Chapter 2
The Origins of the "Manichean Mindset"

Our unique attributes evolved over a period of roughly 6 million years. They represent modifications of great ape attributes that are roughly 10 million years old, primate attributes that are roughly 55 million years old, mammalian attributes that are roughly 245 million years old, vertebrate attributes that are roughly 600 million years old, and attributes of nucleated cells that are perhaps 1,500 million years old. If you think it is unnecessary to go that far back in the tree of life to understand our own attributes, consider the humbling fact that we share with nematodes (tiny wormlike creatures) the same gene that controls appetite. At most, our unique attributes are like an addition onto a vast multiroom mansion. It is sheer hubris to think we can ignore all but the newest room.

– David Sloan Wilson

Abstract This chapter surveys the debate between so-called Nativists and Behaviorists on whether a universal Human Nature exists, before segueing into the main tenets of the important emerging discipline of evolutionary psychology, which emphasizes how the ancestral environment continues to exert an enduring influence over many modern human impulses, including the instinct for violence. The chapter analyzes ongoing debates between Individual Selectionists who emphasize that individual human competition is the basis for all social life, as opposed to Group Selectionists who argue that humans are at the same time instinctly groupish as well. As Group Selectionists would contend, the innate human predilection for social categorization, together with structurally induced looping effects reifying social group constructs, creates the necessary environmental prerequisites for the Darwinian natural selection of not so much selfish individuals but rather *cohesive groups best suited for success in intergroup conflict.* The chapter posits that the roots of this social categorization process lie in the first element of the Human Nature Triad, *binarity* – or the human tendency to employ binary oppositions in making sense of environmental stimuli. Binarity, together with the importance of a wider, psychologically comforting Group Tent in profoundly meeting individual esteem needs and the resulting potential for sometimes self-sacrificial violence against out-groups, implies the existence of an innate Manichean Mindset. This Mindset is expressed in the basic ethnocentric, xenophobic, and dominance-seeking

behavior of the in-group vis-a-vis putative out-groups. Hence, intrinsic, potentially combustible, Manichean-minded in-group/out-group cleavages *preexist* – well before the intervention of a violent extremist ideology.

2.1 Introduction

Evolutionary biologist David Sloan Wilson's sobering reminder above suggests that before we can unpack the notion of the Manichean Mindset and its putative role in Indonesian Islamist militancy and terrorism, it is critical to set the stage by examining the roots of the Mindset within our ancient biological natures. In a previous study, the present writer argued that understanding violent Muslim radicalization in Indonesia requires an appreciation of the interaction between Human Nature, culture, and what was termed the situated individual personality – incorporating individual psychological factors as well as the immediate social milieu within which the individual is embedded. These elements were brought together in the so-called Radical Pathways Framework. In particular, it was argued that should these three elements in the framework interact in ways so as to generate what was termed "existential identity anxiety" or a visceral fear of group marginalization or even extinction, then the pathway to violent radicalization is all but assured. The framework was employed to illustrate the radicalization processes – Radical Pathways – of key JI militants involved to various degrees in the Bali bombing of October 12, 2002 (Ramakrishna 2009). To be sure, *Radical Pathways* paid significant attention to the ways in which culture – essentially taken in that book to mean learned ways of thinking, feeling, and potentially acting – influenced the violent radicalization process. The current study acknowledges the power of culture in shaping the violent radicalization process, as shall be seen in a later chapter. Nevertheless, numerous graduate seminar discussions of the Radical Pathways Framework suggest that the role of the Human Nature element of the framework deserves much deeper analysis. This book in some ways carries on where *Radical Pathways* left off. It is broadly interested in those elements of Human Nature that under certain conditions could give rise to the cognitive and affective processes that underlie violent religious radicalization in Indonesia. As discussed, it is argued that Indonesian Islamists radicalize into an ever-evolving, violent extremism not because of ideology per se. Ideology is one intervening factor; the real root of the phenomenon lies in the Human Nature Triad of binarity, religiosity, and complexity. The binarity element of the Triad gives rise to what we call the Manichean Mindset – the subject of the current chapter. This Mindset could be said to reside at the core of the existential identity anxiety that was identified by *Radical Pathways* as implicated in violent religious radicalization in the case of the JI Bali bombers. This chapter will accordingly set the scene for the rest of the book by explaining the concept of the Manichean Mindset, and in the spirit of the quote by David Sloan Wilson, elucidate its inescapable rootedness within our evolved biological natures.

To this end, this chapter will discuss the main themes of the debate between so-called Nativists and Behaviorists on whether a universal Human Nature even exists. This will then lead in the second section to a discussion of the main tenets of the relatively recent discipline of evolutionary psychology and its emphasis on how the *ancestral environment* continues to exert an enduring influence over many modern human impulses, such as the instinct for violence. The section following this then explores the intellectual roots of the evolutionary paradigm in the work of the famous British naturalist Charles Darwin, showing that while the latter and his later disciples readily noted the competitive struggle for survival among living organisms, it was equally apparent that there was a great deal of cooperation in biological and human life that needed elucidation as well. In particular, *Individual Selectionist* arguments of the potency of the so-called selfish gene do not explain the evident human penchant for groupishness, the subject of the fourth section. The fifth section drills deeper into the mystery of cooperation between ostensibly selfish individuals. It demonstrates how the human predilection for social categorization, together with structurally induced *looping effects* reifying social group constructs, created the necessary environmental prerequisites for the natural selection of not so much selfish individuals but rather – as so-called Group Selectionists posit – cohesive *groups* best suited for success in intergroup conflict. The roots of the social categorization process in *binarity* – or the human tendency to employ *binary oppositions* in making sense of environmental stimuli; the importance of a wider, psychologically comforting *Group Tent* in profoundly meeting individual esteem needs; and the resulting potential for at times self-sacrificial out-group violence – are discussed in the sixth section. The argument culminates in the seventh and final section, which more fully expands on and describes the attributes of the innate Manichean Mindset that is an inescapable function of human groupishness. In sum, the chapter affirms that our innate us-versus-them psychology – our Manichean Mindset – *exists independently of and prior to* the religiously derived us-versus-them ideological frames that are nowadays held to be chiefly responsible for promoting out-group violence in Indonesia and for that matter elsewhere. Hence, Islamist terrorism and militancy in Indonesia is well and truly rooted in Human Nature – even, as we shall see, if it needs the help of virulent ideologies and other forces to become full blown.

2.2   The Great Human Nature Debate

For our purposes, it is useful to start off with the notion of Human Nature as a "blank slate" or *tabula rasa*. The English philosopher John Locke (1632–1704) articulated this idea well (in Pinker 2002: 5):

> Let us then suppose the mind to be, as we say, white paper void of all characters, without any ideas. How comes it to be furnished? Whence comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from EXPERIENCE.

Locke, in the spirit of the Enlightenment, was essentially debunking prevailing ideas largely derived from the Judeo-Christian tradition that man was born with innate "mathematical ideals, eternal truths, and a notion of God" and sought to put forth an empiricist understanding of how the mind works and how human beings apprehend knowledge (2002: 5). By the late nineteenth century, however, the influential American psychologist and philosopher William James (1842–1910) was persuading audiences that Lockean empiricism was an illusion. Influenced by the writings of the British naturalist Charles Darwin – whom we shall be encountering in more detail later – James instead argued that man did indeed possess innate faculties of cognition, perception, and emotion that were the product of Darwinian "natural selection" pressures during the course of human evolution (2002: 19). James argued that human beings were born with a suite of instincts or impulses that guided thinking and behavior. This "Nativist" position proved influential until the 1920s when empiricism staged a spirited fightback in the form of Behaviorism (Ridley 2004: 39–40). The Behaviorists insisted that biology was unimportant and the human mind was "uniquely malleable" and merely represented "the indeterminate material that the social factor molds and transforms" (Wright 2008: 5). Behaviorism as it turned out ruled the roost from the 1920s to the 1960s (Evans and Zarate 2005: 6). Key figures such as John B. Watson and B.F. Skinner were its chief proponents in psychology, Emile Durkheim in sociology, and Franz Boas in anthropology (Ridley 2004: 40). Behaviorism came to be formally known as the "standard social science model," and generations of undergraduates, as the prominent science writer Robert Wright (2008: 6) suggests, were trained to regard human behavior as essentially a learned or conditioned response to environmental rewards and punishments. This was how the "formless mind" was given form. Such ideas come out clearly in the arch Behaviorist John B. Watson's (in Ridley 2004: 185) boast about the presumed all-powerful effects of social conditioning:

> Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one of them at random and train him to become any type of specialist I might select – doctor, lawyer, artist, merchant-chief, and yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations and race of his ancestors.

By the 1960s, however, the Behaviorists were back on the defensive. The linguist Noam Chomsky (in Ridley 2004: 40) had observed that children seemed unable to learn language rules from examples and concluded that they simply had to be born with "innate rules to which the vocabulary of the language was fitted." Chomsky (in Pinker 2002: 37) surmised that such rules constituted a universal grammar that appeared to "underlie superficial variation across cultures." Chomsky's musings of the existence of a common linguistic structure unifying disparate cultural domains hinted at the existence of a universal Human Nature (Nowak 2011: 179). Such musings were supported by steadily accumulating anthropological evidence. To be sure, the anthropologist Franz Boas (in Ridley 2004: 203) acknowledged the tremendous cultural diversity throughout the world and took pains to argue that these differences were the product of "history, experience, and circumstance." Nevertheless, Boas came to accept the existence of a "universal human nature refracted by different traditions

into separate cultures" (Ridley 2004: 206; Winston 2003: 35–36). By the late 1980s, the anthropologist Donald E. Brown (in Shermer 2004: 60–61) had identified 373 human universals comprising "those features of culture, society, language, behavior, and psyche for which there are no known exceptions to their existence in all ethnographically or historically recorded human societies." These universals range from myths, tools, sex roles, and legends to grammar, gestures, and emotions. Brown also identified "social groups" and "aggression" as human universals as well – an observation that is of no small relevance to this study (2004: 60–61).

2.3 Evolutionary Psychology and Our Ancestral Shadow

Ultimately, by the early 1990s, a new breed of evolutionary psychologists was calling attention to a "universal, evolved psychological architecture that we all share by virtue of being humans – *a* human nature" (Waller 2005: 149). Evolutionary psychology (EP) is a relatively young discipline that combines cognitive psychology and evolutionary biology (Evans and Zarate 2005: 3). It has had over almost two decades now "a growing influence on most branches of psychology, as well as sociology, economics and political science" (Newman 2009). There have been a number of seminal and influential EP texts, and it is a field that has generated much intellectual ferment and debate (Barkow et al. 1992; Buss 1994; Pinker 2002; Wright 2008; Ridley 1997). Two EP theorists, anthropologist John Tooby and psychologist Leda Cosmides (in Shermer 2003: 36), explain that the human brain comprises a large collection of "functionally specialized computational devices that evolved to solve the adaptive problems regularly encountered by our hunter-gatherer ancestors." Such "computational devices" or "modules" are common to all human beings and include "a distinctively human set of preferences, motives, shared conceptual frameworks, emotion programs, content-specific reasoning procedures, and specialized interpretation systems," all of which "operate beneath the surface of expressed cultural variability" (2003: 36). The evolutionary psychologist Steven Pinker (2002: 39–41) adds that our mental modules need not necessarily represent a single location in the brain, but could comprise several interconnected regions acting as a unit (also Shermer 2003: 36). A central EP theme is that our human instincts have developed by natural selection to "maximize fitness" in the *environment within which human minds first evolved*, known as the environment of evolutionary adaptation (EEA), or more commonly, the ancestral environment (Wright 2008: 37–38). The human ancestral environment is important because "well over 99 % of our species' evolutionary history" has comprised life as "foragers in small nomadic bands" (Waller 2005: 147; Shermer 2003: 36). More precisely, there were *several* ancestral environments that varied across time and space, and the physical environment was exceptionally variable during the emergence of *Homo sapiens* as a distinct species, because of unstable climactic conditions (D.S. Wilson 2002: 31).

