extended phenotypes”—by helping us to construct a better future for ourselves, for other sentient beings, and for our environment.

Tyler Millhouse and colleagues open chapter 5 by highlighting recent work arguing that that existing evidence does not support the claim that *moral cognition*, understood as a specific form of normative cognition, is a product of evolution. The authors of this recent work suggest, instead, that the evidence only supports the claim that a general capacity for *normative cognition* evolved. These authors argue that if this is the case then the prospects for evolutionary debunking arguments of morality are bleak: A debunking argument which relied on the fact that normative cognition in general evolved seems like it would debunk *all* areas of normative belief, including the epistemic norms upon which the argument relies. Millhouse and colleagues accept, for the sake of argument, the claim that specifically moral cognition did not evolve. However, they reject the contention that this critically undermines evolutionary debunking arguments of morality. A number of strategies are available to solve what Millhouse and colleagues refer to as

the “containment problem” of how to effectively debunk morality without *thereby* debunking normative cognition. Furthermore, and according to Millhouse and colleagues, the debunking argument need not rely even on the claim that normative cognition in general evolved. So long as at least some aspects of moral cognition have evolved, this may be sufficient to support an evolutionary debunking argument against many of our moral beliefs. Thus, according to Millhouse and colleagues, even if these previous authors are correct that specifically moral cognition did not evolve, research in evolutionary psychology may have important implications for moral philosophy.

The claim that “life is good” is a popular mantra among the cheery and those aspiring to such “positive thinking.” In opposition to this optimism, David Benatar argues in chapter 6 that while some lives are better than others, no life is good enough to count as non-comparatively good. Benatar concedes that this conclusion will strike many as outrageous and thus he also addresses good reasons why we should distrust positive assessments of the quality of life. Benatar considers and rejects various “secular theodicies” – attempts to reconcile the vast amount of evil in life with the claim that “life is good.” Benatar closes his chapter with a careful consideration of what does and what does not follow from the grim view that he defends.

In the closing chapter of Part II, Sarah Perry addresses antinatalism—the view that it is morally wrong to procreate. Perry considers the history of human fertility, in particular the modern fertility transition of the past two centuries, in light of the ethical beliefs inferable from fertility practices. Perry argues that the patterns of change in fertility suggest that parents, faced with a version of Derek Parfit’s “mere addition paradox,” increasingly reject the “Repugnant Conclusion” and have fewer children for the good of these children, ignoring the purported benefit that existence would give to children they never have. Perry closes her chapter addressing

the other end of life, offering a thoughtful analysis of the social and cultural evolution of suicide.

Part III includes two chapters that address morality in non-humans. Katie Hall and Sarah Brosnan argue in chapter 8 that humans are not alone in the animal kingdom in displaying moral behavior. According to the authors, precursors to moral behavior exist in rudimentary form in many species, including our closest phylogenetic relatives, the non-human primates, and have evolved into the more complex moral behavior seen in humans. Hall and Brosnan argue that moral behavior functions to reduce tension in social groups to thereby afford cooperative, peaceful interactions that are essential for groups to exist. The authors consider four of these behaviors: conflict resolution, reciprocity, reactions to inequity, and empathy. Hall and Brosnan conclude that by studying these behaviors in other species, we may gain insight into the evolution of moral behaviors, what the mechanisms are that produce these behaviors, how these behaviors develop in the individual, and, through a comparative approach in particular, the function of these behaviors.

In chapter 9, Peggy Mason argues that, in mammalian communities, affective communication and pro-social acts support social cohesion, which in turn ancestrally increased an individual's chances of survival and reproductive success. Mason reviews her own and others' research indicating that pro-social behavior occurs in rodents as well as in non-human primates, reflecting the value of social cohesion and affective communication to mammals of all ages and both sexes. Mason's own groundbreaking research documents that, given a rat-appropriate challenge, adult rats help another rat in distress by freeing it from a restraining tube. Rats perform this pro-social act repeatedly and at shorter and shorter latencies, acting consistently and intentionally. This helping behavior occurs even if social contact between the helper and the

recipient is prevented, by having the trapped rat released into a separate space. This result documents that the helper rat helps independent of earning an immediate social reward. As in humans, rats help strangers as well as individuals with whom they are familiar. In the case of rats, help is extended to unfamiliar rats but only if those rats are of a familiar type, even if the type is not the same as their own biological type. Mason reviews research in her lab documenting that co-housing with a single rat of a different stock is enough to confer familiarity to all rats of that stock. Mason suggests that the helping behavior test in rats might be applied analogously in humans to disambiguate cultural and biological influences on human social behavior.

Part IV of the volume includes two chapters that address work at the interface of evolutionary psychology and religious beliefs and behavior. Yael Sela and colleagues address religiously-motivated violence as a downstream consequence of processes of sexual selection. The authors open the chapter by noting that relying on religion as the basis of one's morality can be problematic. Although religion can motivate positive behaviors and cooperation, it also motivates and exacerbates violence in particular contexts. Seal and colleagues first provide a brief overview of human sexual selection from an evolutionary psychological perspective. They next discuss how and why an evolutionary perspective and, in particular, the concepts of intersexual and intrasexual competition may be useful in understanding religiously-motivated violence. The authors then present an overview of the research addressing several types of religiously-motivated violence, such as mate guarding and controlling behaviors, wife-beating and uxoricide, "honor" killing, child abuse and filicide, male and female genital mutilation, suicide, group violence and war, and terrorism, including suicide terrorism. Sela and colleagues close the chapter by highlighting the potential advantages that religiously-motivated violence

may have provided ancestrally within a sexual selection framework, and they conclude with suggestions for future research.

