

Pinker, Steven. *The Better Angels of Our Natures: Why Violence Has Declined*. New York: Viking Penguin, 2011.

Steven Pinker (1954 -) works in experimental and cognitive science, as well as linguistics, at Harvard University. Pinker advocates a language origins theory contrary to that of Noam Chomsky, and has exchanged multiple sharp critiques in the written media with Malcolm Gladwell concerning Gladwell's analytic methods. Pinker deems himself an atheist, though he occasionally styles himself a "serious cultural Jew."

Preface. The incidence of human violence has plummeted. Ours is the most peaceful age ever. This assertion counters the view of most. Our minds estimate a matter's likelihood by the ease of recollection of examples. So, our media make violence seem more prevalent than it is. The decline in violence has been matched by, and sometimes caused by, changes in our views on violence. This book explores the psychology of violence and nonviolence. Pinker views the human mind as a complex assortment of cognitive and emotional abilities thrown together by evolution. Some faculties drive us toward violence; others toward peace. This book explores what has given our peaceful inclinations the better of the battle. Peaceful societies are richer, enjoy better health and education, treat women more equally, and trade more. Pinker overviews the book briefly. Pinker offers associates and collaborators thanks. Violence has declined dramatically in human populations. We need to understand specifically what we have been doing right in this regard.

1. **A Foreign Country.** The past was more violent than historical records or people wish to comprehend. 5,000 year old Otzi the Iceman died of wounds suffered in a raiding party, in which he killed others, before he froze in a crevasse. 9,400 year old Kennewick Man had a bone projectile healed into his pelvis. All the other preserved bodies or remains died violently, indicating violent death may have been more prevalent in the past. Ancient Greek wars were total and genocidal. Rape was an expected spoil of battle. The Hebrew Bible contains one long torrent of violence, which, fortunately, is mostly fiction. First-millennium B.C. people in Palestine found violence acceptable, even admirable. Today's Bible readers set biblical violence aside without much examination. Romans murdered hundreds of millions for entertainment and employed crucifixion, intended to cause maximal pain in execution. Christianity adopted the cross as its symbol, and celebrated the horrid deaths of martyrs, starting, of course, with Jesus. Christians then inflicted similar deaths on opponents and heretics alike. Today's Christians avoid like behavior by ignoring their own violent ideology. Medieval knighthood consisted primarily in bloodshed and rules regarding rape of women. Pinker analyzes the violence of medieval kings, including the Tudor dynasty, of Shakespearean plays, of Grimm fairy tales, of Punch and Judy shows, and Mother Goose rhymes. Nursery rhymes have 52.2 violent episodes per hour; television programming has 4.2 such incidents. Pinker considers the rise, career, and extinction of honor dueling. In the twentieth century, pacifism has surged. War memorials remember dead soldiers, not conquering generals. Generals are passé. Military symbolism has been replaced by celebration of those opposing wars. We ill-tolerate excessive force. Domestic violence, whose primary sufferers are women, has become a crusade. Corporal punishment of children has, in its mid-twentieth century forms, been criminalized. If one merely stated in 1976 the great historical events, all accomplished non-violently, since that time to the present, one would have been deemed daft. This account may not have convinced the reader that violence is on the wane. It should, however convince that many past forms of violence have been extinguished, and raise questions about the course of violent behavior.

2. **The Pacification Process.** Evolutionary theory gives us a coherent explanation of living organisms and how their bodies, behaviors, even cognitions come into existence. Darwin's work has been experimentally confirmed. In the natural world, violence expresses the operation of one survival machine meeting another. These living survival machines strike back, and so violent survival machines employ their violence strategically, striking where risks are believed to be lower than expected benefit. Violence emerges from competition for resources, fear, and thirst for glory, according to Hobbes. Successful competitors for important resources out-survive those less

successful. Females are a scarce resource, given that violent males take for themselves more than one, leaving some males with none. Fear of competitors encourages first-strikes to remove threat. The possibility of pre-emptive strikes encourages otherwise peaceful competitors to take up mutual homicide. Deterrence works when competitors believe opponents might survive a pre-emptive strike, leading to retaliation. Pinker restyles honor violence as credibility retention. One strikes for denigrations to honor because these impugn the credibility of one's deterrent capability. One must credibly prove invulnerability to first strikes for deterrence to work. Each side can believe, because of self-serving biases, that one's own side merely redresses the other side's unwarranted assaults. Violent acts consist in three players: mutually aggressive contestants and bystanders. The aggressors wage war; the bystander demands limitations to the damages caused, which is law at work.

Chimpanzees employ systematic violence in their relations to neighbor troops, and even occasionally within their troops. Chimps reduce risk to themselves in their coalitional violence by attacking only when numerically superior. Bonobos are less violent, and equivalently related to humans evolutionarily. But bonobos are not uniformly peaceable, and anatomical distinctions suggest that their pacific nature may be unusual and recent. Human males outsize females, as is usual in highly competitive species. Pinker concludes that human social violence has evolutionary origins.

Pinker estimates the age of homo sapiens to be 75,000 years [contrary to the 200,000 year and 50,000 year numbers frequently used]. Agriculturalism caused population explosions, and cultivation crept through almost all human populations on the planet. Time is not the critical factor, but rather the emergence of the centralized state, which systematically censures pointless violence. Nonstate societies experience rampant lethal violence. Raiding kills more villagers than battle. Neighbors attack for wealth, pre-emptive decimation, and to maintain believable deterrence.

To compare violence rates across societies, one must compare rates of violent death, not the numbers of the dead. [Pinker presents a fine graph of prehistoric, contemporary hunter-gatherer, hunter-farmer, and modern states percentage of deaths in warfare (Figure 2-2), which warrants careful attention.] Prehistoric death by violence rates were 15% on average. Contemporary hunter-gatherers suffered a 14% rate of violent deaths. Hunter-farmers suffered 24.5% violent deaths. The most violent modern states, at their most violent times, suffered a 1-3% violent death rate. In 2005, globally, less than 1% of death can be attributed to human violence. Other data sets support this data pattern. Living in civilization reduces the likelihood of dying by violence fivefold or more. Some hunter-gatherer societies have been extolled as very peaceful. Pinker debunks this myth with some statistical analysis of these tribes' homicide rates.