What is clear however is that our Late (or Upper) Pleistocene-era hunter-gatherer ancestors (between 10,000 and 150,000 years ago) had to navigate significant

"adaptive" problems, such as adjusting to the vagaries of the climate; detecting and avoiding predators like big cats, poisonous insects, and other dangerous animals; and gathering and eating the right foods, as well as avoiding toxic berries. Moreover, there was the necessity to form mutually beneficial friendships, develop alliances to defend against aggression, nurture children, and select mates. "Our early human ancestors," notes British scientist Robert Winston, possessed neither "the brute strength of the great apes" nor the speed and agility of the "antelope or gazelles" and faced great physical and psychic stresses and strains in what was a "very dangerous and threatening environment" (Winston 2003: 40; also Nowak 2011: 90). These environmental pressures generated and honed over a very long time instincts and impulses that helped ensure human survival and reproduction despite the odds (Waller 2005: 148; Winston 2003: 26–27). In this connection, EP suggests that the painfully apparent human capacity for violence, rather than an aberration caused by inclement social conditions, is in fact very much *innate* and *adaptive*, as it promoted survival in the ancestral environment (Winston 2003: 268). All this has relevance for our purposes because of the enduring influence, in the EP view, of what Waller (2005: 19) terms the human "ancestral shadow."

Because natural selection proceeds glacially – millions of years – there exists an extremely long time lag between the appearance of an adaptive problem and the evolution of an instinct to deal with it. In this regard, since twenty-first-century humanity is separated by less than 10,000 generations from the small group of our common hunter-gatherer ancestors – a blip in evolutionary terms really – then it becomes apparent that there has simply not been enough time for our brains to generate *newer instincts* that are "well adapted to all aspects of our modern environment" (Waller 2005: 148). The "mental equipment we are born with," Michael Dowd (2009: 155) avers, "is attuned for surviving, adapting, and reproducing in a bygone era." *In short, our ancestral shadow is still with us*. This is the reason why Winston (2003: 39) argues that much of our usually unwarranted anxiety and stress responses in situations of uncertainty and unfamiliarity are rooted in "our very own personal link to our most ancient human ancestors – a reaction which hundreds of thousands of years ago almost certainly made the difference between life and death," but now generally reminds us that despite "living in a very advanced modern world, we all do so with Stone Age brains and bodies." Cosmides and Tooby (in Waller 2005: 148) likewise famously assert that our "modern skulls house a stone age mind," and "our brains are better at solving the kinds of problems our ancestors faced on the African savannahs than they are at solving the more familiar tasks we face in a college classroom or a modern city." Thus, EP insists that human behavior today is still being powerfully influenced by instincts that exist because they solved adaptive problems during our frequently threatening ancestral environment. Those same instincts may not always generate adaptive behavior "in response to contemporary environmental contexts" (Waller 2005: 149).

It should be noted that EP critics, on the other hand, contend that human brains, rather than being permanently hardwired during the Late Pleistocene era, are characterized above all by "plasticity" that enables continual development and adaptation to environmental changes (Buller 2005). EP supporters accept that the human brain

does appear to possess a degree of developmental plasticity, which is itself an evolutionary adaptation aimed to provide the necessary flexibility needed to continually preserve a functional relationship with a continually evolving environment. They insist, however, that the "brain is plastic and not elastic" (Doidge 2008: 208–209; Pinker 2002: 44–45). That is, the brain's plasticity is not limitlessly and haphazardly open-ended. "An elastic band can be stretched," says psychiatrist Norman Doidge (2008: 209), "but it always reverts to its former shape, and the molecules are not rearranged in the process." To recapitulate, well-accepted universal traits present in all human cultures across time and space, such as, inter alia, the language instinct, the incest taboo, and fear of snakes, suggest that rather than being a blank slate, the brain comes equipped with certain prepackaged, "hardwired" modules (Newman 2009; Shermer 2003: 147). Evolutionist Steven Pinker (2002: 102) thus reminds us that "neuroscience is showing that the brain's basic architecture develops under genetic control." That most tenets of EP seem to have become accepted is suggested by the fact that mainstreaming of EP ideas seems to be occurring. Hence, political scientist Francis Fukuyama's (2011) recent book employs EP perspectives in explaining the historical development of political order, while anthropologist and terrorism scholar Scott Atran (2010) approaches violent religious extremism in Kashmir, Indonesia, Madrid, and the Occupied Territories using EP ideas as well. For his part, Pinker (2011) has recently produced a monumental study of the gradual decline of violence in human history, employing an essentially EP perspective. For his part, the intellectually eclectic former US President Bill Clinton also appears to have been influenced by EP perspectives (*Foreign Policy* December 2009).

Employing EP perspectives, it should be emphasized, is not to imply uncritical acceptance of genetic or biological determinism. Importantly, EP does concede that human behavior is not solely influenced by innate instincts or impulses. Rather, as the American evolutionist Michael Shermer (2004: 61) argues, it is held that culture is "wholly integrated and fully interdigitated with nature such that you cannot speak of one without the other." In like vein, Matt Ridley (2004: 247) debunks the false dichotomy of nature versus nurture (or culture), insisting that rather than being "implacable determinists of an inevitable human nature," genes – essentially units of hereditary information – are in fact "subtle devices designed by ancestral selection to extract information from the world." It is thus the EP view that humans need *both* biology and culture to survive and reproduce (Dowd 2009: 155). Liddle and his colleagues likewise emphasize that EP adopts an "interactionist approach" in which humans are said to "possess a set of richly context-dependent modules that produce behavior contingent on environmental variables" (Liddle et al. 2011: 184). What *is* debated within EP is the precise nature of the interaction between biology and culture in shaping human behavior. What we may call the *hard EP* view is that biology "holds culture on a leash" (Teehan 2010: 34). This view holds that the human mind is rather like a Swiss Army knife, with ready-made modules that are designed for specific functions, such as to understand language or avoid predators. Such innate modules are universally present in all human beings, from "Aboriginal trackers to Wisconsin prom queens," and are independent of cultural or other environmental influences (Winston 2003: 92–94). Robert Wright (2008: 9) memorably

refers to these innate mental modules as "knobs of human nature" and notes that each individual human being has her suite of knobs tuned differently, for instance: "one person's guilt knob is set low and another's is painfully high." This is largely because apart from the knobs themselves, there are also built-in psychological mechanisms for *tuning* the knobs in response to lifelong environmental stimuli. Such stimuli would of course be uniquely different across individual life histories (Wright 2008: 9; Winston 2003: 94).

On the other hand, evolutionary biologist David Sloan Wilson (2002: 31) expresses perhaps a *soft EP* position. He argues that while the innate modular view of the human mind is essentially accurate, "genetic evolution does not invariably lead to the kind of modularity that excludes open-ended processes." His point is that instead of the "highly circumscribed information processing" suggested by the hard EP theorists, human learning and problem-solving in response to the diverse and complex challenges of the ancestral and succeeding environments in fact developed an evolutionary impetus of its own. Hence, while the human brain is certainly not endlessly elastic, human behavior is not overly shackled by biological imperatives. *Cultural learning* is an important influence as well (2002: 28–31). Culture in this EP sense, following Robert Boyd and Peter Richerson (in Teehan 2010: 33), refers to "information capable of affecting individuals' behavior that they acquire from other members of their species" – not genetically – "but rather through teaching, imitation, and other forms of social transmission." Open-ended cultural evolution – based on conscious and deliberate adoption by human collectivities of apparently successful social trends – occurs over much shorter timescales than genetic evolution (Nowak 2011: 11; Teehan 2010: 35). It enabled human social groups to relatively quickly acquire behaviors conducive to continuing survival in the ancestral environment and every environment since (D.S. Wilson 2002: 31–33; Ridley 1997: 180). This line of thinking has recently prompted D.S. Wilson (2011: 361) to emphasize that the demands of survival and reproduction in constantly changing environments have implied a Human Nature that is "inherently open-ended." Hence, human beings possess a "genetically evolved capacity for open-ended cultural change."

Ultimately, both strands of EP accept that human cultural change is not an alternative to genetic progress but rather very much "part of the evolutionary account of human behavior" (Teehan 2010: 33). This means that rather than being immutable behavior patterns that are "inevitably expressed" and unresponsive to "environmental, social, and cultural influences," it is held that our inborn modular knobs or instincts interact powerfully with social and external forces over the course of our lives so as to preserve "functional relationships to aspects of the environment" (Waller 2005: 146). John Teehan (2010: 34) says it well when he observes that the "evolution of mental tools that allow for culture to develop" has conferred upon human beings the "flexibility and behavioral plasticity to explore a wide variety of cultural niches" without, ultimately, "negating the pull of the other layers of our evolved psychology." In other words, EP maintains that culture must in the end pay some degree of respect to biology. Culture, as Ridley (1997: 6) asserts, represents "canalized expressions of our instincts," which is why the same basic themes, such as ritual, family, friendship, love, bargain, jealousy, superstition, hierarchy, and group loyalty, "crop up in all

cultures." Of particular interest to our study in this regard is the question of how the interaction between human biology and culture produced the phenomenon of human *groupishness* – which as we shall later see has been a key element of the underlying social psychology of violent Islamist militancy in Indonesia. This requires us to unpack further Darwin's theory of natural selection.

2.4 Darwin, Individual Selection and the Thorny Issue of Cooperation

During his five-year journey on board the HMS Beagle, Charles Darwin, a Cambridge University theology graduate, gradually discovered that rather than being a reflection of a benevolent Creator, Nature was marked not by harmony but rather a ceaseless struggle for survival among competing organisms – and very much "red in tooth and claw," as Lord Tennyson famously wrote. More specifically, Darwin came to see that as a result of that struggle species change or *evolve* over time and that the traditional Judeo-Christian understanding that all living organisms remained unchanged since the Garden of Eden was not sustainable in light of the evidence. Profoundly influenced by Thomas Malthus's argument, first made in 1838, that global overpopulation would result in a scramble for increasingly scarce resources and lead to weaker individuals dying off, Darwin ultimately formulated his theory of natural selection, first in the enormously influential *The Origin of Species* in 1859 and later *The Descent of Man* 12 years later (Cooper 2007: 19–21). Darwin's theory of natural selection pivoted on three central ideas: phenotypic variation, heritability, and selection. First, any variation in phenotype (an observable and measurable trait) demonstrated by animals within a species – for instance, physical size, wingspan, speed, or perhaps fighting ability, represented the raw material of evolution. Second, only those traits that could be passed on to the next generation – heritability – were subject to evolutionary pressures. Finally and importantly, those traits that granted organisms and animals a survival edge over competitors in the scramble for scarce food and other resources within a particular environmental niche were *selected.* That is, the offspring of those organisms with such advantageous traits would dominate succeeding populations in that particular environment (Waller 2005: 139; D.S. Wilson 2002: 7). In this way, within any particular ecological niche, one would observe "a tendency for fitness-enhancing phenotypic traits to increase in frequency over multiple generations" (D.S. Wilson 2002: 7). Darwin (in Wright 2008: 24) himself aptly summarized natural selection: "[M]ultiply, vary, let the strongest live and the weakest die." As evolutionist Robert Wright (2008: 24) clarifies, by the "strongest," Darwin meant "fitness," that is, the *best adapted to the environment*, whether through sheer brute might, "camouflage, cleverness, or anything else that aids survival and reproduction." The whole point of natural selection as Darwin saw it was through blind trial and error, "the preservation of traits that are in any way conducive to getting an organism's genes into the next generation" (Wright 2008: 24).

