

EXECUTIVE SUMMARY: *DRIVEN TO LEAD: GOOD, BAD AND MISGUIDED LEADERSHIP*

Paul R. Lawrence Published by Jossey-Bass/Wiley

Driven to Lead proposes—and demonstrates—that good leadership is the application of the extraordinary decision-making process built into the human brain. Our brains have evolved to juggle four different and even conflicting priorities and to arrive, for the most part, at effective, productive solutions. Leadership is not simply an external effect on other people; it's what is actually happening inside the brain. With this insight, leadership becomes something we can try to improve and apply as methodically as we improve and apply technology and medicine. That's why Warren Bennis calls *Driven to Lead* “truly amazing—actually a masterpiece.”

Those four fundamental drives are (1) the *drive to acquire* essential resources and offspring, (2) the *drive to bond* in long-lasting, mutually caring relationships, (3) the *drive to comprehend*—to learn and make sense of our environment, and (4) the *drive to defend* ourselves, our loved ones, and our property. While the drives to acquire and defend are common to all animals, the drives to bond and comprehend are unique responses to the challenges and opportunities faced by our prehistoric ancestors.

Of course, these drives can conflict with each other. In Part I of *Driven to Lead*, Prof. Lawrence guides us through the brain's decision-making process, “so familiar, yet so surprising when we really examine it,” showing how we arrive at solutions, not in spite of, but *because of* this tangle of motives. Once we have seen how our own brain makes its best decisions, we can understand how leaders can make their best decisions. In one surprising example, Lawrence uses his theory to make sense of the surprising transformation of the macho and self-defeating culture of an oil rig.

But as *Driven to Lead* shows, surprising results are just what we should expect. While other creatures have instincts well suited for a limited set of circumstances, humans have something different—the ability to make sense of whatever happens (or at least try to) and to devise a response, often a *group* response. This human way of doing things requires leadership, and the human brain naturally provides it.

One consequence of the drives to bond was the development of a moral sense. *Driven to Lead* shows how the basic moral sense, common to all cultures, derives from the four drives and the decision-making process that manages them.

But it is also possible to be genetically missing the drive to bond. The result, although rare, is of outsized historical importance. For these are the psychopaths, the people who are genetically missing the drive and the capacity to care about other people. As leaders, they are the evil leaders who cause enormous suffering. *Driven to Lead* has a good deal to say about these people, how we can make sense of their seemingly incomprehensible behavior, and how we can finally begin to protect ourselves from them.

In Part II of *Driven to Lead*, Prof. Lawrence examines key leadership events in political and economic history and in the history of the institutions of religion, art, and science. Of particular interest is his analysis of the United States government and its Constitution as a reflection of the brain's own four-drive decision-making process.

Part III brings Prof. Lawrence's theory of leadership right into the ring, applying it to some of the most important leadership challenges we face today. Why does Congress find it so hard to do what's right? Was it really just greed that caused the mortgage meltdown? Can we make sure that globalization does more good than harm?

Leadership and the Structure of Trust

by Paul R. Lawrence & Robert Porter Lynch

In the business world, executives soon learn how expensive distrust is. Every transaction, every conversation, every move we make seems to be distrusted until we prove we can be trusted. Mistrust causes everything to be more complicated, slower, and far more fragmented. Distrust hurts our businesses, adding extra costs to everything. Just take health insurance – distrust adds at least 20-30¢ to every dollar of health cost, for which we receive no health value in return. What's more, distrust puts a major limitation on collaborative innovation, internal teamwork, and external relationships with suppliers, customers, stockholders, and our community. Distrust is an incredible competitive *disadvantage*.

Profusion of Distrust

Trust in America is declining; the evidence is everywhere. Recent polls show that by a margin of nearly 3 to 1 we distrust the media and unions, and by 4 to 1 distrust politics and big corporations. Only 36% of Americans trust banks. The majority of Americans trust neither Congress nor the Food and Drug Administration. President Obama has announced a “Trust Deficit.” If distrust were a disease, we'd declare it an epidemic.

Executives generally agree that the pace of change is increasing, especially since 1980, with more speed and more complexity, creating more stress and uncertainty. Many attribute this to such factors as the cell phones, internet, deregulation and globalization. What too few executives seem to understand is that *in a faster moving, more rapidly changing world, we need more trust, certainly not more distrust, to keep a sense of order and balance*. Trust is the one thing that's essential in a stormy sea. Yet just the opposite has happened. Trust has gone into a precipitous decline at the very time we need more of it. [see Figure 1]

Ultimately, no amount of pages in a legal contract can substitute for or replace weak trust. It's the single most important thing that separates relationships that thrive from those that fizzle. Trust enables everything to move faster, more effortlessly, and with less conflict. In spite of its importance, trust is too often taken for granted.

Why is trust so low? We think there are several reasons:

1. We've distrusted for so long that, like cynicism, it becomes a habit. To start trusting again is risky, making us vulnerable. It's easier to be skeptical; reserved; protective; if we expect little, then we're never disappointed.
2. Many of our institutions are based on an adversarial process. Our legal system is founded on the premise that the truth will be best revealed by pitting lawyers against each other in a courtroom battle. Journalism favors stirring up a controversy to sell newspapers; radio talk shows foment dissention by telling their one-sided truths. Our political party system promotes doubt and distrust of their opponents.
3. As a civilization, our ways of thinking about trust itself are inadequate. Go to the bookstore and look for books on trust. Reading over the scanty literature, one is somewhat shocked to see how little we seem to know about such an important subject that impacts our daily lives, at home and at work. We don't have courses focused on the subject of trust. But the converse reality is equally distressing. We have entire

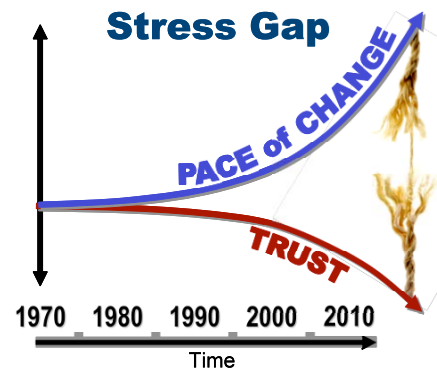


Figure 1 – Stress Gap

professions in law, accounting, and negotiations promoting or reacting to distrust. Thus we are relegated to trust by platitudes, such as: "Trust must be earned," "Build an escape clause," "Start small, then expand," "Speak softly but carry a big stick," "Be ever vigilant," or "Focus on interests." These are all but useless in creating sustainable, organization-wide, trust. Often the platitudes are contradictory, irrelevant, inapplicable, or downright inappropriate, irritating, or counter-productive.

Causes of Distrust

What causes distrust? In a word: *fear*; in particular, *fear of being taken advantage of, humiliated like a stupid sucker, or fear of being hurt financially, emotionally or physically*. Fear, focused outward on a common threat, may help overcome the threat, but, focused inside the organization, it will certainly destroy trust and teamwork.

This sheds light on what can be done to improve trust. By examining *how* distrust occurs, specific *behavioral actions* become evident. Changing the actual behaviors of people does more to shift trust positively than to talk abstractly or symbolically about it.

Probably the most challenging and elusive objective of any leader is to create a *system* of strong trust within their organization – whether it is between business units, within teams, or across corporate alliances.