Governments reduced one problem, homicide, by creating another, authoritarian government. Homicide fell; oppression grew. One was less likely to die by the sword, but much more likely to be etched by taxes and stifling rules that quashed natural behaviors.

- 3. The Civilizing Process.** Pinker recounts how etiquette rules regarding knives and forks rankled him as a youth. Norbert Elias disabused him of his incomprehension. Elias reported the dramatic decline in violence in England from the fourteenth century to the present. In all of western Europe, homicide rates fell from about 100 per 100,000, to 1 per 100,000. Non-state societies engaged murder at a much higher initial rate. Murderers were 92% male, in their twenties, though women were more likely to commit infanticide. Murder of women and kin falls at a slower rate than murder of male competitors (Verko's Law). Medieval violence permeated the culture. Knights were just warlords. Violent impulses were indulged freely. Pinker considers the implications of medieval manuals of morals and manners, and the execration of words for feces and sex. All evidence an increasingly restrictive social etiquette. Predisposition to revenge (honor) gave way to readiness to restrain one's impulses (dignity).

A first cause of less violent behavior was the rise of centralized governments (one warlord winning out over others), with its military advances (Leviathan). Only governments could afford modern armies. So, the many warlords submitted their disputes to the king, trading swords for courtly manners. A second cause of less violent behaviors was cultural change that permitted positive-sum games, exchanges in which both parties benefit beyond what would have otherwise been available to either alone. Pinker calls this "gentle commerce," in contrast to plunder.

Exchanging surpluses is the core positive-sum game. The merchant's empathy with his clients makes it possible to retain them. These cultural changes permitted technological and economic transformation. Leviathan and gentle commerce support one another. They form an organic mechanism.

Pacification attributable to centralized governments consists in more than mere brute force. Legitimate authority creates trust among individuals, and that trust extends further and longer than oppressive coercion. This pacification (which Pinker calls the "Civilizing Process," to honor Norbert Elias's terminology) predicts what sociologists and criminologists observe: murder rates fall to 1 per 100,000, except where the process fails to penetrate—lower classes, isolated regions—or went into reverse—the third world and the 1960s.

When European violence declined, aristocrats abandoned the sword, then the middle class followed suit. The legal system offered them refuge. Lower classes were left (and remain left) with self-help, which is just vigilantism. Most murders are committed by persons who see themselves as achieving justice. So, lower class violence is not a moral failing or a disease or an expression of rage at their financial condition. Rather, lower class people are essentially stateless. Pacification has captured the core and relegated violence to the societal fringes. So, one sees what violence is not: 1) not a disease that spreads, 2) not a fruit of poverty, 3) not the result of government failure. Lower-status peoples are essentially without government, due to their own attitudes and the hostility of enforcement agencies toward them. Civilization drove violence to the margins of society.

Homicide rates first fell in England, then spread through western Europe. Increases in homicide rates occur where tribal societies experience colonialism, and then rapid independence, without time for civilizing habits to penetrate the collective psyche. Pinker tells the stories of the Mae Enga of Papua New Guinea.

American homicide rates exceed those of Europe significantly. State by state analysis shows that three regions, with three different settlement populations, have different homicide rates. These different populations are the northern tier, the southern tier, and the between tier. Differences in homicide between the tiers relate to the differential penetration of conviction about the legitimacy of government. The South and West remain hesitant about allowing government to control all legitimate use of force. Guns and self-help are more common. Much of the African-American population has kept to its own isolated street rules and disdain of police intervention. African-American homicide rates many times higher than white rates. Pinker recounts experiments detailing the honor culture and ease-of-insult in Southern subjects. Honor culture may depend, for its tenacity, on lawless locales that make persons essentially stateless. Violence in the western United States was rampant, but fell as the frontier closed and justice systems became established and better funded. Fifteen to thirty year old males commit most violence. Pinker accounts for western violence by sexual competition and inebriation. Nineteenth century western violence declined when women arrived and tamed their mates.

United States and European homicide rates rose dramatically in the 1960s, especially among young black men. Pinker styles this trend, which lasted more than two decades, a local reversal. Young men became more violent. An age-solidarity arose among youth, which informalized previous manners and customs and emphasized society's failures (civil rights, wars, environment, discrimination). Trust in social institutions waned. The adolescent front attacked self-control, social interdependence, and marriage and family.

Oddly, the crime rates, including homicide fell dramatically in the 1990s globally. The cause was not demographic or economic. Nor was the cause legal abortion, leading to the termination of unwanted children who would subsequently become criminals. Several factors led to the decline in crime rates. Intensification of the criminal justice system, with higher incarceration rates, mandatory sentencing, and criminalization of illegal drugs, took criminals out of circulation. Police forces increased in size, and lower level crimes were attacked. Contrary to these explanatory schemes, one must recall that without these features, Canada and Europe also saw decline in violent crime. Social scientists equivocate, alleging unquantifiable changes of culture or psychology. Some of these cultural changes have been intentional and organized—civilizing offensives, seeking to change perceptions of acceptable behavior.

Pinker speculates that the ultimate cause of the crime decline lies in fundamental change in the civilizing process. Informalization is the "third nature," with our basal motives being a first

nature, and our civilized habits a second nature. Informalization consists in individual reflection on first and second natures, leading to relaxation of controls selectively, with an emphasis on abandoning those habits that no longer require strict inhibition.