The foregoing general analysis can be thought of as *Individual Selection* if you like (Bloom 2000: 3). To Darwin, writing in an era before genetics had developed as a recognized science, the unit of natural selection was the individual organism. However, once genes had been discovered, Darwin's successors began to argue that in fact the unit of selection was not so much the individual organism per se but rather the *gene* it carried (Winston 2003: 200–201). This is of course Oxford biologist Richard Dawkins's (1976) famous idea of the *selfish gene.* From the "gene's-eye view" of the evolutionary struggle for survival, all individual organisms, from the simplest single-celled entities to complex multicellular coalitions such as human beings, are nothing but *receptacles* for the genes they carry. "We," Dawkins (in Ridley 1997: 19) memorably, if somewhat bleakly, observed, "are survival machines – robot vehicles blindly programmed to preserve the selfish molecules known as genes." This is not saying that genes behave selfishly in a moral sense. The idea is simply that genes are not geared toward the individual happiness or well-being of their biological carriers; they pretty much blindly and single-mindedly seek to ensure only one outcome: continuous genetic proliferation (Wright 2008: 162–163; Teehan 2010: 10–11). Moreover, genes operate beneath the level of human consciousness. Hence, as Freud would have appreciated, we are "oblivious to our deepest motivations" while engaging in some activities that seem "obvious" and "right" and "desirable" such as helping our kin – while avoiding other acts that *feel* "absurd" and "wrong" and "abhorrent," such as incest (Wright 2008: 10, 175). Paradoxically, the selfish gene perspective proved useful to biologists who since Darwin himself had struggled to explain the *cooperation* that seemed to coexist with competition in nature. Mathematical biologist Martin Nowak (2011: xiii) in this respect emphasizes the fact that evolution *has never been just about competition but cooperation as well*:

> Creatures of every persuasion and level of complexity cooperate to live. Some of the earliest bacteria formed strings, where certain cells in each living filament die to nourish their neighbors with nitrogen. Some bacteria hunt in groups, much as a pride of lions hunt together to corner an antelope; ants form societies of millions of individuals that can solve complex problems, from farming to architecture to navigation; bees tirelessly harvest pollen for the good of the hive; mole rats generously allow their peers to dine on their droppings, providing a delicious second chance to digest fibrous roots; and meerkats risk their lives to guard a communal nest.

Thanks to the selfish gene idea, biologists contended that in many cases what looked on the surface as counterintuitively selfless cooperation was in fact *enlightened* selfishness in disguise. This notion was forcefully developed in the 1960s by the biologists William D. Hamilton and John Maynard Smith through the concept of *kin selection* (Harman 2011: 153–175). In this view, an individual will unconsciously be driven to behave cooperatively, altruistically, and ultimately even sacrificially for him/her immediate siblings and him/her own children. This is because both siblings and children share 50 % of her genes. This percentage of shared genetic endowment decreases as the family circle expands – hence, we share only a quarter of our genes with first cousins and half brothers or half sisters. The point is, because "our children, siblings and cousins carry a proportion of our genes, it is in our interest to help them

survive, prosper and reproduce" (Winston 2003: 201–202). In other words, from the "gene's point of view, any organism that contains copies or partial copies of itself," that is, close kin, "is worth preserving." The kin selection argument has been employed by Individual Selectionists to explain, for instance, the "extraordinary self-sacrifice among many insects of the order Hymenoptera, notably the highly social ants, bees and wasps" (Wright 2008: 164). The "all-too-human tendency to show preference for family members," the evolutionary-minded religious scholar John Teehan (2010: 21) similarly suggests, "whether in making sacrifices or distributing rewards," is in fact "an apparently universal human trait" and demonstrates the robustness of the logic that to "sacrifice my immediate interests in order to benefit my kin is also consistent with long-term self-interest." Hamilton (in Teehan 2010: 21) called this broader notion of genetic self-interest "inclusive fitness." As Michael Shermer (2011: 71) quips, "Blood really is thicker than water."

A thornier and on the surface somewhat more puzzling fact confronting Individual Selectionists was the reality that altruistic, cooperative behavior also seemed common between organisms that were *unrelated*. As evolutionary biologist and arch Individual Selectionist George Williams (in Ridley 1997: 38) once asked rhetorically, "How could maximizing selfishness produce an organism capable of often advocating, and occasionally practicing, charity toward strangers?" Two answers were soon proposed. First was the so-called "big mistake" hypothesis. Because habits of cooperation forged within the small, close-knit kinship groups that populated "the Pleistocene savannah" remain very much part of our ancestral shadow, these unconsciously held traits cannot be switched on or off at will; consequently, today we tend to "mistake" the "wider society for kin" (Winston 2003: 313). Hence, altruistic behavior often inadvertently and unconsciously extends across kinship boundaries to encompass unrelated individuals whom one may meet once and never cross paths with again – such as helping an elderly lady across the road, assisting a mother with screaming children clamber on or off crowded trains – to even risking one's life to save strangers. In fact this deeply ingrained impulse to cooperate with *imagined* or *fictive* kin has often been exploited by political entrepreneurs throughout human history to build superordinate groupings beyond the family, from the kin-based band or tribe to larger chiefdoms and even larger nation-states. The same logic applies to religious and, in particular, religiously motivated terrorist groups – as in Indonesia as we shall see later (Atran 2010: 39, 303).

An alternative explanation for cooperation in biological life between unrelated organisms involves a digression into mathematics and in particular game theory. First popularized by the Hungarian-born mathematics wizard John von Neumann in the late 1920s, game theory was applied to modeling Cold War strategic interactions between the United States and the former Soviet Union. In particular, von Neumann had been a consultant to the Research and Development (RAND) Corporation, founded by the US Air Force in December 1945, and it was two RAND researchers, Merrill Flood and Melvin Dresher, who first formulated the well-known puzzle called the Prisoner's Dilemma in 1950 (Nowak 2011: 5–6). The Prisoner's Dilemma was formulated as an anecdote about prisoners by Albert Tucker of Princeton University later the same year (Ridley 1997: 55; Harman 2011: 132–135). The Prisoner's

Dilemma emerges whenever there is a "conflict between self-interest and the common good" (Ridley 1997: 53) and encapsulates neatly the fundamental tension in social life between "competitiveness and cooperation" (Shermer 2004: 58). Robert Wright (2008: 192) summarizes the Prisoner's Dilemma well:

> Two partners in a crime are being interrogated separately and face a hard decision. The state lacks the evidence to convict them of the grave offense they committed but does have enough evidence to convict both on a lesser charge…a one-year prison term for each. The prosecutor, wanting a harsher sentence, pressures each man individually to confess and implicate the other. He says to each: If you confess but your partner doesn't, I'll let you off scot-free and use your testimony to put him away for ten years. The flip side of this offer is a threat: If you *don't* confess but your partner does, *you* go to prison for ten years. And if you confess and it turns out your partner confesses too, I'll put you both away, but only for three years.

Any analysis of the available options suggests that in all scenarios, whatever the other party does, it is "rational to be selfish" and "you are better off defecting" (Ridley 1997: 54). Prisoner's Dilemmas have been shown in fact to be endemic to all spheres of biological and social life, implicit in the interactions between marine organisms, the varying heights of different species of trees in tropical rain forests, to Cold War nuclear standoffs and even marital conflict. To take a common example, if all fishermen, for instance, showed restraint and limited the number of fish caught, rapidly depleting fishery stocks would be conserved. However, real life demonstrates that the morally upright fisherman all too often loses out to his more selfish peers (Ridley 1997: 56; Shermer 2004: 60). And *yet* cooperation is rife in nature.

Individual Selectionists thus recognized that nature must have found ways to overcome the Prisoner's Dilemma and foster the cooperation between unrelated organisms that is bountifully evident. One such figure, Robert J. Trivers, postulated that one reason to cooperate with non-kin was what he called *reciprocal altruism* – or more simply: "I'll rub your back, so that you'll rub mine" (Trivers 1971; Nowak 2011: 27; Teehan 2010: 25). This logic was clear for all to see in biological life: vampire bats were known to share blood with other hungry bats that had fed them previously. Similarly, on coral reefs, fish of all kinds visit "cleaning stations" where they are scrubbed of parasites by shrimp and smaller fish – in return the smaller organisms are rewarded with food (Nowak 2011: 22–23). Such reciprocal altruism or *direct reciprocity* also exists among unrelated vervet monkeys, tree swallows, dolphins, gorillas, and chimpanzees, for instance (Teehan 2010: 25). Eight years after Trivers published his seminal essay, a young American political scientist named Robert Axelrod organized a computer tournament and invited game theorists, mathematicians, and social scientists to submit programs to explore how the Prisoner's Dilemma could be beaten. In other words, Axelrod wanted to figure out the conditions under which cooperation would emerge in a world of directly interacting selfish players without the guidance of a central authority (Winston 2003: 331). Fourteen programs were submitted, and Axelrod set them off against one another. Each program was pitted against every other submitted program 200 times as well as against itself and against a random program (Ridley 1997: 60). When the dust had settled, there was a winning program, called Tit-for-Tat, devised by the Canadian

game theorist Anatol Rapoport (Wright 2008: 196). Tit-for-Tat began by cooperating "and then did whatever the other guy did last time" (Ridley 1997: 60). In essence, Tit-for-Tat succeeded because it never defected first, retaliated only after the opposing player had defected; and it forgave the player after executing a single act of retaliation (Winston 2003: 332). Axelrod then designed another computer tournament that simulated the evolutionary process, in which "software creatures" – the various programs – competed for "space on the computer's screen in just the same way that real creatures breed and compete for space in the real world" (Ridley 1997: 61). Tit-for-Tat again came out on top and spread throughout the population at the expense of the other programs (Winston 2003: 332). Tit-for-Tat appeared to be an "evolutionarily stable" strategy (Wright 2008: 200).

The success of Tit-for-Tat in Axelrod's computer tournaments essentially supported the view that reciprocal altruism could be a mechanism for "generating cooperation between unrelated individuals" (Ridley 1997: 63). However, three conditions had to be fulfilled: first, repeated opportunities for altruism; second, repeated interactions between potential altruists; and finally, an essential functional parity of benefits and costs to be shared between the potential altruists (Teehan 2010: 25). In particular, it is necessary that "players recognize their present partner and remember the outcome of previous encounters with him or her" (Nowak 2011: 24). There is an overriding need for a "stable, repetitive relationship," rather than a "casual" and "opportunistic" one (Ridley 1997: 63). In other words, in a single encounter between two selfish individuals, the inexorable logic of the Prisoner's Dilemma would take effect, and the rational course of action would be to cheat or defect. But in *repeated encounters* – an iterated Prisoner's Dilemma – even when the players have strongly conflicting interests, cooperation can emerge because the "prospect of vengeful retaliation paves the way for amicable cooperation" (Nowak 2011: 29). The eighteenth-century British philosopher David Hume (in Ridley 1997: 52) well encapsulated the healthy dollop of enlightened self-interest underlying all displays of ostensible cooperativeness between unrelated human beings:

> I learn to do service to another, without bearing him any real kindness, because I foresee, that he will return my service, in expectation of another of the same kind, and in order to maintain the same correspondence of good offices with me or others. And accordingly, after I have serv'd him and he is in possession of the advantage arising from my action, he is induc'd to perform his part, as foreseeing the consequences of his refusal.