Achieving Trust by Design

Why have so many attempts at achieving trust failed? Most leaders know intuitively that the magic moments of strong trust, however fleeting, are truly possible. Sports coaches call those magic moments "being in the *zone*." This seemingly elusive condition is the result of right alignment of powerful forces; *innate drives within the human unconscious* that can be *unleashed* and *aligned* to achieve trust *systematically by the right kind of leadership*. Traditionally trust has been considered a "soft" backwater of leadership and management studies. Because there has been no clear "structure" or "architecture" for trust, it has fallen into a vague and ambiguous area where the mind-set for trust is fuzzy; the skill-set is deficient; and the tool-set inadequate.

However, a growing body of evidence shows that a strong structure of trust has an underlying design behind it. Trust's great value can be achieved only in an organization where basic values are reinforced with concrete, measurable behavioral actions. Only then can organizations reach new heights in relationships. What's needed is a structure for guiding everyday interactions, along with specific management tools to create productive relationships, while safeguarding against the untrustworthy, and disengaging from poisonous, distrustful ones.

By becoming skillful in designing trust, a leader can take trust from the vagaries of intuition to a new level where highly insightful interaction becomes commonplace.

Trust Element #1. DRIVERS OF BEHAVIOR

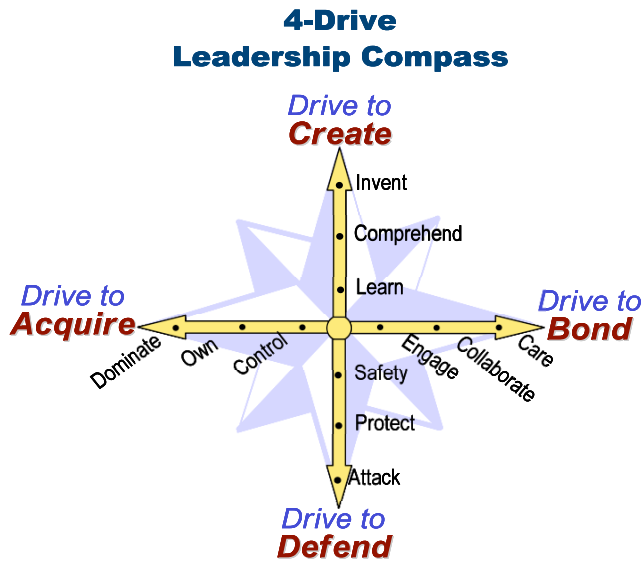


Figure 2 – Four Drives of Human Nature

“drives”¹ [see Figure 2]:

- ◆ Drive to *Acquire* – to compete for, secure, and own at least a minimum of essential resources (food, shelter, mate, etc.), to exert sufficient control over one’s environment for this purpose, and, when pushed to excess: into greed and domination.
- ◆ Drive to *Bond* – to form long-term mutually caring relationships, to cooperate with others, engage in teams, build organizations and alliances, and, at its fullest, to put moral meaning in all relationships.
- ◆ Drive to *Create* – first to learn, to comprehend one’s self and environment, then to inquire beyond, and most fully, to imagine and invent.
- ◆ Drive to *Defend* – to protect from threats to one’s physical self and loved ones, to have security and safety of one’s valued possessions and basic beliefs, and, pushed to the extreme: to attack.²

Each individual has their own distinctive blend of these four drives and typically manifests them in a manner that reflects their unique culture and personal experiences in life. These drives must be reasonably satisfied and are independent of one another in the sense that fulfilling one does not contribute to the fulfillment of the others. All four drives evolved in humans because they all proved to be essential for survival.

To understand the nature of trust, it’s first necessary to grasp the fundamental roots of human nature and how our brains have been hard-wired for survival by the evolutionary process. Based on neglected insights of Darwin’s drawn from his second epic book, *The Descent of Man*, and on extensive research over the last hundred years into the neurological process of the human brain, along with the best evidence from psychology, sociology, and anthropology, we can begin to understand what drives human behavior: *our ultimate innate motives.*

Nearly every individual on the planet is imbued with four innate

The term “Survival of the Fittest” is often erroneously ascribed to Darwin as his main theme. Herbert Spencer promoted this idea in 1864 to justify British Imperialism. Darwin’s real premise was “Survival by Collaborative Adaptation.”

¹ This approach to leadership is explained in Paul Lawrence’s forthcoming book *Driven to Lead: Good, Bad and Misguided Leadership*, Jossey-Bass (2010) ,

² *Acquire* and *Defend* are common to all mammals and reptiles, although more developed in humans, while *Bond* and *Create* are far more elevated and refined in homo sapiens than any other primate or mammal, making them almost uniquely human traits. All four drives are discussed in Darwin’s work.

The drives are often in conflict within our minds. Our drive to *Acquire* can obviously often be in conflict with our drive to *Bond* with others. However, with conscious awareness of the need to reasonably satisfy all these inherent drives (in themselves, as well as in other stakeholders) effective leaders, can resolve these conflicts by selecting a course of action that best satisfies all four drives. This can best be done by skillfully crafting³ action plans that resolve such conflicts; often by emphasizing the higher-order drives to *Bond* and *Create* that make us uniquely human.

However, the culture of the immediate organizational environment also has a major effect on these drives, either by reinforcing or suppressing one drive over another. That's why the same individual may behave quite differently in different organizations, or why changing top leaders can produce radically different results within the same group of people.

An organizational culture based on control and fear will trigger and emphasize the *Acquire* and *Defend* drivers, resulting in an organization that has fiefdoms and power-struggles, territorial battles as rivalries emerge between business units, functions, or buyers and suppliers.

On the other hand, trust-building emphasizes the *Bonding* and *Creative* drives that are so essential to a modern corporation. Trust unleashes human energy by aligning the *Bonding* and *Creative* drives of individuals, enabling multiple individuals to coordinate actions and innovate synergistically. In a fast moving, rapidly changing world, where flexibility and adaptability are strategically essential to success, setting a course that stimulates both the drives to *Bond* and *Create* is vastly superior to one that activates only the less flexible *Acquire* and *Defend* drives.

Southwest Airlines has an enviable record of profitability by activating the *Bond* and *Create* drives in their corporate culture.

The Leadership Compass acts as a navigational instrument for leaders to determine action plans to achieve a creative balance among all four drives. Every organization creates a unique footprint based its own distinct administrative processes for measuring and rewarding the different drives. A leader must be especially cognizant of his or her relative emphasis on these measures and rewards because of their significant impact on outcomes.

The "dominate" and "control" (*Acquire* & *Defend*) posture of General Motors toward its suppliers during the last two decades created a severe competitive disadvantage compared to Honda and Toyota's use of a far more advantageous collaborative innovation (*Bond* & *Create*). By 2004 the trust level with GM was so low that supplier innovation flow was being directed to Honda and Toyota, and away from GM.

³ The human brain has evolved over eons to enable the prefrontal cortex to assess these conflicts and appropriately select the right balance among the drives. Rita Carter, a neuropsychologist, summarizes in *Mapping the Mind*, "The prefrontal cortex is given over to man's most impressive achievements—juggling with concepts, planning and predicting the future, selecting thoughts and perceptions for attention and ignoring others, binding perceptions into a unified whole." The drives to *Create* and *Bond* – the more recently evolved capacities of the human brain are most effective in enabling this balancing of drives

Trust Element #2:

FOUR-DRIVE CODE OF HONORABLE BEHAVIOR

The idea of a moral conscience is currently moving from being basically a religious or philosophic belief to being a scientific construct with important business and leadership implications. In business it is being translated into a code of conduct that honors and respects the interests of others, enabling commerce to be conducted fluidly and fairly. According to Darwin, and now verified by recent research studies, all humans have an innate conscience from which specific rules of engagement can be deduced logically from the four drives and the Golden Rule.