4. **The Humanitarian Revolution.** Humans have a long and global history of systematic torture of human victims. Pinker details practices of medieval Christendom. Yet, in modern times most *capital punishment* and all intentional torture have been rejected. People do not long to view horrific pain in others. The Age of Reason and Enlightenment are the cause. The Humanitarian Revolution touts human happiness and rational government. Human rights took the center stage when the American and French Revolutions affirmed them, and when the United Nations' Universal Declaration of Human Rights was promulgated. The worst form of *torture* is human sacrifice, practiced globally in mostly religious or governmental contexts. *Human sacrifice* extinguished itself in most locations. When one does not sacrifice to the gods, one still suffers misfortune. *Witches* were blamed. Primitive societies often believe that death does not occur naturally. Those who die for unseen causes were cursed by sorcerers. The worst of these offenses has died out because people came to value other humans more and believe that some things happen for reasons unrelated to human misconduct. Pinker recounts stories of *killing to defend religious principles*, notably Luther and Calvin. Pinker opines that skepticism and reason are one source of the abandonment of this sort of killing. Secular governments tortured as well. The practices died out in the 1700s. Capital punishment was for most of human history fickle, and has been abandoned in much of the world. Even America, which retains its capital punishment, has eighteen states that outlaw capital punishment, and executes only a fraction of one percent of its murderers. *Slavery*, which form of violence has been approved through most of human history, has been outlawed. Debt bondage and asset seizure are also on the decline. *Tyrants* do violence against their citizens, and suffer violence when a comrade kills them to take their place. Eighteenth century thinkers invented the fiction of a social contract, and attempted to reorganize the legitimacy of government. The American experiment set the democratic ideal loose, which has had large civilizing effect globally. *War* was, until recently, considered the normal state of affairs among states. Humanity lived in a constant state of warfare in which millions died horrible deaths. War lacks a moral rationale, but the need for deterrence prevents pacifism. Unfettered trade gives opponents an interest in other states' well-being. Pinker explains Kant's essay, Perpetual Peace, emphasizing three points: all states should be democracies, all states should join a League of Nations, and people should move freely among states, building global hospitality and mutual understanding. There have been no big wars in the last sixty years.

These many cruelties vanished with rapidity that makes explanation difficult. Crucially, people went rapidly from enjoying cat burnings to suffering revulsion at the idea. What caused the Humanitarian Revolution? First, people may have practiced empathy to cope with the increasingly complex bureaucracies of society. Second, cleanliness may have rendered our neighbors less odious. The Civilizing Process (of centralizing government) did not cause the Humanitarian Revolution (increased empathy). Pinker suggests that people may be less sadistic when their own lives improve. But he finds problems with this explanation. Book publication and literacy exploded as the Humanitarian Revolution took root. Pinker links the two. Peter Singer argues that the circle to which humans will extend sympathy has been growing. Pinker believes this expansion is caused by reading, which necessitates thinking the thoughts and learning the perspective of another. Information exchange technologies (which have been changing rampantly for three centuries) make of the world a global university. Cities push together diverse viewpoints, improving the quantity and quality of human thought. Urbanization is another impetus toward humanitarianism.

Moral inquiry also contributed to the growth of compassion. Scrutinized cruelties do not long survive deliberation. Enlightenment humanism was this scrutiny. Humanism starts with a skeptical viewpoint. We can know for certain our own minds. When we reason, we commit ourselves to the careful deliberation and ongoing revision of what we learn (which is the methodology of science). The existence of other minds like our own deserves great credence. Minds can meet. Morality recognizes that humans can grasp one another's perspectives and non-zero-sum games exist to be exploited. Some deductions follow: government is useful. Pinker considers Burkean conservatism, which deems social tinkering beyond human capacity. Pinker

argues for a median view of humanity—hobbled by persistent systematic errors and pitfalls, but able to see those proclivities and step around them, after some experimentation. Pinker also considers 19th century romanticism, which rejected rationality in favor of living, and bequeathed the planet some of its most virulent and violent steps backwards.

5. **The Long Peace.** We have long debated the place of the first half of the twentieth century in human history. Is it preparation for future, yet more horrible, wars? Or has the sixty years of ensuing peace begun the obsolescence of global conflicts? Population-adjusted, the twentieth century was not the bloodiest in history. Only WWII even makes the top ten bloodiest events. Historical myopia causes historians to know more about recent than wars distant in time. The twentieth century was not history's bloodiest.

Pinker examines the war statistics of Lewis Richardson, a Quaker, who categorized “deadly quarrels” by logarithmic scales. The start and end dates of wars prove difficult to pin down. Poisson processes are those in which events occur constantly, at random, and independently of one another. If probability in the Poisson process changes, it is called non-stationary. Richardson discovered that the timing of wars is a Poisson event. He also concluded that wars exhibit no meaningful cycle. The twentieth century world wars show, among other things, a run of bad luck. Richardson also showed that, although the frequency of wars was decreasing, the wars were becoming deadlier. When one plots the frequency of wars against their magnitude on a log-log graph, they form a straight line (power-law distribution). Power-law distributions teach us that wars are scale-free (no upper limit), and huge events are unlikely, but not impossible. Self-organized criticality is another technique for mathematical modeling of war. It teaches the connection between size of opponents and the damage of a given war.

Are large deadly conflicts worse than small ones? Murder and world war are most destructive. Homicides greatly outpace deaths attributable to war. But when great powers war, great damage is done. (When elephants fight, the grass suffers.) The deadliest periods have been the European Wars of Religion, the French Revolution and Napoleonic conquests, and WWI and WWII. Pinker offers graphical and statistical evidence supporting each of these propositions.

Pinker recounts Luard's five ages of war: Age of Dynasties, Age of Religions, Age of Sovereignty, Age of Nationalism, and Age of Ideology. After 1648 (Peace of Westphalia) states invested more in war capability, forming standing armies. War was glamorized, and its virtues regaled. The critique of war as an institution continued. Pre-WWI authors noted the horror and economic insanity of wars. Movies ridicule war and war leaders.

Since WWII, no nuclear weapon has been detonated in anger. As a proportion of the destruction the nuclear powers could have wreaked, the actual war carnage is magnitudes less than any other historical time. No major power has directly fought another since WWII. Pinker attributes this remarkable fact, statistically a one in one thousand chance, to a permanent change in the way developed societies view war itself. Conscription has been falling all over the planet, now viewed as an unacceptable coercion. The raw number of soldiers in developed countries has fallen dramatically. The UN Declaration of Human Rights adopts the Enlightenment view that the individual human, not that person's collective, is the ultimate value in life. International borders were made unchangeable by violent action. Honor, as a national value, has fallen as a rationale for war. One can back down without being viewed as cowardly. Popular support for war plummeted, and opposition developed as wars emerged. Soldiers themselves have changed; Marines seek to protect life, even of enemy soldiers when possible. And European soldiers have lost the will to fight and suffer. Some abandon their posts in Afghanistan. This change contrasts with the rhapsodizing of war's virtues before the twentieth century. War's popularity has plummeted. National borders are functionally frozen. Invaders are opposed. Honor as a national obsession has given way to pragmatism. Popular resistance to war has skyrocketed. Nuclear war became taboo. Nuclear weapons have not proliferated as anticipated. Many countries have abandoned nuclear weapons or the attempt to acquire them. Pinker considers whether having a weapon entails its ultimate use and then normalization. This was not the pattern with chemical weapons. Poison gas, though abundant and used extensively in WWI, has been outlawed and used only in isolated circumstances. Perhaps nuclear weapons will go the same way. Pinker details effort to this end.