2.5   The Rise of Human "Groupishness"

Hume's pithy and prescient observation explaining how even unrelated individuals with conflicting interests can and perhaps *must* cooperate to survive sheds light on the historical and archeological record of humanity. This shows unequivocally that since the days of our common hunter-gatherer ancestors, human beings have evolved not singly but rather as an integral part of small social groups. It has been argued that "group living promoted individual survival" especially in "settings

where collective action facilitated defense or the acquisition of food" (Waller 2005: 151). Early humans who banded together in a group could cover more ground, readily acquire fresh deer and antelope meat, defend against predators, and better survive drought and famine on the savannah (Winston 2003: 316–317). Specifically, small hunter-gatherer groups were more "efficient" than individuals in locating and killing large prey and could coordinate the activities of disparate individuals who otherwise may have interfered with one another. Importantly, beyond kinship ties, reciprocal altruism would have been operative among unrelated group members: foraging groups pooling and sharing resources would have had the effect of "smoothing" the "variation in daily capture rates between individuals," and "lucky" hunter-gatherers would have shared their take with "unlucky" ones who would return the favor another day. The fate of the individual was thus tied to that of the group (Shermer 2004: 40). Little wonder then that ancestral human beings developed "groupishness," to borrow Matt Ridley's phrase (1997: 39). Evolutionary biologist E. O. Wilson (2012: 59) likewise affirms that the human "tendency to form groups" has "the earmarks of instinct" and reveals a certain "power and universality." For their part, the evolutionary-minded social network theorists Nicholas Christakis and James Fowler (2011: 228) add that humans "have evolved genetically to adapt to the risks and opportunities of cooperating in groups."

To function optimally, hunter-gatherer groups in the past were not very large in size. To recall the observations of Trivers, in order for reciprocal altruism to work, individuals had to be able to recognize and know one another fairly well through repeated social encounters and exchanges. Otherwise, it would have been impossible to seek repayment for a favor or even retaliate for a misdeed (Ridley 1997: 69–70). As it turns out, the evolutionary anthropologist Robin Dunbar has identified the natural human group size as between 125 and 150 (Winston 2003: 321). This figure is approximately the number of children, grandchildren, and great-grandchildren an ancestral hunter-gatherer couple could produce in four generations at the prevailing birthrate of that era. To put it another way, 150 represented the number of people the couple would have known in their immediate and extended family (Shermer 2004: 41). This number has become known as "Dunbar's number" (Dunbar 2010: 21–34; Christakis and Fowler 2011: 246). Significantly, despite the reality of crowded urban living in the densely populated cities of the current globalized era, people *still* "find themselves divided into small groups" of about 150, suggesting that the figure is rooted in a "deep evolutionary basis" (Shermer 2004: 41–42). True enough, the "magic number 150" (2004: 40) has been more or less evidenced in studies of various ancestral and modern hunter-gatherer societies as well as other social groups, for example, "Middle Eastern Neolithic villages, the Hutterites of Canada, East Tennessee farming communities," and not to mention "Amish parishes" (Winston 2003: 322). It is roughly the number of people in "the average address book, the number in an army company," and "the maximum number of employers prefer in an easily run factory" (Ridley 1997: 69; Christakis and Fowler 2011: 247–248).

It has been suggested that the reason for the upper human group size limit of 150 is because the human brain "cannot sustain more than a certain number of relationships of a given strength at any one time" (Shermer 2004: 42). These relationships, built

on kinship ties and reciprocal altruism, are crucial to individuals for ensuring access to resources ultimately needed for survival and reproduction. As Winston (2003: 321) suggests:

> Each of us has *a network of people* with whom we are in regular or occasional contact. It will be made up of friends, family members and colleagues, and possibly their friends, family members and colleagues. All these are people with whom one could strike up a conversation easily…and possibly of whom *one may ask a favour.* (emphasis by author)

Shermer, citing Dunbar, offers a more colorful illustration, asserting that the figure 150 is "the number of people you would not feel embarrassed about joining uninvited for a drink if you happened to bump into them in a bar" (2004: 42; 2003: 160). While group membership was an asset to individual survival in our hunter-gatherer past, it must not be forgotten that selfish individuals populated these social networks. Hence rather than continuous amity, human social interaction within these groups was a complicated, messy and at times violent affair. At the root of this was the basic human – particularly male – drive for social status. In fact Darwin (in Wright 2008: 247) observed that "Man is the rival of other men; he delights in competition, and this leads to ambition which passes too easily into selfishness." The male drive for status and social dominance was rational from the gene's point of view: being on top of the social "pecking order" was highly conducive to resource accumulation, sexual success – and hence genetic proliferation (Bloom 1997: 195–197). Darwin (in Wright 2008: 247–248) sensed this:

> The strongest and most vigorous men – those who could best defend and hunt for their families, and during later times the chiefs or head-men – those who were provided with the best weapons and who possessed the most property, such as a larger number of dogs or other animals, would have succeeded in rearing a greater average number of offspring, than would the weaker, poorer and lower members of the same tribes. There can, also, be no doubt that such men would generally have been able to select the more attractive women. At present the chiefs of nearly every tribe throughout the world succeed in obtaining more than one wife.

Anthropological studies of "the Ache, the Aka, the Aztecs, the Inca, the ancient Egyptians, and many other cultures" confirm that "a link exists between status and the amount of sex a man has" (Wright 2008: 248; Bloom 1997: 197). Moreover, "pecking orders" or, more technically, *dominance or status hierarchies* have been found by naturalists in a "bewildering variety of species" (Bloom 1997: 196). Sociologists and psychologists have long recognized that the innate drive for social dominance and status is potent among humans – particularly males (Pinker 2011: 515–517). Throwing a group of children together for the first time soon leads to the spontaneous emergence of an informal hierarchy within which the "ones at the top are best liked, most frequently imitated, and, when they try to wield influence, best obeyed" (Wright 2008: 241). Pecking orders are inescapably part of human nature.

Human social groups on the Late Pleistocene savannah, therefore, while certainly knit together, as Robert Wright (2008: 202) argues, by both "kin selection" and "reciprocal altruism" into an "ever-expanding web of affection, obligation, and trust," were at the same time equally wracked by Machiavellian machinations arising from "ruthless genetic self-interest." There was thus much opportunity for the emergence of

what Martin Nowak (2011: 186–187) calls a "soap opera" containing elements of deception, manipulation, sexual jealousy, coalition building, and conflict. Not for nothing therefore did the classical English philosopher Hobbes (1651/1985) identify the lust for power as a prime moving force in human affairs. Despite these internal contradictions, however, human groups continued to evolve and grow in size, developing over the last 100,000 years from *bands* of tens to hundreds of individuals, into *tribes* of thousands, then *chiefdoms* of tens of thousands, then into *states* of hundreds of thousands, and ultimately multistate *empires* of millions (Shermer 2004: 31–32). A key development in the process of this human social expansion was the development of agriculture that aided the transition from large roaming hunter-gatherer tribes to more settled chiefdoms. As Robert Wright (2000: 74–79) shows, the confluence of three trends: competition for social status between "big men" within hunter-gatherer tribes, the need to support ever-larger populations able to deploy sufficient manpower to defend against atavistic opposing tribes, and the necessity of stockpiling food to insure against unforeseen periods of scarcity – generated both political organization and agricultural development.

Meanwhile, another factor was driving this steady human social expansion behind the scenes: increasing brain size. The capacity to accurately perceive the motivations and intentions of others – a "theory of mind" – coupled with the stresses and strains of keeping track of the various Prisoner's Dilemmas being played out within social networks of increasing size and complexity, that is, whom to trust and whom to ostracize in any number of social contexts, meant that human brains had to develop greater cognitive and information processing capacity (Nowak 2011: 55). "To thrive in a complex society," Matt Ridley (1997: 69) observes, "you need a big brain," and "to acquire a big brain, you need to live in a complex society." Over time, human brain development – and the utterly crucial facility for *language* that went along with it (Nowak 2011: 67, 187) – facilitated larger, no longer necessarily face-to-face, functionally differentiated, more complex, and yet interconnected social groupings such as large tribes, chiefdoms, and states, held together by what the biologist Richard Alexander calls *indirect reciprocity*. In these bigger tribes, chiefdoms, and states, *reputation* is a key commodity and a gateway to high social status and its ancillary benefits as described earlier (Teehan 2010: 28–29). As Nowak (2011: 187) explains:

> With the help of [the language assets of] *gossip, chat, and banter* we are able to gauge the reputation of other people, sizing them up, or marking them down, to decide how to deal with them…In our vast society it is a case of: "I scratch your back and *someone else will scratch mine*." We all depend on third parties to ensure that those who scratch backs will have their backs scratched eventually. (emphasis by author)

Hence, "language, brainpower, and society became entwined in a three-way dance" (2011: 187; Ridley 2004: 225–226). Throwing their support behind this so-called social-intelligence hypothesis, Christakis and Fowler (2011: 239–240, 248–250) likewise maintain that the evolution of large brains and language were utterly critical to the emergence of larger and ever more complex human societies. The Harvard evolutionary biologist David Haig (in Nowak 2011: 67) succinctly sums up the difference between the *direct reciprocity* holding together unrelated individuals in

small face-to-face human groups in the past and the *indirect reciprocity* undergird-ing the larger, complex social groupings today: "For direct reciprocity you need a face. For indirect reciprocity you need a name." One fundamental point, however, should be apparent by this juncture. "People," Ridley (1997: 187) under-scores, "do undoubtedly think in terms of groups: tribes, clans, societies, nations."

2.6   Social Categorization, Group Selection, and the Uncomfortable Logic of Between-Group Competition

There are actually many kinds of human social groups beyond those identified by Ridley above. The science writer David Berreby (2005: 323) goes so far as to argue that an individual can traverse any number of human groups or "humankinds" in the course of a single day, from feeling and acting like "an American among a gaggle of foreign tourists," to a "New Yorker when talking to a Texan," and to a "male when talking to a woman." Similarly evolutionary biologist David Sloan Wilson (2002: 15) recognizes the natural plurality of human social groups in the average individual's daily experience. Hence, his "bowling group is the people with whom I bowl, my study group is the people with whom I study, my platoon is the group of people with whom I fight, my nation is the group of people who share the same set of laws, my church is the group of people with whom I worship." Wilson notes that there exists an "infinite variety of groups," configured in terms of the human beings who interact in relation to a particular activity or trait. He calls attention to the virtually unnoticed ubiquity of the diverse "trait-groups" in all our lives (2002: 15–16). It is in this sense that human groups, Craig Palmer (in Ridley 1997: 187) argues, are in fact "largely mythical," because human beings today, in normal circumstances, do not really live in hermetically sealed off, permanent, and isolated cantonments but mingle continu-ously with counterparts from other groups, with the net result that in reality social groups tend to be "fluid and impermanent."

Endorsing the view that human groups are in fact transient social constructions and should not be reified, social psychologist Henri Tajfel (in Berreby 2005: 206) contends that "groups are processes, not things," and emerge from the "mind's interaction with its surroundings." Cognitive sociologist Eviatar Zerubavel (1996: 426–427) likewise insists that reality is "continuous," and if "we envision distinct clusters separated from one another by actual gaps it is because we have been socialized to 'see' them." Zerubavel tellingly adds that when "we cut up the world, we usually do it not as individuals but as members of particular 'thought communities'." In sum, the peculiar way the human mind interacts with its surroundings: by perceiving "the world in terms of groups, ruthlessly categorizing people as us or them," is of great importance (Ridley 1997: 187–188). The mind, under the influence of our ancestral shadow, tends to use a "quick and easy mental algorithm" (E.O. Wilson in Dozier 2002: 40) that "groups people, as well as objects, into categories," which helps "simplify the present and predict the future more effectively" (Kressel 2002: 211).