Darwin observed,

Any animal whatsoever, endowed with well-marked social instincts (Bond) ... would inevitably acquire a moral sense of conscience, as soon as its intellectual powers (Create) had become as well, or nearly as well developed, as in man.

What kinds of behavior would establish a relationship of mutual trust by fulfilling these four drives in others without ignoring one’s own drives?⁴

He then cited the Golden Rule, practical guidance understood by all major civilizations for over three thousand years:

To do unto others as they would do unto you is the foundation stone of morality.

In respect of another’s drive to *Acquire*:

- Enhance the other’s capacity to acquire necessary resources.

Finally he went on,

In respect of another’s drive to *Bond*:

- Keep promises rather than breaking them.
- Seek fair exchanges rather than cheating.

Of all the difference between man and the lower animals, the moral sense of conscience is by far the most important.

In respect of another’s drive to *Create*:

- Tell truths rather than falsehoods.
- Share useful information and insights rather than withholding it.
- Respect other’s beliefs, even in disagreement, rather than ridiculing them.

In respect of another’s drive to *Defend*:

- Help protect the other, their loved ones and their property.
- Detect and punish cheaters.⁵

As we will see, building a strong trust relationship begins by embedding “honorable purpose” into everyday decision-making between the enterprise and its customers.

⁴ From P.R. Lawrence, “The Biological Basis of Morality”, *Business, Society and Ethics*, 2004, and research by Marc Hauser, *Moral Minds*, 2006, Harper Collins.

⁵ These rules are not always observed. The other drives are always competing for preference, and sometimes they win. Therefore, the true confirmation of the hypothesis is not perfect observance of the rules but feelings of guilt—of a “bad conscience”—when they are knowingly broken.

**TRUST ELEMENT #3:
HONORABLE PURPOSE**

With a going enterprise, the building of stronger trustful bonds can start anywhere, but for a start-up entrepreneur the starting place is always with the key stakeholder, the customer. If the entrepreneur does not start by building trust with one's customers around an honorable purpose, trustful relationships elsewhere in the organization will probably never take off. And the key to doing this is by following the Four-Drive Honor Code

The purpose of an enterprise is the promise to honorably provide products and services competitively at a profit. The honor involved will be implicit in whether the design and delivery of the product/service truly reflects accurately the needs and best interests of the customer and environment.

The entrepreneur should then examine their proposed relationships with their stakeholder base: employees, suppliers, stock owners, and their community in light of the Honor Code, point by point, rigorously challenging whether their proposed actions live up to code's standards. Only with affirmative answers to these questions can the nascent enterprise successfully undertake the recruitment and alignment of other essential stakeholders.

Taking this first step in this careful way will underpin all one's subsequent efforts to build the relationships in a trustful manner.⁶

If one starts by tricking one's customers with illusory values, only temporary satisfactions, unsafe elements, misleading information, etc. how can such enterprise leaders expect to have strong trusting relationships with others? (which can happen even before the product/service weakness is reflected in falling sales)

A shared honorable purpose helps aligns other stakeholders around one central target. This enables trust by ensuring that everyone is going in the same direction for the same reasons. People's energy, commitment, and enthusiasm can rise to amazing heights when they are aligned on an honorable purpose that will truly make a positive difference by a sustainable vision that gives meaning to their work. Even struggling businesses have been turned into successful companies when a new leader gives people honorable goals and a pathway to achieving them.

⁶ As organizations shift from stand-alone enterprises to truly networked structures, this process of applying the standards of the Four Drive Honor Code will become fundamental to achieve Network Alignment.

Trust Element #4. BALANCING SELF INTEREST VERSUS GREATER GOOD

No economic system or organization can thrive over the long run if it places overwhelming emphasis on self-interest (*Acquire*). This has been epitomized by the “greed is good” mantra on Wall Street that brought down the entire world’s economic order in 2008.

But neither have any systems flourished that over-emphasized the sacrifice of reasonable personal gain in favor of the greater good of others (*Bond*). When people focus heavily on the greater good, they grow increasingly anxious about sacrificing their own needs.

There is nothing inherently wrong about self-interest. Prosperity is a very legitimate value. The drive to *Acquire* one’s basic resources is obviously essential to survival. But if everyone works *exclusively* in their narrow self interest, severe problems will erupt: unions and management lock horns, customers and suppliers become rivals, stockholders grab for short-term profits while economic systems break down as each entity attempts to maximize for itself.

In this kind of a dog-eat-dog world, trust diminishes as everyone withdraws into their turtle-shells to protect their individual interests. We trust people who we can count on to balance self interest with the mutual interests. The same is true of corporations. [See Figure 3]

Effective leaders openly balance these two, and most individuals are fully cognizant and capable of accepting and supporting this balance. Those who don’t are not to be trusted.

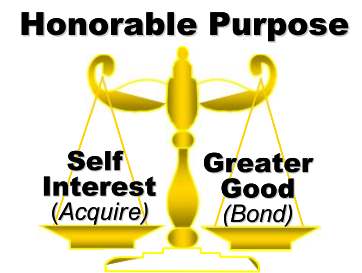


Figure 3 – Balancing the Drives

TRUST STRUCTURE IN DAILY ACTION Trust Element #5: THE LADDER OF TRUST

Think of trust and distrust as a ladder, starting from the bottom of hideous destruction to resurrective possibilities at the top, as illustrated in Figure 4. We’ve overlaid the Trust Ladder on the Four-Drive Leadership Compass, and plotted the *behaviors* that people engage in when “trust building” or “trust busting.” “Neutral” trust we refer to as “transactions.”

The Ladder of Trust has become the centerpiece of the trust structure; it’s a tool to illustrate the journey from the darkness of deep distrust to the light and wealth of strong bonds of trust.

Most everyone has experienced interactions at every level on this ladder. Early in life, parents serve in a guardianship role, while we create a broad range of family relationships. The closest relationships can become friendships. As we grow older, other highly cooperative relationships emerge, such as sports teams or friendships with loved ones. These occur when the *Creative* and *Bonding* drives are manifested and supported.

At the lower end of the Ladder are highly distrustful interactions, where people attack one another either verbally or physically, manipulate or deceive one another. In this zone people often retaliate “tit-for-tat” with equally or more intense forms of distrustful behavior, thus escalating distrust. These tend to occur when the drives to *Acquire* and *Defend* predominate.