What has caused the long peace? Democracy is one answer. The “Democratic Peace” means that democracies do not fight one another. Counterexamples abound, so the rule is

equivocal. But statistical analysis does show that democracies war less than other governmental forms. Classical liberalism, with its embrace of widespread trade, may be an answer. Dependence upon trade deters armed conflicts. Some argue that, since capitalism is strongly associated with political democracy, the peace is a Capitalist Peace. Kant envisioned a federation of classic liberal states cooperating when possible. Intergovernmental organizations foster this sort of cooperation as well, and gave rise to the European Union. Regression analysis demonstrates that democracy, trade, and intergovernmental organizations all foster peace. Pinker thinks the statistical data show that perhaps, by hard historical trial and error, the world is learning to eschew war and violence.

6. **The New Peace.** Pundits and academics tend toward pessimism about the chances of global peace. The gloom is numerically false, but based on the prevalence of images of developing countries' civil wars, genocides, and terrorism. Numerically, all these forms of violence are falling dramatically. This is the New Peace. Pinker recounts the difficulty of determining criteria for conflicts, so that researchers can compare apples-to-apples, and analyzes the concepts of interstate war, extrastate war, and intrastate war, as well as battle-related deaths and indirect deaths. Annual deaths attributable to battle have decreased ninety percent. Extrastate wars have fallen to zero.

But civil wars have increased. Despite this, the average number of people killed per war has been declining. War has become localized to the poorest regions of the planet, but the poverty may be a product of war as much as war is a product of poverty. Decolonization brought an end to effective government in many of these regions as the European powers withdrew from colonies or the Soviet Union collapsed. Civil wars erupted, but then declined as well, as trade put comfortable life within reach. Both the Cold War and ideology waned as forces promoting conflicts. Developing countries with fledgling democracies are much more likely to experience civil wars. Another cause of civil wars is the resource curse, as when a country has poor government and large and valuable non-renewable resources (oil, minerals). Foreign aid can have largely the same effect. Many of the civil wars in developing nations amount to raiding and brigandage by small groups of lightly-armed young men. Civil wars have declined as U.N. peacekeeping forces have grown larger and are more readily deployed. Peacekeeping missions reduce the severity of civil war, and the likelihood that once quelled, the civil war will reignite. Nonstate conflicts (intertribal within nations) have fallen as well, though the data is more sketchy. Pinker takes to task inflated estimates of non-combat deaths in developing countries' civil wars, finding them to be far less than some propagandists allege.

Genocides grow from the human capability for categorization. More people died in the 20th century from genocides than from war. Ideological genocides spring from twin proclivities of ideology: their unbridled utilitarian impetus, and their need to conform to the ideological plan. Genociders tell a story in which the murders represent the climax of the battle for utopia. Genocide depends on bad action by a few, and acquiescence of many. Genocide is not a recent development; historical genocides abound. Democides (governments kill unarmed persons deliberately) killed about 170 million people in the 20th century, most of them by communist or fascist totalitarian regimes. Democracy reduces democide, because democracies are committed to less violent means of settling conflicts. The period since 2000 is the most genocide-free in the last half-century. The primary generator of genocide in the 20th century was Marxist ideology, and the emergence of three individuals: Stalin, Mao, and Hitler.

Terrorism has received an unwarranted degree of attention, given its small associated death toll. Avoiding terrorism kills more people than terrorism. Terrorism does not accomplish its goals, and its practitioners die off and their organizations are ephemeral. Despite the World Trade Center attacks, terrorism has been falling since the new millennium. Kin selection and evolutionary forces may help explain suicide terrorism. Suicide terrorists tend to have education, middle class backgrounds, and are aware of the moral implications of their actions and do not suffer mental illness. Suicide terror is falling. Al Qaeda has lost favor with the Arab street. When a terrorist group begins to slip from public attention, they need to make bigger splashes against more vulnerable victims. This squanders the movement's credibility and the public turns against the terrorists. Terrorism is, thus, theoretically flawed, and doomed to fail to accomplish its goals.

No one can predict whether declines in violence will hold. Cultural clashes with Islam are no mere prejudice. The Islamic world indulges violence the West eschews. Large majorities

of Islamic peoples want Sharia as their law source. Yet, most also want western democracy style freedoms, within a nominally Islamic framework. Overall, Islamic organizations are turning from violence to non-violent means. Terrorism with weapons of mass destruction is less likely than many predict. First, all non-nuclear WMD are ineffective, especially for technically-backward terrorist cells. Second, it is unlikely that nuclear weapons will be transferred by rogue nations to terrorist groups. These nations would lose control of the weapon, but suffer the consequences of its use. Global warming adds a destabilizing factor to international relations. But so far, its depredations have not sparked international conflicts. Outbreaks of violence are certain, but the path at present is plainly downward. There are persistent reasons for the decline: democracy, collapse of aggravating ideologies, better government, economic well-being, U.N. peacekeeping, international trade, and the fact that less violence makes violence less likely.

7. **The Rights Revolution.** Western culture has banished not only actual violence, but also play violence, and lesser forms of violence (such as assault, rape, even threats). In the process of the rights revolution, people were not necessarily aware that they were part of the process. They just adopted political correctness. Hate murders have fallen to almost zero. The ethnic riot (majority rioters seeking minority victims) disappeared in America, and most of the West as well. Remedial discrimination addresses societal imbalances created by previous laws and attitudes. The effort extends to the precursor attitudes and language, now enshrined in the political correctness taboos. Rape has declined, once being universal. Pinker considers the interests of the parties to rape: the rapist, the rape victim, and the aggrieved father or husband. Rape has declined 80% since 1973.