Such rapid "social categorization" offered evolutionary advantages to our Late Pleistocene forebears by filtering the amount of data they had to process and thus enhancing speed of information processing – an ability that in our ancestral environment often meant the difference between life and death. "Social categorization," social psychologist James Waller (2005: 239) notes, is consequently "universal and pervasive across humankind" and is "as natural to our minds as breathing is to our lungs." Social categorizations have one significant consequence though. In systematizing our social world, they "also create and define our place in it" (2005: 239), in the process effectively dividing the social world into "us" and "them," or as American sociologist William Graham Sumner (in Berreby 2005: 211) famously put it, the "we-group, or in-group, and everybody else, of the others-group, out-groups."

Reinforcing innate social categorization processes creating the in- and out-group cognitive dichotomy are structural pressures such as war. Throughout human history, instead of Rousseau's Noble Savage, anthropologists have discovered that the truth, as Michael Shermer (2004: 99) asserts, was closer to "Savage, yes. Noble, no." In particular, prehistoric war was, relative to "population densities and fighting technologies," at least as common and brutal as modern war (2004: 98). Robert Wright (2000: 58–59) adds that war had the effect of pushing people into an "organic solidarity" to defend against an external threat. He points out, however, that the *pushing effect* of war was complemented by the *pulling effect* of another powerful structural factor, that of "trade and other economic sinews." Matt Ridley (1997: 14, 200) likewise calls attention to trade – the "beneficent side of human groupishness" – as an important social glue, although he also acknowledges that "group territoriality and intergroup conflict" were the central drivers of human "social coagulation" in our ancestral past. It does seem that war or the threat of war was on balance, the prime reason for human groups to coalesce into ever-greater degrees of organic solidarity. Recent research suggests that climatic changes during the Late Pleistocene forced once-isolated hunter-gatherer bands into much closer contact, increasing the opportunities for conflict (Nowak 2011: 90). Biologist Howard Bloom (2000: 194, 197) argues pithily that whether at the cellular or human level, groups facing threat "constrict," and nothing "grows a subculture faster than opposition to assault." Ridley (1997: 174) likewise recalls how in the Second World War German bombs achieved a "monolithic loyalty among a bickering British public" and generated a generalized wartime "greater-goodism." More precisely, structural pressures such as trade and far more potently war tend to generate what is known as a *looping effect* that gives coherent shape and substance to relatively inchoate notions of groupishness held by a human social collective embedded within a particular historical and sociopolitical context. Such groupishness may pivot upon any trait – geography, ethnicity, or perhaps religion – that is politically or socially salient at that particular historical moment. Berreby (2005: 57) explains the looping effect well:

> A category of person starts out as an idea in someone's mind. That person convinces other people that he or she is onto something, and the idea spreads. Then people who belong to the newly minted human kind start using the concept to guide their behavior and understand themselves. That creates evidence this kind of person is "really" out there.

Hence, looping effects generated by historically contingent structural forces such as war *reify* the salient social category or trait-group in the minds of the human beings comprising that specific collective, leading them to behave in congruent ways thereafter. Berreby (2005: 59) in this regard makes the important point that even if "beliefs about human kinds are inventions," once they are made real, they would have "more impact on people than all the plagues and earthquakes ever recorded."

To reiterate, the emotional salience of the social group for its individual members becomes especially relevant in the context of intergroup competition and especially violent conflict. When the danger of being marginalized or even destroyed by an opposing group is collectively perceived to be clear and present, the normally selfish and unrelated individuals within the group might see it as rational to restrain their normal self-seeking impulses. Instead they could, in a display of reciprocal altruism, cooperate to ward off the threat and hence ensure collective survival and ultimately their own genetic proliferation. *What is good for the group could be seen as good for the individual.* Darwin (in Ridley 1997: 172) himself noted the possibility of groups comprising relatively altruistic individuals trumping groups comprising relatively more selfish ones. In an oft-quoted passage, he observes:

> A tribe including many members who, from possessing in high degree the spirit of patriotism, fidelity, obedience, courage and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection.

This, more precisely, was *Group* – as opposed to Individual – Selection. The possibility of Darwinian natural selection acting not only upon genes or individual organisms but also the group was fleshed out in the early 1960s by the British zoologist Vero Wynne-Edwards. After studying the behavior of the red grouse of his native Scotland, Wynne-Edwards reported in his book *Animal Dispersion In Relation to Social Behavior* that the birds appeared to gauge the amount of food the moors could provide annually and rather than breeding haphazardly, adjusted their behavior so as to ensure that population size would never outstrip food supply. He concluded that animal populations that put the interest of the group above that of the individual would trump other more extravagant populations (Bloom 1997: 51; Nowak 2011: 84). However, Group Selectionists such as Wynne-Edwards were soon on the back foot. Individual Selectionists argued that individual red grouse would certainly sacrifice their reproductive privileges for others – but those others would be *kin* – as William Hamilton had proposed. In fact "very few animals ever put the interests of the group or the species before the individual" (Ridley 1997: 176). Ant colonies, wolf packs, dwarf-mongoose troops, nesting groups of scrub jays, and mole-rat societies that appeared to be populated by large numbers of altruistic individuals were in fact "big families" whose constituents shared a common genetic endowment – and would thus be expected to be altruistic anyway according to the logic of kin selection or inclusive fitness (1997: 176). Altruism in groups, in short, was always a "family affair" (Harman 2011: 162).

Another Individual Selectionist broadside against the Group Selectionists employed simple mathematical logic. They pointed out that Darwin himself, despite having suggested the possibility of Group Selection, nevertheless conceded that within a tribe, it was "extremely doubtful whether the offspring of the more sympathetic and benevolent parents," or of those individuals "which were the most faithful to their comrades," would ever get to be "reared in greater number than the children of selfish and treacherous parents of the same tribe" (Wright 2008: 186–187). In fact Darwin (in Wright 2008: 187) predicted that altruistic and self-sacrificing individuals would on average "perish in larger number than other men," leaving "no offspring to inherit his noble nature." Thus, Individual Selectionist Matt Ridley (1997: 179) insists that "selfishness spreads like flu through any species or group that tries to exercise restraint on behalf of the larger group," and individual ambition "always gets its way against collective restraint." As that other staunch Individual Selectionist Robert Wright (2008: 187) wryly points out, "it is hard to see how a tribe would get full of selfless people in the first place." Finally, Individual Selectionists excoriated Group Selectionists for being analytically sloppy, mistaking Group Selection for "individual selection mediated by groupishness," and failing to see that we "are designed not to sacrifice ourselves for the group but to exploit the group for ourselves" (Ridley 1997: 188). Individual Selectionist George Williams concluded that natural selection at the individual level was more than adequate to explain nature's diversity, including human social behavior. Little wonder then that following these attacks, Group Selection went into decline for decades (Shermer 2004: 52; Nowak 2011: 83–84).

However since the 1980s, with the help of further field studies, sophisticated mathematical modeling and artificial evolution experiments, the Group Selectionists have made a comeback (Harman 2011: 319; Nowak 2011: 86–87). Led by perhaps their leading advocate, evolutionary biologist David Sloan Wilson, Group Selectionists have argued for the validity of *both* Individual and Group Selection (Bloom 2000: 6), and nowadays employ the term *Multilevel Selection* (D.S. Wilson 2002: 10; Mirsky 2009: 51). That is, if a population is seen as a "nested hierarchy of units, with genes existing within individuals, individuals existing within groups, groups existing within populations, and so on," *then natural selection can work at each level simultaneously*, simply because heritable variation and hence fitness differences can exist at any of these levels (Harman 2011: 319). At the group level – whether flocks of birds or tribes of humans – variations in phenotypic properties (warning cries of birds or standard of morality of humans) with consequences for survival and reproduction (avoidance of predators or success in intertribal warfare) can certainly have consequences for survival and future reproduction. Moreover, if current groups "resemble" past groups from which they descended, then groups could well "evolve into adaptive units" just as "individuals evolve into adaptive units" (D.S. Wilson 2002: 9). In sum, the latest thinking is that "the gene's-eye view and group selection are not, and never should have been, antithetical" (Harman 2011: 319). Group Selectionists like mathematical biologist Martin Nowak (2011: xvii) moreover assert that any serious examination of "cells to multicellular creatures to anthills to villages and cities" would demonstrate that evolution should really be seen as

standing on three pillars: mutation (or variation), selection, and, of special note, *cooperation* – "the architect of creativity" within the evolutionary process.

But what of the Individual Selectionist warning that the offspring of selfish individuals within the group would tend to dominate future populations in comparison with those of altruists? Group Selectionists counter that this may not happen because of the countervailing effects of *indirect reciprocity*. In other words, altruistic, "daring and helpful" individuals would develop a good reputation and hence secure access to social status and other rewards including – important from the point of view of genetic proliferation – the "wide-eyed admiration of the opposite sex" (Nowak 2011: 83). But more germane is the follow-up question: Why would the *group's social norms value this kind of behavior*? Nowak (2011: 83) answers that groups with "meaningful social norms" that put a high premium on altruistic behavior would be able to generate the tighter internal cohesion needed to suppress the influence of selfish individuals and thereby "outcompete other groups." In fact, in line with the previously discussed soft EP view that *cultural evolution* is also possible, altruistic behavior could become widespread within a social group through *social conformism* – perhaps most people behaved altruistically or perhaps high-status and respected individuals behaved altruistically. Hence, whether via evolved instinct or cultural learning, the social group would be able to develop "prosocial" habits and behaviors that help it outcompete its less altruistic rivals. In this way, instinct aside, *culture* also enables groups to themselves become units of selection in the evolutionary process (Teehan 2010: 34–35; Ridley 1997: 180–181).

Group Selectionists hence argue that beyond kinship and reciprocal altruism, human social groups, quite unlike other living organisms, can also be knit together by meaningful social norms or moral systems made possible by the creative potential of human culture – *such as religion* (D.S. Wilson 2002: 22–25; Shermer 2004: 54–55). Before unpacking this crucial point however, it is necessary to emphasize two important factors that need to be operative for Group Selection to work. First, environmental pressures must favor "among-group selection" over "within-group selection"; as David Sloan Wilson (2002: 9–10) cautions, "just because groups can evolve into adaptive units doesn't mean that they do." Sustained environmental pressures must be such that natural selection would favor the survival of cohesive social groups over collections of Machiavellian individuals. Specifically an environment of "intense between-group competition" is required to promote "mechanisms that blur the distinction between group and individual welfare" and enhance "fitness at the group level" (Nowak 2011: 93). A key implication of no small significance for our study is that "even when groups do evolve into adaptive units, often they are adapted to behave aggressively against other groups"; hence, Group Selection does not eliminate conflict generated by selfish ambition but rather "elevates it up the biological hierarchy, from among individuals within groups to among groups within a larger population" (D.S. Wilson 2002: 10). *Group Selection, to reiterate, presupposes a situation of intense competition or even conflict between groups*. William Hamilton (in Harman 2011: 222), for instance, argued that xenophobia or "even relishing cruelty to others – was selected for in the evolution of man, since altruistic groups must expand at the expense of other groups and to do this they need to fight them." Hence,

what generates "altruism and kindness at one level only serves to produce hatred and violence at the other" (2011: 222). An environment favoring between-group competition aside, efficient Group Selection presupposes relatively impervious group boundaries: it should be difficult for individuals to move from group to group. Such "tribal loyalty" or "group stickiness" could be the result of genes that boost the "instincts of generosity, moral constraints," or even "religiosity" (Nowak 2011: 89). It is noteworthy in this regard that Arthur Deikman (2003: 114), a specialist in cult behavior, observes that in many religions, intermarriage is frowned upon because of the perceived need to maintain the rigid boundaries deemed essential for preserving "group cohesion and group strength." As we shall see later moreover, strong and relatively impervious in-group/out-group boundaries are a striking characteristic of religious fundamentalism.