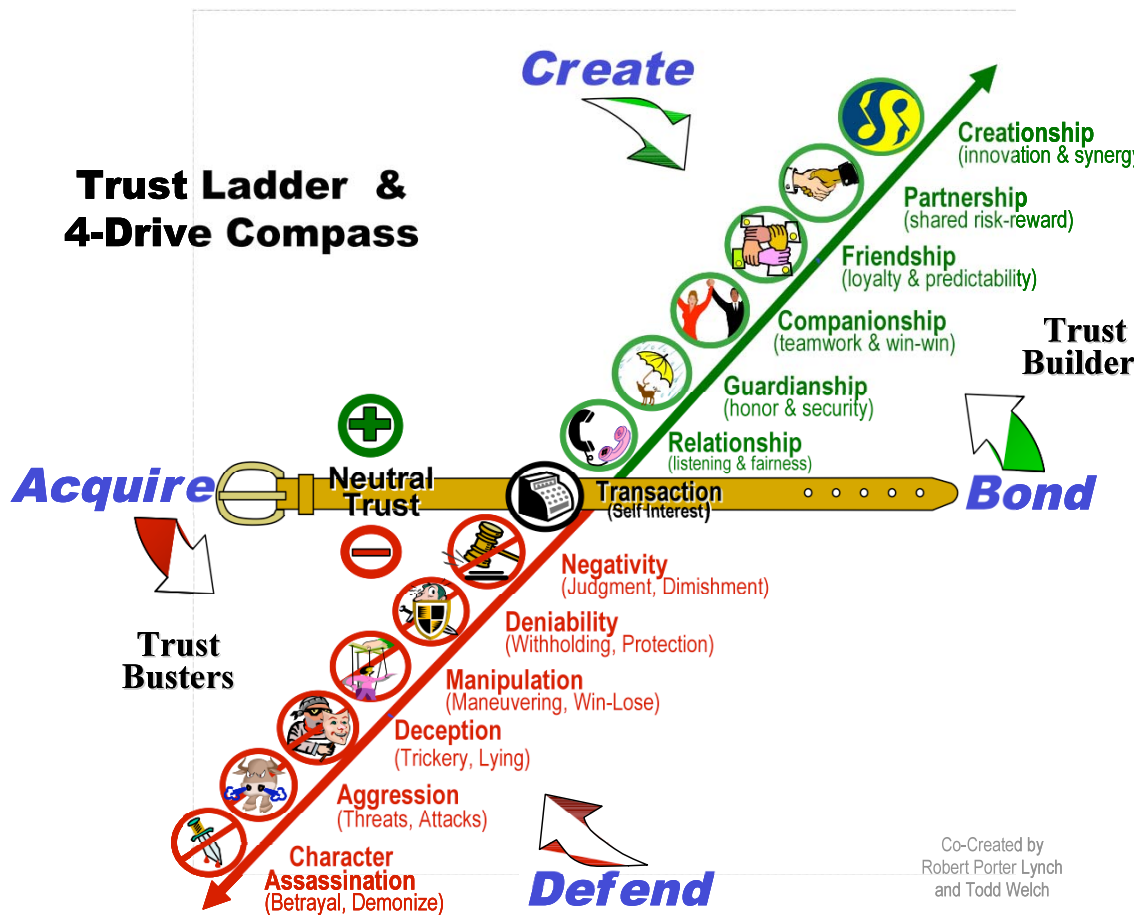


Figure 4 – Trust Ladder with Four Drives of Human Nature

When leaders have a clear picture in their mind of the descriptions and names of trust and distrust behaviors, they are brought out into the open, and then pro-active action can be taken to wipe them from the repertoire of organizational culture. With a *language* through words and pictures and a systematic *architecture* (framework) a leader can discuss in vivid detail what type of trust is desired, as well as the actions required to eliminate distrust.

We are going to build out the Ladder of Trust first with a description and symbols of the behaviors associated with the types of distrust. (Later we'll explore the upper zones.)

Negative Zone of Distrust -- Trust Busters

The multiple ways we've learned to "bust trust" are so well defined in our society they should be considered art forms. These are all terribly expensive habits to support, and a massive drain on human energy. Here's a brief description of each of these types of Trust Busters (there are more than these six, but these are the most prevalent):

Character Assassination and Betrayal



While murder may be the ultimate assassination, the more common version in organizations is *character assassination*. This takes the form of persistent efforts to

destroy the other's reputation, to scapegoat or demonize the other. *Betrayal* is an even more extreme form of character assassination.

Talk to anyone around you, and ask them "Have you ever been betrayed?" Then watch their response. Usually it's one of intense emotional pain. Their hurt is carried around like a private wound, often with guarded silence as they suffer in the quietude of self-imposed exile. Many respond to betrayal with revenge or demonization.

Aggression



Aggression is the use of someone's power in a way that seeks to threaten or harm. It represents the extremes of the drive to *Defend* (attack) and the drive to *Acquire* (dominate). The intimidator believes the best defense is a good offense: take the initiative to demonstrate superiority, strength, and power.

For the overt aggressor, it's "either my way or the highway;" and "he who has the gold, rules." They may bellow and bluster. They may vividly demonstrate their power symbolically by sitting higher than others in their office, or telling stories about their aggressiveness, or speaking crassly in public, or insisting their answer is the only right one.

Because outright aggression is pretty obvious, often highly intelligent people quickly learn it's frowned upon. So they develop a trickier game: they become obstructionists by offering resistance that shows up as helplessness, procrastination, upsets, hurt feelings, resentment or inaction even after multiple requests to stop. It's called "passive-aggressive."

The victim of the passive-aggressor may become angry, but because there's no overt attack, they don't fight back. Instead they clam up; shut down; just obey. Commitment and creativity dies; caring and learning halts; despondency and cynicism prevails.

Deception



The purpose of deception is to twist the truth. Lies are nearly always the base of deception. It takes a variety of forms from the innocuous to the sinister. Sometimes it's so subtle it's hardly noticeable. Subtle forms of deception create illusions that something is totally true when it's not. Not giving all the information one should have is deception. Making others believe something with a half-truth is another example. Twisting the truth makes others insecure, uncertain, and unconfident.

Fraud is another form of deception with the clear intent to swindle someone.

While lies are always dishonorable and destructive, in their worst form they can be downright evil, intending to harm, hurt, or damage another person. Lies often place the victim in the unenviable position of having to defend themselves against some allegation that was never true in the first place. The victim then has to go to inordinate lengths to prove that something never happened.

Manipulation



The mind of the manipulator has determined they cannot trust their world to respond in predictable and reasonable ways, so they have to trick their world into responding opportunistically to their advantage, which usually sets up a circular, self-fulfilling prophesy. Lo-balling one's estimates is a form of manipulation.

The most typical manipulation game is whining or complaining. This method attacks others by focusing attention on how everyone else is wrong, bad, guilty, or incompetent. The whiner is seeking to get their own way by maneuvering others into the "bad guy" role, with themselves as the 'rescuer'. They often get away with it because it is easier to placate them than to confront their dysfunctional games.

Deniability



Deniability (*Defend*) typically comes in two forms: active and passive. Active deniers will often hide behind mountains of legal agreements, non-disclosures, red-tape, and anything that will cover them in the event of a collapse or blame from above. By being overly protective they actually create the very distrust that they attempt to protect themselves from.

Passive deniers withdraw, flee, hide, or remain silent – making no commitments, avoiding interaction, and taking no risks. Passing the buck is a good way to keep out of the line of fire. Ducking issues is a form of protection. Bureaucrats are professional protectors, deflecting responsibility with obscure rules, convoluted processes, and abstract reasoning.

Negativity



Negativity comes in many forms: the chronic evaluator, the overly judgmental and critical, and the cynical. They are quick to judge something wrong, play holier-than-thou, or subtly find a way to make others look reckless, inexperienced, or unworthy and thus make themselves seem stronger.

Unfortunately, people have a tendency to weigh negativity far more heavily than praise. Negativity triggers people's defensive drive, (*Defend*), becoming a corrosive force, eating into the emotional fabric of people who crave to have their drives for collaboration (*Bond*) and learning (*Create*) reinforced. Idea killers will knock the energy out of an organization as it quickly quashes the creativity drive.

Why a "Trust Deficit" in Washington?

Just look at the "Trust Busters" outlined above. These are daily fare in our nation's Capitol.

(We don't mean to imply that one should never carefully evaluate people nor make judgments. There is a distinct difference between judging people and situations objectively and making it a personality trait.)