Domestic violence was once protected and sanctioned, but now has been criminalized with such force that some women claim the criminalization now limits their autonomy. Some evidence shows women are as likely as men to commit domestic violence. Johnson distinguished controllers from squabblers. Controllers are mostly male and violent. Squabblers experience arguments that spin out of control. Women and men are more equally represented among squabblers. Domestic violence rates have fallen dramatically in Western countries. Women suffer less domestic violence where they work in government and professions and earn more income. Pinker argues it is likely domestic violence will fall dramatically in the third world in the not too distant future.

Infanticide has been a feature of human culture throughout its history. Pinker suggests an evolutionary biology rationale, that weak or inopportune children impair the survival prospects of existing or future children, and so infanticide is, under the right circumstances, a survival practice. Post-partum depression may be a “decision period” in which the mother experiences emotional detachment from her infant while deciding whether to keep it or kill it. Female infanticide is common in Asian families. Pinker explores rationales for female infanticide and the demographic distortions it introduces, as well as Chinese cultural forces promoting female infanticide. Slowly, a taboo on taking “identifiable” human life has grown entrenched. Infanticide in the United States has fallen to a tiny fraction of its one-time prevalence. Pinker notes that, if abortions are considered infanticide, the West has made no progress at all in infanticide. Pinker deliberates childhood punishments, which have been universal and cruel by current standards. He cites a study showing 100% of 18th century American children were beaten. Locke’s ideas on education and Rousseau’s “original innocence” helped change ideas about child-rearing. Prosperity, legal reforms, and revised mores also reduced the frequency and severity of child punishments. Pinker considers spanking in particular, which some experts forbid universally. Spanking and attitudes favoring spanking have fallen. Sweden and twenty-four other countries have outlawed spanking. Americans still permit parental discipline, but that countenances only minor physical incursions, not beating, kicking, burning, and so forth. Child abuse has fallen by half, as have sexual abuse and even bullying. The child protection agenda has spawned a parental belief that their efforts fundamentally change their child’s prospects in life. It has also spawned national terror at the vanishingly small likelihood that one’s child will be abducted by a stranger.

There has been an American sea change in attitudes toward homosexuality, especially gay homosexuality. It has been decriminalized. Cultural stigma has declined in many populations. Criminal penalties have been enhanced for crimes born of homophobia. Homosexuality remains a crime in some global regions, mostly African and Islamic countries.

Animal rights have emerged from a growing consensus that it is never right to inflict senseless pain on sentient beings. Pinker recounts the history of animal cruelty briefly, and then considers the rationales of those who opposed cruelty to animals: misanthropy, messiness of meat-eating, transmigration of souls, nonviolence, sentient suffering, and the expanding circle of moral concern (Singer). Animal cruelty has been restricted in laboratories, blood sports, and hunting. Still, vegetarianism accounts for a few percent of the population in the West. Humans are adapted to eat meat. Meat hunger and the loss of promising new drugs for lack of experimental animals militate against removing meat from the human diet. Perhaps we can use our intellect to reduce animal suffering.

The rights revolution emerged from empathy and sympathy with suffering, prosperity's expanding scope, democracy, the information economy, mobile technologies, debunking inanities, and publishing of stories inviting people into the experience of others.

8. **Inner Demons.** Humans have, through their evolutionary history, shed blood. But the decline of violence demonstrates that its source is not an immutable human drive. Some human mental components must resist violence, just as some must support it. All humans have a violent side. Violence is not merely the intrusion of sociopaths into otherwise peaceful coexistence. Individual violence peaks in two-year olds. Thereafter, we learn peace. Adults imagine homicides regularly. Our imaginations (and pastimes) exceed our actual violence dramatically. Evolutionarily, violence was such a prevalent event that our minds crave information about it. Higher cognition prepares the individual for infrequent high-harm events. The mammalian brain contains circuits for rage behaviors, but these are linked to our overall cognition. No-holds-barred aggression is infrequent because it seldom works. Even when successful, one must fear kin-revenge. So, violence tends toward sucker punches or rampages, where one is obscured by surprise or crowds. Our violent rampage capacity seems to lie dormant and unrecognized until the right circumstances trigger it.

Evil acts affect people. Perpetrators feel themselves justified and the harm they cause minimal. Victims feel themselves senselessly savaged and the harm caused irreparable. This Pinker calls the "moralization gap." Humans paint themselves in a more favorable light than facts warrant. Trivers theorizes that we lie to ourselves to make ourselves more believable to those we lie to. Still, humans, while lying, also note their actual abilities, so their lies do not become lunatic states. We can see our realities, but only when pressed. The rest of the time, we self-deceive. In disputes, humans tell stories of the conflict that minimizes their culpability and maximizes an opponent's sadism, marshalling a fact pattern that supports the story. Victims emphasize remembrance of wrongs; perpetrators emphasize the realism of their acts and the need to move along. These stories of victimhood and demonization of perpetrators constitute the myth of pure evil. Analysis of such events puts the researcher in league with the perpetrators, appearing to offer diminishing thoughts about the severity or uniqueness of the acts. Arendt argued Eichmann's evil was banal. He was an ordinary man doing ordinary things for ordinary reasons.

Humans do aggressive acts to kill for food, but these acts differ from other aggressive acts. Pinker describes the anatomy of the rage circuit in the rat brain. He goes on to describe Panksepp's research on rage, seeking, fear, and dominance. All the underlying brain circuitry from the studies of rat brains exist in the human brain. Human emotion and impulses are attenuated by the orbital cortex, which regulates emotional expression. The temporoparietal junction and dorsolateral prefrontal cortex permit rationalization of acts, including violent ones. Neurobiology shows that human violence derives from more than one region of the brain.

Humans entertain reasons for their violence: instrumental purposes, dominance, revenge, sadism, and ideology. These are our five inner demons.

Instrumental violence is *predation*; one has no motive except to reach an end. Those who get hurt along the way are collateral damage. Predation is underappreciated because it is common and understandable. About one to three percent of the human population is psychopathic, lacking the neural components to feel empathy. Positive illusions, unwarranted feelings of exceptionalism, embolden predators and victims alike, leading to worse and more frequent violence. Military incompetence derives primarily from overconfidence, and wars of attrition almost always transpire between male competitors, even in computer games.