James Liddle begins chapter 11 noting that religion is considered by many practitioners to form the foundation of morality. However, religiosity varies substantially at the individual and societal level. According to Liddle, understanding this variation from an evolutionary perspective can aid in disentangling religion and morality. Liddle summarizes his recent research designed to replicate and extend previous findings regarding the “Secure Society Theory” of religiosity, which states that religiosity varies with the extent to which one feels secure in one’s environment. The relationship between individual perceptions of societal security—as opposed to national indicators—and religiosity has yet to be tested. Liddle’s research addressed this by analyzing United States data from the General Social Survey, supplemented by Federal Bureau of Investigation and Census data. Liddle reviews the results of this research, which indicates that the extent to which one feels safe walking around one’s neighborhood at night predicts religiosity, even when crime rate, poverty rate, age, sex, and race are controlled statistically. Additionally, time series analyses of data from 1980 to 2012 provide partial support for Secure Society Theory, with neighborhood fear and poverty predicting future religiosity.

The final three chapters comprise Part V of the volume, and these chapters address the evolution of morality in the contexts of politics, the law, and game theory. In chapter 12, Bøggild and Petersen review recent research on the evolved functions of procedural fairness, making a clear case for the existence of adaptations for politics. According to the authors, politics is the process of determining resource allocations within and between groups. The authors argue that group life has constituted an enduring feature of human evolutionary history and we should expect the human mind to contain psychological adaptations for dealing with political problems.

Bøggild and Petersen note that previous research has focused on adaptations designed to produce moral evaluations of political outcomes: is the allocation of resources fair? They argue that people are not only concerned about *outcomes*. They also readily produce moral evaluations of the political *processes* that shape these outcomes. In short, the authors argue that people have a sense of procedural fairness. Bøggild and Petersen argue that intuitions about procedural fairness evolved to deal with adaptive problems related to the delegation of leadership and, specifically, to identify and counter-act exploitative leaders. The authors first introduce the concept of procedural fairness, review psychological theories and make the case for why an evolutionary approach is necessary. Next, they discuss the evolved functions of procedural fairness and review previous research through the lens of evolutionary psychology. Finally, the authors discuss how environmental mismatches between ancestral and modern politics make procedural fairness considerations more potent in modern politics, often generating powerful sources of moral outrage.

Jeffrey Evans Stake makes a convincing case in chapter 13 that an evolutionary perspective on human morality may help us understand and critique the law. Stake examines three areas of American property law. In two of the three areas, title by first possession and title by adverse possession, the pieces of legal doctrine fit together when seen through an evolutionary lens. In the third area of law, compensation for eminent domain, Stake argues that the inconsistency between the legal doctrine and evolved psychology suggests why governmental takings of property raise public ire. Stake closes the chapter by highlighting suggestions for what can be done to make the law less offensive to evolved sensibilities.

In the final chapter, Hoffman and colleagues address the strategic logic of moral intuitions from the perspective of game theory. The authors present an analysis of the Nash

Equilibria of a series of simple games to reframe and explain many puzzling aspects of human morality. These include why we have a sense of rights, why we give to charity in odd and often inefficient ways, why we admire principled people, why we distinguish between transgressions of omission and commission, and several other themes in the literature on moral psychology. Hoffman and colleagues also enumerate several novel predictions and policy prescriptions. The arguments in this chapter suggest that supposedly *a priori* arguments for why our moral sentiments exist (descriptive ethics) and why they should be followed (prescriptive ethics) presented by philosophers such as Aristotle and Kant may be more about folk intuitions. According to Hoffman and colleagues, it should not surprise us that these philosophers generated explanations for our moral intuitions that strike us as *post hoc*, folk psychology. Hoffman and colleagues concede that although their own analysis might strike some readers as similarly folk-informed, these claims are based in rigorous modeling of the underlying dynamics using population level analyses of equilibria that are difficult to intuitively grasp. Hoffman and colleagues suggest that their own arguments question the notion that morality can be justified based on any *a priori* logic, at least one that does not account for individual incentives within one's lifetime. The authors also question the notion of "moral truths" other than if such truths are the moral intuitions that emerge from Nash Equilibria. These premises underlie much of moral philosophy, and thus lead the authors to question the methodology commonly employed within the field, which often relies on psychological explanations that are little more than folk intuitions, neuropsychological description, or rely on unverifiable evolutionary processes with superfluous predictions. Hoffman and colleagues contend that their argument applies not only to esoteric philosophical debates, but should also make us doubt the logic we give for our own morality, such as when we have political debates with our friends. And, it similarly draws into

question the premise that moral progress is driven by reason.

*The Evolution of Morality* showcases the profound and wide-ranging intellectual value of an interdisciplinary approach to human psychology and behavior. Guided by Darwin's insights, the contributions to this wide-ranging volume provide a compelling case for an evolutionary analysis of morality.