Transaction – Neutral: Neither Trust Nor Distrust



To understand a transaction, think of a toll-booth on the turnpike or bridge or paying the attendant at a parking garage. That's a transaction, an exchange of value: money for use of their road, bridge, or parking lot. But what was the name of the tollbooth attendant? Easily forgettable because it was a transactionary experience, one based simply on exchange.

This is why we put transactions right on the neutral trust line – neither trust nor distrust. Transactions happen every day: at the grocery store, at the mall, at the gas station. When shopping, we put enough trust in the “brand” or the store’s reputation to complete the exchange of goods or services for money, but not enough trust to engage in any form of deeper relationship.

It’s at this level we have placed a “belt” on the Ladder of Trust to indicate that any action below the level of a transaction is off limits: ‘below the belt’.

Positive Zone of Trust – Trust Builders

People yearn for trust because of their innate drive to *bond*; it’s the natural state of human interaction. We were born with trust in our primary care-givers, our parents, and thankfully, this trust was confirmed for most of us by our early experiences. People who had normal childhoods remember the time when the world felt safe.

Relationship



The trust journey begins simply with building a relationship with other people by *listening* -- not judgmental listening -- but connected listening that simply validates the other person’s point of view. When we listen with compassion, learning, and constructive inquiry, we begin to build trust. People feel like they are receiving *support* because they are heard.

Listening and inquiring with interest and compassion means you start with an open mind (*Create*) and a caring heart (*Bond*) -- no assumptions and no expectations which impair our ability to see things as they really are.

When building a trusting relationship, the minimal boundary conditions must be satisfied – both parties must feel respected, both can be counted on understand the personal interests, needs, and concerns of the other, which gives the assurance that both be will be better off from having met. If this does not happen, then the relationship is broken and fallen below the line into the Zone of Distrust.

However, leaders that only engage their teams at this first relationship level, while being appreciated for their compassion, are not going far enough.

Guardianship



The next level of trust provides *safety* and *security (Defend)* to the other person. A guardianship can be one-way, much like a parent provides to a child, or a mutual guardianship like soldiers on a battlefield. Every employer has a duty and responsibility, both morally and legally, to protect their employees' safety on the job, provide a fair, living wage, pay their unemployment taxes, protect their civil rights, and provide a work environment free of harassment. In return, employees are expected to maintain a guardianship over the work-place by not stealing, reporting hazards, contributing ideas to improve competitive advantage, and ensuring the well-being of their teammates.

Those who don't feel safe in a leader's presence will be protective or fearful. As human beings, we aren't wired to trust what we fear. A Guardianship means more than knowing that you won't intentionally hurt me. Safe means they must be emotionally safe and physically safe. But at a deeper higher level, it's *reliance* -- knowing that you will be there to protect me from harm; be there when I need you; won't sacrifice me for your self interest; be counted on to protect my best interests as well as your own; won't be negligent: we can count on each other to protect each other's safety.

Companionship



Being a companion means trusting enough to work productively in teams -- "teamship." Each individual must know breakdowns will not be destructive; thoughts, workspace, and concerns can be shared without fear of retribution, disrespect, or dishonor.

Confidence stems from placing self interest at least on a par with mutual interest as win-win emerges as essential. Every decision embraces what's in the interests not just of the individual, but in the greater good of the organization, the team, and the future of the business.

In the best companies, companionship blends into fellowship and friendship. When you fly Southwest airlines, the sense of fellowship manifests itself in the teamwork, dedication, and sense of humor of the employees. The U.S. Marine Corps has mastered the art and science of creating fellowship. The most successful churches are dedicated to building a sense of fellowship because of its spiritual connotations.

At this level the world is seen through a common vision and aligned interests. We expect reciprocity: shared ideas, giving at least as much, if not more, than we expect to take back; everyone begins to give more than they expect in return. Individuals come to the realization, sometimes painfully, that they win or lose together, as a team -- in the same boat, facing the same storm together.

Lou Gerstner, reflecting on his transformation of IBM the 1990s, observed that the powerful culture, sense community, values of fair play and hard work, and ethical standards of IBM were the foundation which kept the company from shattering when its business strategies needed a massive shift.

Because of the weakening bonds of the modern family structure, for many, their workplace becomes a surrogate family, thus the workplace carries with it an additional desire for fellowship.

Great leaders capitalize on building companionship and fellowship not just because it produces great results, but because it tends to endure the ups and downs of business, like a gyroscope keeps steady when the world rocks around it.

Friendship



For a friend, we are always present and always committed to *their* best interests. When they're in difficulty, we help; when hurting, succor; when in doubt, counsel; when confused, clarity, when self-deceived, honesty.

The power of friendship lies not just in the bond of familiarity, but in the mutual commitment to each other's well being.

When our friend is attacked or harm comes their way, we respond with aid. If they have done something wrong, we stand by them to help them right the wrong. When unfairly accused, we defend them. This is what loyalty is all about. Friendships grow up in organizations alongside trust, but leaders should be watchful that they do not grow into favoritism.

Partnership



A partnership is designed to respect and cherish the differences in thinking and capabilities between two or more people or organizations. It is the combination of *differing* strengths with the *alignment* of common purpose that makes a partnership effective. For example, one person does outside sales, another keeps the finances on track, while another runs operations. Great partnering relationships require a number of things to make them work effectively:

Shared Vision: Trust is built by the power of the commitment to a shared view of the unfolding future. While making today's dollar is essential in any business, great partnerships are always looking one step ahead to find the new opportunity, to design the future, to turn adversity to advantage.

Shared Planning: People support what they help create. This builds trust because those thus engaged are consulted and their ideas are valued, which, in turn builds even stronger commitment to the future.

Shared Resources, Risks and Rewards: By sharing risk and reward, people have "skin in the game." The more everyone shares risks and rewards, the more powerful the level of commitment.

Creationship



For this level of trust we had to create a new word. A "creationship" implies that we can do something extraordinary – we can co-create together. A creationship embraces prior elements of trust-building, and then, secure in the absence of fear, unleashes a connection between the hearts and minds of the co-creators – new ideas generate like spontaneous combustion.

How does the leader foster creationships? Here are some ways:

Purpose and Destiny: Some of the most co-creative people on the planet are those with a deep central sense of personal purpose or destiny. This kind of purpose gives meaning and value to whatever we do – there is a reason for *being* and *doing* in our daily lives.

No such thing as Failure, Only Learning: Be careful not to punish what might look like a failed attempt at creative solutions. Be sure to encourage learning from failures. Remember, high performance teams fail more often than low performance teams; the difference is how they learn -- then innovate from what they learned.

Use Conflict to Advantage: Whenever there's change, conflict is inevitable as systems, strategies, roles, and perspectives shift, even in a trusting environment. Don't shove conflict under the rug, but use it as a learning mechanism. Focus on shifting perspectives; prevent people from becoming entrenched in one point of view.

Laugh! Creationship teams are not all grinding labor; it's having fun with what they do and laughing a lot, spontaneously creating in the moment – that's magical. Research shows that laughter releases endorphins that trigger creativity. Laughter expresses the absence of fear.

Building a creationship can be one of the most rewarding experiences in life. It can happen between two people, or within a team or even a company. When people engage in a creationship, they seem to abound with an endless source of regenerative energy. Some people describe this as *entering a fourth dimension* – it's invisible but quite real.

Using the Trust Ladder

We've found that one of the most effective uses of the trust ladder is simply to make it visible and accessible so that people can make an honest assessment of where their relationship now exists on the scale (it can exist on multiple points), and where they want it to be. Later, address what actions must stop, and which actions need to prevail to meet the goal.