Dominance is a pre-emptive game of demonstrating ability to thwart attacks. It usually ends with displays, but can spiral into lethal violence. Dominance involves not only individual prowess, but also the ability to marshal allies. Violence is more likely if the contestants have honor codes, or if an audience is looking on. Dominance violence is a mostly male affair; women seek dominance but tend to employ gossip and social shunning. The dominance aggression system of the hypothalamus is twice the size in males as compared to females. Lowered testosterone reduces dominance violence. Parenting induces testosterone reduction, as does marriage itself. Dominance violence is a testosterone problem. Unwarranted delusions of omniscience often accompany dominance violence. Dominance violence is especially troublesome when it affects political elites and rulers. Their parries result in wars. Individual fitness is linked to group fitness. We conceive groups as “big” individuals in our minds. Our group feelings give rise to tribal thirst for dominance. Our preference for our in-group emerges in infancy. An in-group is defined by race and accent, but can be created of any distinction. Nationalism combines group mentality with tribalism and a government. When leaders are narcissists, blame-stories emerge explaining why a manifestly great people are nevertheless oppressed and unsuccessful. Peaceful nations are attempting to purge ideological theories from their rationale for existing. Such governments are compacts among the various peoples who live inside the borders, regardless of their origins or languages. The world is less violent because women have more say in things. Women are a pacifying force, with some exceptions. Male dominance emotions have been demoted by several trends: deconstruction of honor and glory concepts, women’s influences, knowledge of other cultures, disparagement of testosterone behaviors, and pervasive biological knowledge. All these allow more males to look at their dominance urges with clarity, and suppress them.

Revenge violence is endorsed by ninety-five percent of cultures. Revenge violence emerges from the brain’s Rage circuit, in conjunction with the Seeking circuit. Empathy is overridden, which occurs more easily in males than females. Revenge makes express the need for deterrence. Pinker surveys the Prisoner’s Dilemma game, which examines cooperation and defection in a dyadic game of loaded consequence. Generous and Contrite Tit for Tat are the most winning strategies in iterated versions of the Prisoner’s Dilemma. It pays to be nice, clear, retaliatory in response to defection, and forgiving when cooperation is again employed. Humans do not have to play the game to be forewarned about defectors. We just ask others who have played. In another game, Public Goods, maximum benefits emerge when everyone contributes maximally. But free riders emerge; the majority punishes them. So, revenge plays a role in maintaining cooperation. The injured party must be known to have the inclination to inflict punishment on defectors. Self-serving misrepresentation of injurious events creates the dynamic in which simple revenge degenerates into cycles of vendetta. Vendetta overcompensates. The crucial event is that defectors gain nothing by defection. That is what justice must accomplish. Vendetta also fails because of the culture of people playing. Some cultures emphasize repentance; others permit excess revenge. Excess revenge drains social capital, the prime source of prosperity in a culture. For cultural peace, normal persons must attenuate their revenge impulses. We forgive more easily with kin. As our kin-feeling expands, so does our ability to forgive. Revenge also diminishes when the perpetrator is too valuable to lose, and when the perpetrator believably repents (as by apology). These factors lead to a different view of the legal system, one focused on restoring community between victim and perpetrator. Apologies by national leaders have skyrocketed, which works to tamp down conflict better in civil wars than in international conflicts. The restorative justice paradigm is the demise of South African apartheid. First, blunt truth-talk exposes the harms done. Second, groups redefine their social identity. Third, people accept incomplete justice, with symbolic moments and relatively minor recompense meted out to perpetrators. Fourth, perpetrators make a show of their repentance and renewed hopeful relationship with their victims.

Sadists inflict pain for enjoyment. They receive no obvious benefit or evolutionary advantage from their acts. Serial killers murder for sadistic reasons. Morbid fascination, dominance, revenge, and sex: each can dominate a sadist’s mind. Inborn deterrents to sadism are empathy, cultural taboo, and physiological revulsion at the gore and noise of injuring others. All serial killers are psychopaths; not all psychopaths become serial killers. Sadism may be acquired

by acclimation, with revulsion weakening and pleasure rebounding sooner in each sortie into others' pain.

Idealogues indulge violence to achieve a greater societal good. Narcissists and psychopaths can entertain mass violence naturally. But how does one such individual get an entire people to follow along in ideological violence? Groups polarize naturally. They think dully, choosing to go along with the majority. Divided groups antagonize one another, so people want to fit in. That pressure can overwhelm individual judgment. Milgram's torture experiment showed only 30% of people unwilling to injure another for scientific gain. There are upsides to following leaders. There may be wisdom in the views of many, and some matters require us to just follow suit: driving on the right side, speaking a language. But following suit can also lead to the irrational domination of culture by inferior ideas. The Abilene paradox (a Texas family takes a horrid trip to Abilene because every member thinks the others want to go) leads people to do what they do not want for fear of social censure for speaking up (also called the "spiral of silence"). One dissenter can cause such spirals to collapse (the Emperor's New Clothes). In real ideological tsunamis, enforcement leads all to fear their denunciation, making them both willing to punish and to denounce others. Experiments show that people will conform their opinions to the majority, contrary to their own perceptions, and will denounce honest speakers they secretly admire. The moral outrages of ideological frenzies transpire with the assistance of blame-shifting strategies: 1) reframing their atrocities in tamed euphemistic language (collateral damage, ethnic cleansing, extraordinary rendition); 2) gradually sliding into greater and greater horrors; 3) diffusing responsibility among many actors; 4) distancing oneself from the acts of violence; 5) denigrating the victim, 6) minimizing the impact of the acts of violence; 7) comparing the harm to others of life's harms (relativizing); 8) relying on job description as excuse; and 9) comparing worse examples (advantageous comparison).

In the theory of pure evil, a small number of very bad men injure the many, but are opposed by good heroes, who sometimes prevail. Pinker prefers a different theory. Every man possesses inner demons that can motivate him to do evil acts. But exposing them psychologically and learning to recognize them, especially in open societies where people can speak heresy without political censure, loosens the control these impulses exercise over humans.