The potential for meaningful social norms and moral systems such as religious morality to act as a third coagulant – beyond kinship and reciprocity – of human social groups is utterly significant. This means that what follows from Group Selectionist logic is a *narrow group-based morality or circle of moral consideration.* This is why David Sloan Wilson (2002: 10) argues that moral systems such as religion are effective in promoting not so much intuitive notions of "universal morality," but more precisely "in-group morality and out-group hostility." Religious morality, John Teehan (2010: 151) likewise iterates, develops as "a system to promote within-group cohesiveness" that is *most useful in competition and conflict with other groups*:

> Morality is a code of how to treat those in my group; it is not designed to extend…to those outside the group. Since these others are not bound by the same moral code they must be treated as potential cheaters; since their reproductive success is not tied to the success of our group they are not invested in our group and so cannot be expected to engage in altruism or reciprocation. *Those outside the group are in fact a potential threat to my group's survival.* (emphasis by author)

Such a posture of in-group morality/out-group hostility created by a religious code, for instance, is supported by three innate psychological mechanisms operating beneath the level of consciousness, all of which are generated by *in-group bias* (Waller 2005: 242), a concept which shall be further unpacked in the next section. First, we tend to believe that other in-group members are "more similar to us than to out-group members" across a "wide range of thoughts, feelings, and behaviors" – what is called the "assumed similarity effect" (2005: 239–240). Second, the "out-group homogeneity effect" predisposes in-group members to generally assume that all out-group members are alike, and "if we know something about one out-group member," we "feel that we know something about all of them" (2005: 240). Such automatic stereotyping of members of an out-group, often in negative ways, is a lingering aspect of our ancestral shadow (Berreby 2005: 52–53; Duntley and Buss 2005: 113; Fiske 2005: 128). Third, because of the "accentuation effect," members of the in-group tend to be biased toward information that amplifies the differences with out-group members. Intergroup similarities are ignored (Waller 2005: 240). The net effect of such processes, as a protégé of Franz Boas, anthropologist Margaret Mead (in Ridley 1997: 192), observed, is that tribal injunctions against killing

human beings are "universally interpreted to define human beings as members of one's own tribe," and members of competing tribes are *ergo* "subhuman." Thus, while to kill a member of one's religious in-group, for instance, is murder, to kill an unbelieving out-group member may not be. "This is not," Teehan (2010: 151) concedes, "what one might expect of a divine law," but it certainly is what to expect of a law shaped by an "evolved moral psychology" honed by Group Selection.

2.7 Binary Oppositions, the Human Need for Control and the "Group Tent"

To recapitulate, social categorization creates the in-group, "us," which is subsequently reified by structural pressures such as trade and, more potently, war, against some out-group "them." While social categorization generates the cognitive effect of cleaving humanity into in- and out-groups, that is not its only consequence. Intense intergroup competition for survival allows natural selection at the level of groups – Group Selection – to operate, enabling groups dominated by altruists to outcompete groups dominated by selfish free riders. Successful groups are characterized by a visceral in-group solidarity/out-group hostility. Social categorization hence involves not merely a cognitive but an affective dimension as well. This is important and requires further elucidation. In this respect, the work of the French structural anthropologist Claude Levi-Strauss on *binary oppositions* is instructive. Levi-Strauss spent a lifetime studying the underlying structure of myths. In *The Naked Man*, the fourth and final volume of his *Mythologiques* series, in a chapter called "Binary Operators," he argues that the basic units of myth, or "mythemes," must "lend themselves to binary operations, since such operations are an inherent feature of the means invented by nature to make possible the functioning of language and thought" (Dundes 1997: 40). Levi-Strauss's sentiments have proven perceptive and influential, and it is widely accepted today that "binary opposition is a universal" fact of human culture, the past and present (1997: 46). Binary oppositions are considered integral to all facets of human social experience, encompassing multiple domains, including, inter alia, ethnic, cultural, linguistic, social class, age, sexual orientation, and religious spheres (McGrath 2007: 51).

Evolutionary biologist E. O. Wilson (in Dozier 2002: 40–41) likewise considers "the innate tendency" to "use two-part classifications in treating socially important arrays," as a basic feature of human interaction with the environment. Our tendency, Michael Shermer (2003: 147) observes, to "cleave a continuous nature into bivariate categories in order to simplify our complex world," may be the result of an epigenetic rule. Epigenetic rules are "inherited regularities of development in anatomy, physiology, cognition and behavior" that guide the complex interaction between genes and social learning (Shermer 2003: 146; E.O. Wilson 1999: 138). Matt Ridley (1997: 174) provides down-to-earth and often-humorous examples of everyday human mental binary oppositions in action, observing wryly that they must explain the often-nasty attitude of London taxi drivers toward other road users and their

equally strong loyalty to fellow cab drivers, whether they know them personally or not. Binary oppositions equally animate the "quite astonishing amount of contempt" Apple-Macintosh aficionados display toward IBM enthusiasts. Ridley's remarks about nasty London taxi drivers and contemptuous Apple-Macintosh users reinforce the point that binary oppositions *comprise not just cognitive but potent affective elements as well.*

That the process of social categorization generates both cognitive and affective consequences is validated by modern neuroscience. Researchers Andrew Newberg and Mark Waldman (2006: 88) affirm that, in the process of social categorization, "it is easier for the brain to first quantify objects into pairs, and then to differentiate them into opposing groups" such as light or dark, fact or fiction, and "Republican or Democrat," for example. These "dyads" in fact represent a "unified concept" as "each term is defined according to its relationship to the other" (2006: 88). Of particular importance however, Newberg and Waldman (2006: 88) point out that once an "oppositional dyad" is generated, the brain will *automatically impose* an "emotional bias on each part of the dyad," leading us, after we "divide objects, people, and ideals into groups," to in fact "express a preference for one and a dislike for the other." Agreeing, social psychologist Neil Kressel (2002: 211) asserts that going from "categorization to stereotyping and favoritism for one's own group" is not difficult. Social psychologist Susan Fiske (2005: 127) concurs, adding that human biases toward out-groups are "automatic, unconscious, and unintentional." Henri Tajfel's famous experiments with "minimal groups" further underscore the automaticity of the affective or emotional biases generated by our ingrained cognitive binary instincts. Complete strangers were randomly divided into two groups using arbitrary criteria. The participants had no contact with either in-group or out-group members, neither were they told that they were competing for a prize or some scarce resource. Despite the "minimalness" of these arrangements, however, the mere *perception* of belonging to two different groups – social categorization – triggered competitive behavior toward the out-group and favoritism toward randomly assigned in-group members that, to reiterate, the participants had never even met. Such experimental results have been repeated and validated cross-culturally (Waller 2005: 241–242; Augoustinos and Walker 1995: 101–109; Pinker 2011: 522). E.O. Wilson (2013), commenting on these minimal groups and "how swiftly and decisively people divide themselves into groups and then discriminate in favour of the one to which they belong," concludes that in "its power and universality, *the tendency to form in-groups and then favour in-group members has the earmarks of instinct*" (emphasis by author). Newberg and Waldman (2006: 88–89) similarly emphasize that our innate propensity to "assign preferences and dislikes to people from different cultural, religious, and ethnic backgrounds" is potent and poses serious real-world implications: "the in-group will always develop scenarios – pass laws, distribute benefits, etc. – that are less than favorable for the out-group."

Human in-group bias is instinctual and automatic because, in evolutionary terms, an adaptively fit in-group is better able to meet not just the basic survival but also

the *psychological* needs of its individual members. Extensive social psychological research suggests that a foundational human need is *the sense of being in control.* This refers to the need to believe that we have the basic capacity to interpret and master our environment, protect ourselves and loved ones from physical harm, accomplish important goals, and lead personally meaningful lives (Staub 2005: 54–59; Kay and Eibach 2013: 567; Shermer 2011: 94). In order to enjoy a sense of control, human beings – particularly those individuals with a strong "need for cognitive closure" through "knowledge that is certain and firm" – need to find ways to overcome the myriad uncertainties emanating from their social milieu; and one powerful uncertainty reduction mechanism is "group-centrism" (Federico et al. 2013: 474–475; Klein and Kruglanski 2013: 428–429). Strong in-groups are "epistemic providers" – that is, "the beliefs, norms, and valued social identities consensually shared by members of a group provide people with certainty about what the world is like, what they should do in various situations, and who they are and why they are important" (Federico et al. 2013: 475). Moreover, members of in-groups perceived to possess relatively high social status tend to amplify intergroup differences more sharply (Federico et al. 2013: 477). Individuals basically *need* to identify with specific social groups that they see as superior to others (Waller 2005: 242). The American psychoanalyst David M. Terman (2010b: 61) adds that individuals tend to "invest their idealizing needs and wishes in the group" and, going further, warns that "when the group or its ideals are attacked, individuals may feel even more humiliated and enraged than when they are personally shamed" (see also Doosje et al. 2013: 589). To be sure, Terman cautions that one should take care not to uncritically conflate the group and the individual and that carelessly attributing the group mindset to individual psychopathology would be a mistake. Nevertheless, he insists that "deeply held aspects of the individual self are invested in the group self, and it is evident that intense affects are generated in the individual when the group is perceived as threatened with extinction or humiliation" (Terman 2010a: 17).

Taken together, Group Selectionist logic, the human proclivity for evaluatively laden binary oppositions, the strategic role of the high-status in-group in profoundly meeting the foundational human need for a sense of control, and the ensuing psychic unity between that in-group and the individual confirm the salience of the useful analytical construct termed the *Group Tent.* Psychoanalyst and conflict theorist Vamik Volkan (2006: 69–70) explains the concept:

> We all wear, from childhood on, two layers of clothing. The first garment, which belongs just to the individual who is wearing it, fits snugly and represents personal identity. The second set of looser outer clothes is made from the fabric of the large group's ethnic (or religious or ideological) tent. Each member of the large group is cloaked by a piece of the same cloth, and it protects the person like a parent or caregiver. The canvas of the tent thereby shelters thousands or millions of individuals under it as though it were a gigantic single piece, and represents the large group identity.

As long as this Group Tent remains stable and sturdy, individual group members go about their daily business without thinking much about their large-group identity. However, if the Group Tent is perceived to be shaken, stressed, or torn

during periods of upheaval and humiliation caused by "others," then "wearing one's own personal garment becomes less important than being collectively covered by the second canvas garment" (Volkan 2006: 70):

> [T]he sense of "we-ness" *quickly expands from the family and clan and includes a renewed investment in the whole ethnic, national or religious large group*. This happens because the people experience their own victimization not just as a result of an attack on themselves by "others" but also as a result of their mutual identification as members of a shared large group. (emphasis by author)

The implication here is that in a world of intense intergroup competition and conflict, what holds the large in-group together is not merely kinship ties or reciprocity but the *imagined kinship* of nationalism, ideology, and ethnicity – or religion.