Groups (teams, alliances, task forces, departments, supply chains, and top executive committees) need to identify what types of behavior are prevalent in their experience, specifically what actions are either "above or below the belt line." The discussion often reveals people trapping each other in the nether regions of distrust, with no means of escape.

It's often been disheartening to learn how many groups report that the preponderance of business is stuck in the levels of distrust. In fact, this has been the norm for so long that it's considered acceptable behavior and has become an acceptable art-form in the business world -- symbols of modern era capitalism.

Avoid being Sucked into the Downward Spiral

If you ever enjoyed the wonderful music of Broadway productions such as *My Fair Lady* or *Camelot* you've heard and felt the powerful synergy of the team Lerner and Loewe. The co-creative force can be seen in science in the NASA teams rocketing a man to the moon. Virtually all the great discoveries and innovations in today's world are happening in-between industries and technologies in creationships, such as the Genomics Project: the confluence between medicine, mathematics, informatics, and computers.

When even one person engages in the first level of distrust, it is tempting to respond “tit-for-tat,” or worse, going one level deeper. This, of course, can trigger a never-ending downward spiral of deepening distrust. This must be avoided at all costs.

By opening a discussion of how one distrustful act triggers another, we can then address what must change to head in the right direction. Those who courageously resist tit-for-tat and make the commitment to engage in higher level discourse will unearth disarmingly productive discussions. But such action is not easy – we are so programmed to retaliate, not reinvent.

Leaders must play a pro-active role in reframing engagements, and ferret out those interactions, including their own, that reinforce distrust. Shifting out of the distrust mode for deeply distressed organizations is by no means an easy task; it’s like trying to cure advanced cancer, because distrust has become deeply embedded in the organization’s culture. But all is not bleak. The human spirit yearns for a better way, optimism can reign over cynicism, trust can be rebuilt -- provided leadership is truly committed.

Leadership Actions

Our advice to leaders who want to move up the ladder of trust is quite specific: Start every interaction assuming that the other parties have all four drives intact as the ultimate motivators of their psyche -- motivated by opportunities to not only *acquire* more resources and *defend* themselves, but also by opportunities to be *creative*, and to develop *bonds* of trust with others. With this in mind, leaders can, in fact, address all four drives in their followers simply by mutually practicing the Four-Drive Honor Code. We find this amazingly simple -- but it works. Read over the rules again. Of course they may be hard to follow, but if a leader can stick closely to these rules, it will move the group up the ladder of trust, releasing energy for collaborative innovation that’s off the chart.

Nonetheless, a leader must be alert to identifying distrustful behavior, calling it out, making it unquestionably clear what won’t be tolerated.

Taken together, these are the acts of leadership that will build a strong structure of trust. We are optimistic that the *Bond* and *Create* forces are, at worst, just dormant in our corporate culture’s collective psyche.

Trust Element #6

THWARTING THE BEAST -- *Gaining Insight on Whom One Should Not Trust*

So far we have been discussing people who, under good leadership, will heartily join in building a strong structure of trust. But science is now revealing what history and everyday common sense has long suspected—that some people actually do not have an innate conscience in their brain.⁷ For this reason we certainly cannot advocate blind trust in all others. There are a few truly dangerous psychopaths in our midst.

⁷ The key book on this is entitled *Without Conscience: The Disturbing World of the Psychopaths Among Us*, 1999, written by Robert Hare after 25 years of studying psychopaths.

The question of who to trust is as old as the human race. It's been on our minds since ancient times: the subject of the writings of the Greeks and Romans, and addressed in the Old and New Testaments. What can we add to that might shed light on this age-old issue?

The Ultimate Caution – Watch Out for 3-Drive Humans

While building a system of trust is a noble endeavour, it cannot be conducted with naivete. Efforts can backfire without a healthy dose of reality. While we are convinced the vast majority of people are capable of being trustworthy, a very small percentage of people (perhaps 1-2 percent of the population⁸) are actually genetically deficient, lacking the “bonding gene.” For some of this small segment, their remaining three drives (*Acquire, Create, Defend*) shift into overdrive. They are skilled at worming their way into positions of power, are highly intelligent, extremely manipulative, and will torpedo anyone that gets in their way. They lack empathy, shame, or remorse. Other people are just tools for them to accumulate more power and wealth. Their lack of moral conscience can be masked with potent ideologies such as “the purpose of business is solely to make money.”

In a newly released landmark study of over 200 U.S. Corporate Leaders, Babiak, Hare, and Newmann found that 4-6% of the executive suite was occupied by psychopaths -- five times the rate expected in the normal population. This strongly suggests our corporations are becoming a magnet for psychopaths at senior levels.

These are the corporate leaders who, like Al “Chainsaw” Dunlap, manage companies like Genghis Khan. (See sidebar story⁹) With their intelligence, sometimes they can even mimic bonding with superficial charm but with no real consideration for honesty, integrity, or human compassion. They seek powerful roles in society. Lacking the checks and balances of a *Bonding* drive, their *Acquire & Defend* drives are pushed to the limit, manifesting as domination and combative attack. Thus their modus operandi sees anyone opposed to them as the “enemy,” requiring constant secret operations below the belt. Their unchallenged belief in competition obliterates thoughts of anything but a win, always narrowly focusing on the best way to move in for the “kill.”

⁸ Babiak & Hare, *Snakes in Suits*, Harper Collins (2006). Note: These 3-Drive humans are often referred to as psychopaths or sociopaths, *after* they have broken the law. Those that skirt the edges of the law will work in the narrow area that is legal but unethical or insensitive. While their percentage in the population is extremely low, their impact on society is massively disproportionate to their numbers.

⁹ CHAINSAW: The Notorious Career of Al Dunlap in the Era of Profit at Any Price By John Byrne New York: Harper Business, Review by Robert Weissman, Washington Monthly, Nov 1999

If the Al Dunlap of "CHAINSAW" were a fictional character, he would be dismissed as a figment of bad writing, a one-dimensional caricature: He capitalizes on his notoriety for mass layoffs by writing a book called *Mean Business*. He seems to revel in firing people. He is fond of telling visitors, "I just love predators. They must go out and hunt and kill to survive." An egomaniac, he screams at and purposefully humiliates his employees, including top management. He has a personal life to match: He cut himself off from his family, abused his first wife, and was stunningly stingy in child support payments to a son from his first marriage.....

When Sunbeam tapped Dunlap to run the company, Wall Street responded with hosannas. Share price rose a record 60 percent the day after the announcement of his hiring and continued to skyrocket during the first months of his tenure.

Dunlap quickly began ...his slash-and-burn [strategy].... He soon announced plans to sell or close 18 of Sunbeam's 26 factories. Wall Street celebrated, and the company's share value continued to climb.

Profitable facilities were shut down and the costs incurred from production shifts could not be recouped in the foreseeable future. But Dunlap was determined to impress Wall Street with record jobs cuts, and he refused to listen to cautionary warnings.

Sunbeam sellers had inflated sales by offering deep discounts. Product quality slipped.

As profitability plummeted and the company fell into the red, the board of directors turned on Dunlap and fired him. Soon it became clear that earlier evidence of increasing profitability had been the result of accounting tricks that auditors retrospectively disallowed.

What is most disturbing about the tale, perhaps, is how many accomplices Dunlap had as he wreaked havoc on a venerable company and the lives of thousands of employees. Executive after executive echoes the one who told Byrne, "I was a greedy son of a bitch along with everyone else" and willing to do whatever Dunlap demanded in exchange for the promise of a big payoff in stock options. The auditors were bullied into going along with questionable accounting measures. And Wall Street analysts, the board of directors and the principal shareholders allowed themselves to be deluded by Dunlap's sham turnaround of the company.