9. **Better Angels.** Our culture has been on an empathy binge. The decline in violence derives from empathy, but also from good decision-making, rationality, emphasizing what is fair, cultural rules and taboos, human rights, and self-restraint. Pinker finds that the word "empathy" has been badly compromised in its meaning. In its meaningful sense, empathy indicates sympathetic concern for others. Mirror neuron hype has been especially overdone in empathy talk. The mirror neuron research involved rhesus macaques, which monkeys show no hint of empathy.

Pinker traces the neuroanatomy of empathy, which he notes little involves mirror neurons. Oxytocin, a hormone, induces social trust, as well as maternal cuddling. Pinker believes the oxytocin system essential to human sympathy. Human sympathy is elicited by cuteness, beautiful features, members of our close social circle, and communal (non-instrumental) relationships. Does sympathy extend beyond these narrow circles? Is there an expanding circle of empathy? Pinker distinguishes Batson's long research into two hypotheses: the sympathy-altruism hypothesis and the perspective-sympathy hypothesis. Researchers have tested both hypotheses. Sympathy-altruism can be induced, and mitigates against retaliation in iterated Prisoner's Dilemma games. Perspective-sympathy can also be induced, and also affects longer term attitudes toward groups represented by the person with whose plight one sympathizes. Pinker speculates that art, especially novels, may be a way of inducing sympathy with those far different from ourselves. Despite its promise, empathy is not a panacea. Empathy induces compassion at the expense of justice. This can distort society, leaving winsome sufferers well-cared for, and the nameless sufferers neglected. Empathy applies more readily to the cute, the local, the beautiful, the kin, and the friend, than to the stranger, the odd, the ugly, the despicable. The ideal of empathy is deficient. It works for those we interpret winningly. It does not for those we deem enemies or losers. We need not an empathy-ethics, but rights-ethics. Rights pertain to all, not just the cuddly.

Self-control diminishes violence. Self-indulgence occurs when we value the future less than the present (as we should), but by too great a degree. We (and all creatures) prefer smaller

rewards now to larger rewards deferred. This is myopic discounting of the value of the future good. Pinker recounts speculations that this phenomenon emerges from a hand-off in the brain from one system (short term benefits) to another (longer term payouts). The limbic system controls near-term gratification; the frontal lobe recommends delayed rewards. Violence results from imbalances between the limbic and frontal control systems, with the limbic system controlling inordinately. Frontal lobe control, resulting in personal self-control, results in happier, healthier lives on a vast host of measures. Low self-control correlates to increased violence and criminality. Self-control differences among humans begin in childhood; it is likely a heritable personality trait. But can a culture ramp up self-control with the result that violence declines? Upon examination, one learns that self-control is a resource that depletes. Using self-control in one task reduces the self-control one can exercise in the next task. Baumeister calls this phenomenon “ego depletion.” Ego depletion affects resistance to food and sexual dalliance. Self-control can be enhanced: handicapping the present self, removing opportunity, self-distraction from alluring and problematical things, better nutrition, and practicing self-control to gain more self-control. Self-control may be augmented by cultural support or diminished by disparagement of restraint. Can augmenting elements aggregate at the societal level to explain the civilizing process of the last centuries? Pinker suggests measures of societal self-control. First, interest rates relate to how deeply a person discounts the future over the present. Interest rates correlate to the decline in violence. Second, cultures have patterns, for example, Apollonian versus Dionysian. Apollonian cultures commit fewer homicides.

Do declines in violence evidence recent evolutionary advances? Genetic studies show that around eight percent of human genes have been under recent strong selective pressure, and many of these relate to the nervous system’s function. Tendencies toward violence are heritable, according to identical twin, fraternal twin, and sibling studies. Pinker describes multiple points at which selection could have affected the human tendency toward violence. After considering claims of recent genetic violence reduction, Pinker concludes that there is no good evidence for recent violence-reducing genetic evolution. The big changes in violence frequency have occurred in the very recent past. We know that cultural changes affect the expression of violence. No one needs an evolutionary explanation of changes in violence frequency.

Morality is one of the most powerful psychological forces leading the decline in violence, but has also been the juggernaut behind much of humanity’s worst killing. Humans can be wrong about their moral convictions. Moral convictions are universalized; one believes anyone who commits forbidden acts errs. Moral convictions demand action, and failures are censured. Some moral beliefs cannot be justified by many believers, which Haidt calls “moral dumbfounding.” Morality is not merely invented or cultural. Pinker lays out transcultural schema for categorizing moral demands across cultures: Shweder, Haidt, and Fiske. Pinker prefers Fiske’s approach, which labels moral convictions as falling under four heads: communal, authority ranking, equality matching, and market pricing (this last includes rational/legal ideas). Every norm expresses a relationship or social role, an anticipated social framework, and some desirable item to be distributed. Breaking the norm entails punishment of some sort. Within modules, there may be tradeoffs of values, and which among those tradeoffs is acceptable may be a matter of how the tradeoff is linguistically framed. Pinker styles the American culture war as a debate about which concerns are appropriate concerns of the state. (Why can jokes cause people to change in ways that coercion cannot? Humor depends on perspectival changes in the hearer, and changing frames readily is the stuff of revolution.) When one has no relational model into which another fits, that person is dehumanized. Such non-persons can be victimized without consequences.

What changes to human morality have augmented the decline of violence? Fiske and Tetlock argue that human morality has been moving from personal, communalist systems, through authority and equality, toward market pricing strategies. Pinker thinks this course to be a definition of classical liberalism. Changing morality in this manner promotes non-violence. Pinker argues that communal sharing strategies might support non-violence, if the family consisted in the entire race. In conflict, negotiations should split the peace dividend, the money saved by not fighting. But many conflicts turn on sacral values, which can never be compromised (though, in fact, many of them are pseudo-sacral values, and can and will be compromised). Several factors of modern life promote movement toward market pricing and away from communalism: geographic mobility, the possibility of financial gains, commerce and trade, study

of history, and reading fiction. Morality suffers conflicting intuitions. Many of these are wrong-headed.

Reason is much-assaulted, and often deemed to be of less importance than once believed. Pinker thinks this trend dangerous. Pinker wants to clear away some junk ideas first. 1) Dumb, morally-oriented presidents are not desirable. 13,440 fewer people die for every IQ point a president's intelligence rises. 2) The Enlightenment did not cause the Holocaust. 3) It is untrue that reason is the lapdog of drives and emotions.