Two consequences flow from the perception of imagined kinship offered by the Group Tent. First, as Volkan (2006: 69) notes, in-group members perceiving that the Group Tent is under attack possess a tendency to "humiliate, cripple, burn, and kill" out-group members – even if their "own physical survival is not threatened." Thanks to the Internet, individuals in country A can now become angry enough to engage in violence on behalf of co-religionists facing persecution or physical attack in far-removed country B. It does not matter that the country A individual is not himself/herself directly affected. Terrorism scholar Marc Sageman (in Fink and El-Said 2011: 17) calls this "vicarious shared grievances." The French sociologist Farhad Khosrokhavar (2010: 145) speaks likewise of "humiliation by proxy," which he considers the "most universal in the Muslim world." Khosrokhavar's analysis illuminates how the imagined kinship suggested by a common – in this case Islamic – Group Tent can exert a powerful influence on co-religionists thousands of kilometers away. As he (2010: 145) points out, most of these vicariously humiliated young Muslims do not even precisely grasp the social, historical, cultural, and political dimensions of the Palestinian and Kashmiri contexts:

> The French Muslim who believes that he is humiliated in the same way as the Palestinian by the Israelis, or the English Muslim who feels humiliated in the same fashion as the Kashmiris by the Indian army, is imagining a humiliation that is only palpable through a projection. He feels downgraded in the same manner as the Palestinian or Kashmiri he imagines, without any concrete basis other than images on the TV.

The potency of the moral outrage generated as a result of humiliation by proxy and vicarious shared grievances should not be underestimated. It resulted in the violent worldwide demonstrations in protest at the cartoon caricatures of the Prophet Muhammad published by the Danish newspaper *Jyllands Posten* on September 30, 2005 (Asser 2010). In Southeast Asia itself, many individuals have been moved to embark on pathways leading to terrorism, due to vicarious humiliation resulting from the perception that co-religionists elsewhere in the world – in sum, fellow Group Tent members – were suffering injustice and violent persecution (Ramakrishna 2009: 140).

A second consequence of the perception of imagined kinship offered by the Group Tent is perhaps even more sobering: in-group members would have a tendency to not only kill out-group members but also *die* for the perceived good of

the in-group. To employ the language of evolutionary psychology, they would willingly sacrifice their reproductive privileges on behalf of unrelated in-group members they may have never even met. Such a line of analysis, to put it mildly, would be anathema to Individual Selectionists and their emphasis on the selfish gene and individual. Group Selectionists see things differently though. David Sloan Wilson, in another context, argues that if the "individual is no longer a privileged unit of selection, it is no longer a privileged unit of cognition" and that it is perfectly reasonable to see "individuals in a social group connected in a circuitry that gives the group the status of the brain and the individual the status of a neuron" (2002: 33). He goes on to argue that the notion of the *group mind* has long been established by modern social insect biologists. If we accept that the evolution of human cooperation produced not just hunting and warfare, but thanks to the uniquely human capacities of language and culture, "cognitive cooperation" as well, then "we need be no more aware of the role that we play in the group mind than honey bees that perform their waggle dance" to draw attention of the colony to rich sources of nutrients (2002: 33–34). Group Selectionist Martin Nowak (2011: 82), similarly remarking on the apparently puzzling fact that some people seem willing to risk or even sacrifice their lives in order to rescue unrelated strangers, observes that it is not impossible that unconscious "empathy for the group manipulates individuals, overwhelming their sense of self-interest so they act on behalf of the greater good." Sometimes therefore "what was bad for the individual could actually be good for the group" (Harman 2011: 125–126).

Perhaps the Group Selectionist who expresses this view most strongly is the interdisciplinary scholar Howard Bloom (1997: 465). Proceeding from first principles, Bloom first iterates that every living organism is actually a *society of cells*. Each cell is individually equipped with the necessary genetic material to go it alone and yet each cell, "in pursuing their own goals, cooperate to create an entity much larger than themselves" (1997: 57). The Portuguese man-of-war, for instance, which can measure 150 feet from its air bladder to the tips of its tentacles, is in fact not a single organism but a "colony of minute individuals" (Nowak 2011: 140). The common soil organisms called slime molds, moreover, are normally distributed into numerous microscopic, independently functioning and distinctly separate ameba that can be found on the moist surface of a decaying tree or rotting leaf, feasting on bacteria. When nutrients become scarce, however, these ameba coalesce to form a slimy and moldy plant that is eventually visible to the eye. Some ameba within this coagulated mass line up to form a stalk that pokes into the air, sending out spores in search of nutrients. When spores land on a slab of decomposing bark or a heap of rotting grass, they quickly multiply, creating new populations of individual ameba again (Bloom 1997: 58–59; Nowak 2011: 140–141). Not for nothing are slime mold called "social amoeba" (Nowak 2011: 140). The entomologist William Morton Wheeler famously dubbed a group of separate organisms acting collectively like a single unified larger entity – with a life of its own – a "superorganism" (Bloom 1997: 58; Harman 2011: 122).

Individual human beings, Bloom (1997: 59) insists, are similarly "components of a superorganism" and "cannot live in total separation from the human clump."

He is certainly not alone in holding such a view. The chief advocate of Group Selection, David Sloan Wilson (2002: 1–7), has long argued for an "organismic" conception of human society. He emphasizes that "superorganisms aren't a metaphor" but "a fact" and are an "essential part of the human evolutionary story" (D.S. Wilson 2011: 70). Social network theorists Nicholas Christakis and James Fowler likewise argue that a human social network is very much like a "superorganism" that has "a life of its own" and possesses "an intelligence that augments or complements individual intelligence, the way an ant colony is 'intelligent' even if individual ants are not" (Christakis and Fowler 2011: 289–290). Moreover, within the social network or superorganism individuals are engaged in "mutually influencing one another but without necessarily knowing each other personally or explicitly coordinating their behavior" (2011: 116–117) – what D. S. Wilson calls, as noted, unconscious cognitive cooperation. Furthermore, Bloom (1997: 49) has been influenced by the work of sociologist Emile Durkheim and his followers on "altruistic suicide" – and the existence of the occasional "violent negation of the instinct for self-preservation by the social instinct." Bloom insists therefore that precisely because individual human beings remain inseparable components of a larger superorganism – with as Christakis and Fowler (2011: 289) emphasize, a "structure and function of its own" – we occasionally "find ourselves expendable in its interests" (Bloom 1997: 49, 325):

> The superorganism is often a vile and loathsome beast. But like the body nourishing her constituent cells, the social beast grants us life. Without her each of us would perish. That knowledge is woven into our biology…*The internal self-destruct devices with which we come equipped at birth ensure that we will live as components of a larger organism, or we simply will not live at all.* (emphasis by author)

By "internal self-destruct devices," Bloom has in mind the cellular level, where individual cells routinely shut down for the good of the wider organism when their usefulness has run their course, in a process of programmed cell death called *apoptosis* (1997: 7–8; also Nowak 2011: 150). Bloom argues that by extension, as "the individual is a cell in the social superorganism," if "he feels he is no longer necessary to the larger group, he, too, begins to wither away" (1997: 56). Such individuals are generally those who have encountered sharp declines in their relative positions within the in-group pecking order and are subsequently socially isolated, marginalized, and consequently suffering from the negative physiological effects of lowered testosterone and serotonin[1] levels (Bloom 2000: 144–145; Dowd 2009: 161; Johnson 2004: 64; Wright 2008: 242–243; Ridley 2004: 108). In the context of intergroup conflict, these individuals – for example, suicide bombers – while seemingly motivated by the prospect of posthumous public acclaim at the conscious level, may in fact be equally influenced by subliminal processes, driving them down the path of altruistic self-sacrifice for the group as a whole. As Bloom suggests elsewhere, "physiological feedback loops often call upon the individual to sacrifice his health – or even his life – for the sake of a larger whole" (1997: 70).

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[1] Serotonin is a neurotransmitter that is implicated in subjective feelings of well-being (Carter 1998: 30). Testosterone, the male sex hormone, inspires confidence and aggression (Bloom 1997: 198).

In a similar vein, Nowak 2011: 155) asserts that it is no surprise that at times "some group members surrender part or all of their personal genetic fitness to benefit fellow members other than their own direct descendants."

In contrast to Individual Selectionists like Matt Ridley therefore who argue that all individuals without question exploit the social group for their own selfish interests (1997: 188), Group Selectionists like Bloom counter instead that in fact *some individuals may unconsciously be driven to sacrifice themselves for the good of the group.* They may be guided to do so, beneath the level of consciousness, by built-in, endocrinal "inner judges" that evaluate "the snugness" with which they fit the needs of the group mind or social "neural net" and pass judgment accordingly: if we are useful to the welfare of the Group Tent, we are rewarded with "internal bonuses of zest and confidence"; if not, it soon becomes clear that others "couldn't care less if we disappeared like a blackhead from the face of decent society" (Bloom 1997: 140–145; 2000: 144–145). These insights of the Group Selectionists may come across as unpalatable and controversial, but they arguably derive from sound Group Selectionist logic. In essence, the latter helps illumine the profound influence of the Group Tent on the often-puzzling extent of self-sacrificing human motivations and behavior in the context of violent religious militancy, including terrorism – as we shall soon see.

2.8   The Manichean Mindset Deconstructed

The mere act of cognitively categorizing humanity into separate Group Tents automatically generates a bias in favor of the in-group and against the out-group and underscores how evolutionary adaptations that may have made sense in the threatening Late Pleistocene environment – when encountering a stranger almost always meant danger – potentially complicates intergroup relations in the very different modern world (Waller 2005: 240; Winston 2003: 40–42). To reiterate, in "forming bonds" within our in-group, we at the same time "deepen fissures" with the out-group; there is virtually no "us" in the absence of "them" (Waller 2005: 155). Group Selectionists like David Sloan Wilson and Elliot Sober (in Waller 2005: 152) emphasize that "within-group niceness and between-group nastiness" appear closely intertwined. Marc Sageman (in Fink and El-Said 2011: 17) in a related vein emphasizes the dichotomized "in-group love" and "out-group hate" that religious terrorist groups seem to display. The ultimate implication of these dynamics, social psychologist James Waller (2005: 152) suggests, is that every human being "comes *endowed* with psychological mechanisms that leave us capable of committing extraordinary evil" on behalf of the group "when activated by appropriate cues." In a later chapter, we shall unpack six such "cues": social humiliation, a tight counterculture, a protean charismatic group, an enabling environment of poor governance, intragroup psychic dynamics, and an enabling ideology. At this point though, having constructed the basic theoretical edifice, the task now is to elucidate the Manichean Mindset, the subject of this chapter, and its elements.

To do so involves examining three innate and universal psychological mechanisms, emanating from our evolved cognitive penchant for binary oppositions, that worldwide studies have established the existence of and that appear to start in infancy: *ethnocentrism*, *xenophobia*, and the desire for *social dominance* (Waller 2005: 153). First coined by the American sociologist William Graham Sumner in 1906, ethnocentrism refers to "this view of things in which one's own group is the center of everything, and all others are scaled in reference to it" (Berreby 2005: 211). The good news is that ethnocentrism is an evolved instinct found worldwide (Kressel 2002: 199) that provides the necessary "reinforcement of communal identity and we-ness" that promotes group survival; moreover, the very concepts "us" and "them," social psychologists have found, are imbued with "positive emotional significance that is activated automatically and unconsciously" (Waller 2005: 155). The bad news is that ethnocentrism simultaneously implies a *shrunken moral circle* in which we tend to see "our group as superior to all others" and are "reluctant to recognize members of other groups as deserving of equal respect" (2005: 154–155). This is the point at which ethnocentrism shades into its darker and more problematic counterpart, xenophobia, a "complementary tendency" to dislike and fear outsiders and those unlike us (2005: 155, 240). E.O. Wilson (2013) hints at this xenophobic impulse when he notes that human beings instinctually tend to judge out-group members "to be less likable, less fair, less trustworthy."