Ruthless, willing to do anything that they think they can get away with, and often extolled by Wall Street as heroes, they cannot be trusted.

Although we believe the large preponderance of the population have the potential for engaging in strong trustful relationships, there are still some who, because they were born without a conscience or with a betrayed, abused childhood, are sufficiently resistant to the guidelines we outline here as to be incorrigably rooted in distrust. Trust is too precious to be sacrificed at the alter of the unscrupulous.

We can, hopefully, all look forward to the day when science provides a definitive means to identify such hazardous people. Even though the problem of finding a humane way to restrain psychopaths from harming others still needs to be found, tolerating the status quo is unthinkable when we have good reason to suspect the most notable of the 20th century were Hitler, Stalin, and Mao.

If one finds themselves in an organization with a person fitting this description, it cannot be ignored or wished away. Action is called for.

We suggest a collaborative strategy. Quietly observe the suspect's behavior and take detailed notes. Start discussions with colleagues who might well have noted the problem and compare observations. When well prepared, approach the most senior officer available with evidence and allies. The goal is, of course, to get the offender out of the organization. If illegalities are strongly suspected, of course, approach the appropriate officials of the law. If such efforts fail, our advice is to leave the organization. Do not allow yourself to be victimized.

Payoffs of Solid Trust

When Procter & Gamble decided to outsource its Information Technology System to Hewlett Packard, their lawyers drafted a legal contract 1600 pages long that specified how this complicated relationship was supposed to work. Both of these firms had well-earned reputations for being strong trust firms, but no one was too sure how well they would work together.

When the operational managers saw the enormous legal document none of them even wanted to read it. It was not only cumbersome; it was also adversarial in tone. Some predicted it would create nothing but friction and costs in the \$3 billion arrangement. Fortunately intelligent minds began to foresee the enormous difficulties that would emerge from a legalistic transaction-based relationship on a service contract that called so much flexibility and give and take problem solving of unanticipated issues. And so much was on the line for both firms. They organized a joint workshop between all the key operational managers who would be working together to see what they could work out.

These managers decided they could not collaborate and create in a legalistic relationship. They designed a set of Operating Principles that reflected the strong trust system they valued in their own separate firms. In the course of that one workshop they transformed their relationship from an arms-length vendor approach to a partnership approach.

- Operate as One
- Serve P&G's Global Business Units & Corporate Functions
- Plan Jointly
- Provide Visibility to make effective business decisions
- Deliver on our Commitments
- Anticipate, Confront, and Resolve Breakdowns Quickly
- Default to Innovation First, before trade-offs
- Make Principle-Based Decisions
- Treat All Employees as Valued Partners
- Communicate Openly, Often, and Clearly
- Share Accountability, Risk, and Reward

This modest document has served as the code of behavior for all their daily interactions. For all intents and purposes, the legal agreement is ignored. Now, aged and obsolete, it sits in some filing cabinet, supplanted by this more nimble and flexible, trust-based agreement.

Examine these principles and how they resemble the Four-Drive Honor Code. Think about the kind of trust they were able to create with one another in order to launch this high risk relationship with just these few declarations of intent. What amazing trust, and what obvious savings in red tape and delay, in time and money, that this agreement could and did generate.

CONCLUSIONS:

How important is trust? Simply put: without trust, the creative intellect of employees is severely diminished. In a fast moving world, trust spawns a massive competitive advantage, enabling intensely collaborative teams to generate innovations and make rapid decisions.

Too often trust gets caught in the background noise of life. The art of building trust should not be something that "just happens" reactively, thoughtlessly, or invisibly. If we don't bring trust to the forefront, the normal chaos of business becomes even more tumultuous as we spin erratically and unpredictably in a world of distrust.

We neglect the issue of trust at our own peril. Trust is the most vital thread in the fabric of relationships. Embedding a system of trust into your organization yields enormous rewards for all stakeholders. The economic advantages of trust suggest that 20% improvements in efficiency are perhaps conservative estimates. And it's not unusual for people to find, for the first time, a sense of real meaning and purpose to their work.

The following two items, excerpts from my unpublished book “Being Human”, may be of some help.

The Author and the Book

Readers will probably be curious as to the scientific career that has led me to undertake such an ambitious task of theory-building. As a high school senior I decided to focus my further studies on understanding human behavior, particularly its record of violence. Throughout my higher-level education and subsequent academic career, I have consistently been a multidisciplinary student of human behavior, with no disciplinary modifiers. That is, my interest has never been *economic* behavior or *political* behavior or *criminal* behavior or even *social* behavior—it has always been *human* behavior. As an undergraduate, I focused on sociology, economics, and psychology. I chose to enter a doctoral program which was the best available for continuing to study these same three disciplines, with the addition of some anthropology and human biology. This was the newly emerging field of Human Behavior in Organizations at the Harvard Business School that, since it was launched in the mid-20s by Dean Donham, has been dedicated to such a multidisciplinary approach. As it happened, Harvard Business School was also an excellent setting for my pursuing a multidisciplinary line of research on human behavior as a career, and I have profited greatly from that fact over many years. It has provided me with the opportunity to study human behavior at close range in many different types of organizations in many different environmental contexts. My teaching there has focused on training prospective business executives how to use their brains to improve their ability to make wise decisions in highly complex circumstances. What I have learned about this process is reflected in this book. Thus, I brought to the challenge of writing this book a lifelong passion for developing a unified understanding of human behavior.

During my academic career it gradually dawned on me that no unified theory of human behavior would be possible without addressing four big roadblocks or intellectual puzzles:

1. The puzzle posed by Descartes's mind/brain dichotomy: How can the process of conscious choice in the human mind be accomplished by a biological-physical brain?
2. E. O. Wilson's mystery: How could humans have evolved a brain able to create civilizations by Darwin's natural selection mechanism before civilization existed?
3. The central puzzle of my discipline, human behavior in organizations: How can the uniformities of the behavior of people at the collective level of institutions and societies be reconciled with the individual behavior level, the psychology of motivated choice?
4. The conflict between religion and science: How can consilience ever be achieved between the core belief of science, that all phenomena have a natural explanation, and the core belief of religion, that there is a supernatural Creator?

By drawing on the work of many others, I believe I have found a way, albeit tentative, to deal with these persistent puzzles.

Formal and Practical Criteria for a Unified Theory of Human Behavior

To be entirely successful, a unified theory of human behavior would eventually need to meet the following demanding criteria:

- (1) Its propositions must be amenable to empirical testing.
- (2) It must be valid in all societies and cultures past and present.
- (3) It must be teachable and usable, which means that it must be as simple and succinct as possible.
- (4) It must work back and forth between all levels of analysis, from the individual to the entire species.
- (5) It must be consistent with most of the findings of the various disciplines their varied theoretical perspectives that already contribute to our understanding of human behavior, at least from biology and neuroscience to psychology, economics and sociology.
- (6) It must explain such human traits as consciousness, ultimate motives, free will, conscience, morality, the sense of "self," emotions and complex

decision-making—and it must explain them better than current theories do.

This volume will by no means meet all these criteria, but I believe it offers significant progress.