Reason reduces violence. Voltaire noted that absurdities breed atrocities. When one exposes inanities, one defangs the social support for brutal acts. Reason supports self-control, which correlates with nonviolence. Communal-sharing social structures emphasize black and white thinking. Authority-ranking structures rank things and ideals linearly. Equality-matching thought structures compare things. Market pricing strategies introduce proportionality. Reason advocates proportion. Violence will always be with us. We must and do create forces held in check to be unleashed when necessary (police, armies). Reducing violence and coercion to their minimums to counter over-responses of individual or maniacs is the task of reason.

Hume argues that passions govern reason; reason invents means to achieve emotional purposes. Is Hume right? Is there any part of reason that prejudices its deliberations toward nonviolence? Pinker thinks that self-care and the existence of others in one's community are facts that incline reason toward nonviolent solutions. When one appeals to others not to harm him on the basis of reasons, he is simultaneously committed to avoiding harm to others as well for those self-same reasons. This "systematicity" needs explanation. Peter Singer believes that reason leads us to expand our circle of sympathy. But moral progress is jerky. Why? Pinker speculates that perhaps it is because the human race is getting smarter as time passes. IQ scores have risen regularly, about three points per decade. This is the Flynn Effect. People tend to perform well or poorly on a wide battery of intelligence tests, which tendency is called "g." Intelligence transmits strongly in heredity. It turns out that the Flynn effect is environmental. Increases in intelligence test scores point to some mystery change in people's cognitive universe. Yet these Flynn effect changes outpace heritable genetic changes. And the Flynn effect seems to be influencing only test scores on abstract reasoning, not general intelligence. Pinker guesses that the Flynn effect is due to our increasingly technical and symbol-laden environment, and to the trickle-down effect of schooling in giving normal people familiarity with scientific abstractions.

Pinker hypothesizes that the Long Peace is resulting from a moral Flynn effect. People are better at abstract thinking than their predecessors (the Flynn Effect). Moral reasoning is just an abandonment of parochial object-based thinking in favor of broad, universalized values and perspectives. Our ancestors really were morally ignorant by comparison, and we really are in an intellectual renaissance, which results from the labors of a vastly increased supply of geniuses and people who can understand them. Pinker argues that one needs to show that people with better abstract reasoning tend to generate more peaceable societies, in order to sustain his moral Flynn effect theory. He adduces seven lines of reasoning and evidence: 1) higher intelligence corresponds to lower crime rates and lower victimization rates, 2) high intelligence correlates with high cooperation, 3) high intelligence correlates with classic liberalism (valuing individual autonomy and prosperity over that of community, authority, and cultural norms), 4) high intelligence correlates to cost-benefit thinking typical of economists, and a preference for open markets, 5) high intelligence is associated with a preference for democracy, which is itself associated with lowered tolerance of violence, 6) enhanced education correlates with lowered likelihood of civil war, and education correlates with intelligence, and 7) integrative complexity (involving multiple points of view in one's speech and writing) leads people to be less violent. Pinker opines that reason is the most critical of our better angels, since it alone adjudicates the impulses of other better angels. Reason tests all ideas, and rejects ideas previously, though erroneously, adopted. Reason's internal logic, if combined with self care and a communicating community, drives men toward peace, and an expanding circle of moral concern.

10. **On Angels' Wings.** Pinker sets himself the task of identifying the forces that have led to the decline of human violence. The decline in violence is too widespread to be mere happenstance. The decline in violence cannot be explained by weaponry, either its existence or improvement or destruction. Nor can the decline in violence be traced to competition for resources or the lack of

competition for them. Nor does affluence tamp down violence reliably, though extreme poverty may invite civil war. Religion and religious belief have caused a great deal of violence, but also prevented a great deal.

Other historical trends depress incidences of violence. Pinker presents a table (The Pacifist's Dilemma, an iteration of the Prisoner's Dilemma game) that sets out the utilitarian calculus of peace and violence. No one wants to be exploited. Exploitation of one's own works only for a time (but seems a good idea during the time). Exploitation creates rewards disproportional to the suffering of the group exploited. If one resists exploitation, one incurs net loss, due to war. The only option that benefits all is peaceful cooperation.

Five factors encourage peaceful cooperation. 1) *State Restraint of Violence*. Leviathan compels citizens to avoid inter-citizen violence. Good government is the most important factor in establishing human peace. Government imposes penalties for aggression and war, tilting the decisional matrix toward mutual cooperation. Non-aggression can become habitual. Good government penalizes aggression and war, but incentivizes peace, making peace the only reasonable alternative. 2) *Lawful Trade*. Commerce encourages peace by increasing the rewards of pacific behaviors. When one specializes in a conducive environment (roads, clocks, money, enforced contracts, transportation), human relations can become a positive-sum game. 3) *Female Values*. Men commit most violence. Women lead most pacifist and humanitarian movements. Where women prosper, violence declines. Cultural feminization reduces glory and honor violence. Unattached, unmarried young males form gangs and militias. Countries with large numbers of such men are more likely to war. 4) *Sympathy Expansion*. When the circle of those to whom we owe sympathy expands, peace expands. It is unrealistically utopian to expect everyone to feel the pains of others as acutely as they feel their own, but nevertheless, emoting with the pain of others can grow in its scope. Reading, especially reading novels, expands sympathy by forcing people into the perspectives of others. 5) *Rational Thought*. Reason encourages one to see the world in overview, examining its structural elements. So conceived, reason is sympathy sans emotion. Sympathy needs a boost from reason to make pacific changes to the world.

Pinker concludes that the decline in violence is both critical to understanding ourselves, and underappreciated as a fact. Nostalgia for the past remains prevalent, but misguided. The past was much, much worse than the present. Our (even recent) past was violent, diseased, pained, and perpetually dangerous. Our evolutionary heritage makes violence and war possible. Other factors, such as reason, sympathy, and self-control, trend against violence. Human violence creates not statistics, but real suffering humans. Analysis cannot lose sight of the hundreds of millions of victims of mankind's inner demons. But our better angels are winning. Most of us now die of old age, not murder. We must cling to those parts of us that make this feat possible.