While ethnocentrism and xenophobia are clearly affective consequences of the aforementioned universal social categorization process, understanding the Manichean Mindset requires consideration of a third crucial consequence: *the desire for social dominance.* Earlier we saw that Individual Selectionists argue that within social groups there exists a pecking order or status hierarchy that distributes privileges and resources differentially among group members. Group Selectionists add that such status or dominance hierarchies exist between social groups as well. What Howard Bloom calls the "pecking order impulse" for "pride, dignity, and dominance," drives competition between social groups, states, and empires (1997: 255). E. O. Wilson (2013) concurs, noting that the root of this intergroup drive for status is the human yearning to "belong to any collectivity that can be compared favorably with other competing groups of the same category" – be it "an elite college or the executive committee of a company" or a "religious sect." The term "pecking order" was coined by the Norwegian biologist Thorleif Schjelderup-Ebbe, who discovered the existence of a status hierarchy among chickens in the 1920s. Individual Selectionist Robert Wright faults Schjelderup-Ebbe for making an unwarranted quantum leap from dominance hierarchies in chickens to the notion that despotism is "the basic idea of the world, indissolubly bound up with all life and existence" and, with trademark wit, chides the latter for his "frenzy of politically loaded overextrapolation" (2008: 239). Bloom, however, in line with Hobbes and Machiavelli, counters that "virtually every tribe or nation ever studied has been obsessed" by the quest for status and dominance and all "human cultures – including the 'classless' societies engineered by Marxism in its prime – have been in the grip of the pecking order" (Bloom 1997: 253). For individuals and the groups they comprised throughout

history, personal and social humiliation were as bad as death, and "status and prestige," and the ability to "move up in the pecking order," have always been deeply prized (1997: 252–253).

Social network theorists Christakis and Fowler (2011: 72) similarly contend that human societies care a great deal about "relative standing." As discussed, what lies behind this universal human quest for social dominance is the *sense of being in control.* A lofty position in the intergroup pecking order, Bloom contends, is not the result of the cultural programming of "consumerism, capitalism, television violence, blood-and-guts films, or rock and roll," but is very much "built into our physiology" and has "been with us since the dawn of the human race" (1997: 255, 331). Fueling the instinctual drive for pecking order dominance, it should be added at this juncture, is *mimetic desire*. The French literary theorist Rene Girard has opined pithily that human beings "desire things because others have them" (Stirling 2004: 12). While the object of desire is socially learned as Girard intimates, the drive to possess that desired object is instinctual. The objects of mimetic desire may be material, such as economic wealth, or metaphysical, such as social status and power (Ramakrishna 2007: 125–126). The point is "their possession by others gives them value in our eyes" (Stirling 2004: 15). Christakis and Fowler likewise add that people are "envious" and they "want what others have, and they want what others want" (2011: 72). Consequently, especially during times of intergroup stress, when the objects of in-group desire are regarded *as unjustly denied by a morally inferior if materially superior out-group*, intergroup violence could result. "In uncertain times," Susan Fiske avers "the envious attack the envied" (Fiske 2013: 611; Stirling 2004: 17–18).

The psychologists Jim Sidanius and Felicia Pratto have undertaken a multiyear study that confirms the existence of a desire for social dominance, or what they call *social dominance orientation* (SDO). They define SDO as "the tendency for people to endorse group-based social inequality and the subordination of certain groups at the hands of dominant groups" (Sidanius and Pratto 1999: 302). In other words, the SDO construct measures the extent to which individuals differ in the degree to which they desire their group to be superior to other groups and to dominate them (Waller 2005: 185). Sidanius and Pratto argue that SDO, a "generalized orientation toward hierarchical relations among groups," applies to any type of social group, including nations. Individuals who are high in SDO, inter alia, show more racism, less tolerance for diversity, less altruism, and more patriotism: in other words, SDO predicts the extent of in-group amity and out-group enmity. High-SDO individuals also tend to be more supportive of social and political ideologies that legitimize group-based hierarchies and intergroup inequalities (Waller 2005: 185). Importantly, Sidanius and Pratto point out that very high overall levels of SDO within a social group – that is, large numbers of high-SDO individuals – may not be needed for maintaining that group's quest for a dominant position in relation to other groups. Rather, the wider generalized apathy and tolerance of the silent majority for "oppression and chronic group discrimination" perpetrated by the high-SDO and vocal few suffices to ensure the atavistic and aggressive posture of the overall group

(Sidanius and Pratto 1999: 302). With few exceptions, the overall analysis thus far suggests that ethnocentric and xenophobic social groups marshaled by high-SDO elites – political, community, and religious leaders – and seeking the establishment of a desired pecking order favorable to one's Group Tent are pretty much integral to human existence. As Rick O'Gorman argues, individuals and social groups do not like to be dominated and will resist attempts by out-groups to this end, even violently (O'Gorman 2010). Steven Pinker similarly insists that the "dark side of our communal feelings is a desire for our own group to dominate another group, no matter how we may feel about its members as individuals" (Pinker 2011: 522). The struggle for power and pecking order primacy are thus central to social and political life – a point famously articulated of course by Machiavelli (1532/1984) as he counseled his ruler Lorenzo De Medici in the context of factional strife in the sixteenth-century Italy.

Harking back to our main discussion on what the root of terrorism is, the foregoing analysis suggests that out-group domination and ultimately terrorist violence, *well before the intervention of any virulent ideology*, are ultimately rooted in Human Nature itself. It cannot be overemphasized that individual human beings and the social groups they constitute come "*endowed* with psychological mechanisms" that render them well able to engage in "extraordinary evil when activated by appropriate cues" (Waller 2005: 152). Such appropriate cues, to reiterate, include not just ideological frames of hate and dominance but also other intervening factors like social humiliation, a tight counterculture, a protean charismatic group, an enabling environment of poor governance, and intragroup psychic dynamics. As we shall see, such cues, in combination with the hyperactivated instinctual *Manichean Mindset* of a religiously embattled in-group, could pave the way toward intergroup violence – including Islamist terrorism in Indonesia. The term Manichean Mindset derives from Manicheanism, an ancient Persian religion that originated with the prophet Mani (c. 216–276 CE). Manicheanism (also rendered as Manichaeism) "brought together Judaeo-Christian beliefs and Persian mysticism and saw the whole cosmos as a great drama in which the forces of Light and Darkness struggled for domination." This philosophy "sharply differentiated good and evil, nature and God"; and of particular note, its "fierce dualism" proved to have a "strong appeal" in the ensuing centuries to "a certain cast of mind." The future Christian writer Saint Augustine was himself a Manichean as a youth, and Manichean ideas – propelled by both Zoroastrian and Christian persecution – spread far and wide, finding adherents in central Asia and China, where it apparently flourished as late as the thirteenth century (Roberts 1993: 253, also Wolfe 2011: 50–51). Drawing upon the basic binary opposition implied by a Manichean cast of mind for our purposes, it is postulated here that the Manichean Mindset is an organic aspect of human and group psychology – in sum, a *hardwired, unconscious instinct*. Following Robert Wright (2008: 9), the Mindset is best seen as a "knob of human nature" that is *tunable by life experience* – the Mindset can be "set" either lower or higher, contingent on individual life trajectories. To flesh this out further by drawing upon and adapting related work by David Terman, this Mindset, or more technically, a *gestalt*, has evolutionary or "neurobiological" roots and refers to a "general perceptual, affective-cognitive

organization in individuals" and an "analogous, shared cognitive structure" in the social groups those individuals constitute (2010b: 47). It is an evolved way of "experiencing and reacting to power" and "power differentials," as well as perceived threats to one's "psychological existence" (2010b: 48).

Put another way, the Manichean Mindset that is part of the natural psychological endowment of human beings and social groups can, adapting Terman (2010b: 48–49), be said to be decomposable into three irreducible core and unconsciously held elements: first, a binary opposition – there is an in-group that instinctually perceives itself as morally superior to and locked in constant contestation with a materially more powerful out-group. Second, the morally inferior out-group is automatically stereotyped as the primary obstacle to the achievement of the justly deserved high pecking order status that the in-group is trying to establish. Third, the total domination – in relative power terms – of the out-group is instinctually pursued as the means of ensuring pecking order primacy. These three elements of the Manichean Mindset are expressed in the ethnocentric, xenophobic, and mimetically driven, dominance-seeking behavior of the in-group. Understanding and embracing the existence of this Manichean Mindset and its deep rootedness in our evolved biology is the first central requirement in our quest to unpack the complexity of violent religious – in our case Islamist – militancy in Indonesia.

Conclusion

In this chapter, we have trawled the insights of several disciplines, especially the important emerging discipline of evolutionary psychology, and noted that there exists a common, evolved psychological heritage shared by all human beings across cultures. While humans are instinctively selfish, they are at the same time instinctually cooperative – or groupish – as well. We saw that current thinking in EP holds that natural selection operates at both the individual and group levels, and in fact Group Selectionists argue for the existence of the human superorganism or in-group that defines itself in a mutual binary opposition with relevant and competing out-groups. In circumstances of intergroup competition or conflict, otherwise selfish human beings do cooperate to compete or fight the out-group, in an effort to defend and preserve a collectively imagined overarching Group Tent. In other words, human psychology, in the Group Selectionist view, is such that it is instinctually felt that what is good for the Group Tent – or the superorganism that a particular category of humans see themselves part of – is good for those constituent individual humans as well. The implication is that altruistic, even sacrificial behavior, has never merely been the preserve of the smaller kinship circles and networks of direct reciprocity that have been the focus of the Individual Selectionists. Cooperative behavior in human social collectivities much larger than kinship and face-to-face mutual aid networks can also derive from a sense of shared goals, values, and moral systems – *like religion*. The argument in this chapter culminated in

the postulation of the existence of the Human Nature "knob" – created by the universal process of social categorization into an "us" and a "them" – we have called the Manichean Mindset. The latter is in essence expressed by in-group ethnocentrism, a tendency toward xenophobia, as well as the drive for a higher pecking order status in relation to, and domination of, the out-group.

The nineteenth-century Prussian philosopher of war Carl von Clausewitz made a distinction between War on Paper or Ideal War and War in Reality or Real War. He noted that while in theory there are no logical limits on the levels of destruction possible in warfare, in reality, there are always constraints: of political objectives and popular support; unforeseen circumstances and chance; as well as the nature of the contending armed forces' leadership, technology, and fighting skill. Hence, Real War usually falls short of Ideal War (Clausewitz 1832/1976). Similarly, it should be noted that the Manichean Mindset described here represents a neurobiologically unalloyed, "pure," or "ideal-type" endowment or instinct. *The point to note is that the Manichean Mindset "knob" of individuals and in particular, the in-groups they comprise can be tuned very high indeed, depending on their respective life trajectories*. In sum, we have unpacked the first element in the Human Nature Triad that can potentially contribute to religious violence – the human cognitive and affective proclivity for evaluatively laden binary oppositions, giving rise as seen to the Manichean Mindset. In the next chapter, we shall examine the second element of that Triad: religiosity and, in particular, its culturally canalized form, religion. In particular, it behooves us to ask three burning questions: First, is religion, despite its undoubted capacity for promoting great acts of altruism, nevertheless, inherently prone to violent evil? Second, if religion is a problem, why does it seem to be so ubiquitous and can humankind be rid of it, as increasing number of commentators are very publicly urging? Third, and ultimately, how does a constricted, embattled religiosity, in conjunction with a highly tuned Manichean Mindset, generate a pathway toward religious violence – such as Islamist terrorism and militancy in Indonesia?

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