NOTE: THIS FINAL ITEM IS, OBVIOUSLY, MUCH TOO LONG TO PAY MUCH ATTENTION TO, BUT I WANTED TO SHOW YOU MAJOR PARTS OF A SUMMARY CHAPTER OF AN UNPUBLISHED BOOK I WROTE ABOUT MY MORE COMPLETE THEORY OF HUMAN BEHAVIOR THAT WAS NEEDED TO UNDERPIN MY THEORY OF LEADERSHIP. PERHAPS THE SECTION BELOW ABOUT **ASSUMPTIONS** WOULD BE WORTH A CAREFUL LOOK. PRL

CHAPTER 6

OVERVIEW OF THE DARWINIAN THEORY OF HUMAN BEHAVIOR

*The small strength and speed of man, his want of natural weapons, etc., are more than counterbalanced by his intellectual powers, through which he has formed himself weapons, tools, etc., and secondly by his social qualities which lead him to give and receive aid from his fellow-men.*ⁱ Charles Darwin

The Theory in Evolutionary Terms

This chapter starts with one of Darwin's most insightful sentences, which we have not as yet mined for meaning. Essentially, Darwin is saying that humans evolved bonded relationships (dB) with their fellow humans and a strong cognitive capacity (dC) as a superior way to adapt and hence survive as individuals—and therefore as a species; superior, that is, to having larger teeth and claws or greater speed. But pursuing this strategy for survival also meant that humans had to shift from relating to their fellow humans primarily by competing for resource domination through brute strength and cunning to relating to other humans primarily by being cooperative and helpful. Humans had to become “domesticated” rather than “wild.” To move naturally down this track of

friendly cooperative relations, humans must have been motivated by an enduring and powerful “want” or drive to bond in long-term caring relationships, not merely in self-serving temporary alliances. Even all this would not have worked unless the evolving humans had also retained their drive to acquire essential resources for themselves. If they had become so intent on bonding that they neglected their own resource needs, they would not have made it. Humans with drives to bond could out-survive those without such drives by being more adaptive, but only so long as they did not lose their older drive to acquire. Yet having both of these drives would have put such humans into internal mental conflict. And this is what happened. It has worked because humans also evolved the cognitive capacity and the drive (dC) to think up ingenious ways to do both—to bond and to acquire simultaneously.

Imagine that you are a member of a hunter-gatherer tribe. Imagine that a long-time hunting partner of yours has been knocked unconscious by a blow from a wounded bear which the two of you had been hunting and had cornered against a rock ledge. The bear is hovering over your inert friend and periodically mauling him with his paw. You, his bonded friend, must now decide what to do—and quickly. Any thoughts you had about killing the bear for meat (dA) are forgotten. But one of your limbic drives (dB) is firing away full blast, telling your prefrontal cortex that you should pull your friend from danger regardless of cost, while another independent drive (dD) is also firing its strongest signals into your prefrontal cortex, telling you to run away from this danger as quickly as possible. These intense conflicting signals would surely and quickly get whatever conscious attention your brain could muster. And it is very difficult to say what the best action decision would be. You know what the preferred outcome would be: saving your friend without getting yourself badly hurt or killed. But do you have the cognitive capacity to size up the relevant details of the situation, including your own speed, strength, and technical resources, such as a spear? And what would be the most likely behavior of the bear? Can you calculate the odds of various scenarios? If the rescue has less than an even chance of success, the right choice would be to retreat and suffer the pains of bereavement and guilt. If the rescue has more than an even chance of success, the right choice would be to try. In any event, it is clear that the choice is real. It is not an illusion; and it is a *hard choice*.

The very fact that two highly conflicted drives are in action actually makes your chances of being adaptive enough to come through alive and with a very grateful friend better than those of any creature motivated only by a drive to defend or only by a drive to bond. A creature with only a dD in play would be programmed, *without a conscious choice*, to abandon his hunting partner. A hypothetical creature with only a dB in play would be programmed, *without a conscious choice*, to dash in to help his friend. It is the fact of having opposing independent drives that requires you to make a difficult *conscious* choice. But at this point, you can take advantage of your superior cognitive ability to think of many options and calculate their chances of success. Your choice, while still difficult, will have a much better chance of multi-dimensional success.

An experienced bear hunter might come up with a decision like this: Move or speak just enough to get the bear looking at you. Briefly stay very still while staring intently into the bear's eyes to hold its attention. Then move very slowly sideways, circling toward the rock ledge to give the bear a clear line of retreat away from you and your friend. Once in the proper position, start screaming and run at the bear, waving your arms and your spear. This is the moment of greatest risk—the bear might charge you. But with any reasonable luck your action will spook the bear into running away. These actions would reflect pressure from your drive to comprehend to use your cognitive equipment to come up with a smart action plan, one that takes into account your understanding that bears have a dD in their brain as well as a dA. If the bear runs away, your action will have made you a winner on all four of your drives. And this story should not strike anyone as demonstrating the behavior of an extraordinary human being; it is just a case of an ordinary individual using the good common sense that is available in the brains of all members of an *extraordinary* species.

Chimpanzee brains are not set up to contemplate choices about rescuing a fellow hunter in trouble. A chimp's brain, having only dA and dD to work with, faces the more limited conscious choice of fight or flight. In such circumstances, with only its dD and not its dA firing, a chimp would *automatically* take off—no conscious conflict so no conscious choice. (Although a female chimpanzee might behave somewhat more like the hunter if the “friend” were its own infant.) Only we humans are forced by our conflicting

drives to make the harder choices and this is how we have become so highly adaptive and possessed of a higher level of consciousness. But this wonderful capacity has come at a price; there is no escape from the hard decisions that go with our freedom of conscious choice. This is the insight behind the story of Adam and Eve, the apple of knowledge and their expulsion from Eden..

There is a story making the rounds that also involves a dangerous wild animal and that provides an interesting contrast with our bear story. It seems that two young friends decided to interrupt their jungle walk to take a dip in a lake. As they were emerging from the water, they were horrified to see a tiger stalking them along the water's edge. One of the men quickly began putting on his shoes. The other asked why. "So I will be able to run faster." "That's hopeless, you can't outrun a tiger." "I don't have to," the first replied as he started running, "I just have to outrun you."

This story usually induces only a half-hearted laugh as the listener is genuinely startled by the inhuman diabolical ending. It is precisely the behavior of to be expected of a free-rider with no drive to bond.

Predictability of Human Behavior

Human behavior is notoriously difficult to predict. None of the social sciences have been very successful doing it. It is hard not only because behavior is always engaged in coping with a set of circumstances that are themselves highly variable, but because all humans, according to renewed Darwinian theory, bring conflicting motives to each new set of circumstances. Time after time, we humans are under pressure to choose the most *adaptive* response, a response that at least *satisfices*, to draw on the concept developed by Nobel prize winning Herbert Simon, all our drives under the given circumstances. Scholars such as James and Dewey have called this theory of action "pragmatism." The pragmatic rule is to "do what works for you in the given circumstances." This is fine as far as it goes, but it fails to give us the criteria for judging "what works" for humans. The four human drives I postulate complete the theory of pragmatism; they are the human goals, the human criteria by which we can judge what

works or does not work for us. While the renewed Darwinian theory will never achieve the accuracy of prediction often achieved by the physical sciences, I argue that it can make significantly more accurate predictions than the currently available alternative theories of human behavior. I believe it can predict better because it models more closely the choice process we call common sense, which is “what works” for humans.

One way to clarify this point is to ask the philosopher’s “what if” question in regard to each of the four drives. What if a person were born without a drive to acquire? Such a person, in order to survive, would have to be treated permanently as an infant, totally dependent on others for life-sustaining resources. What if a person were born without a drive to defend? Such a person would also have to be treated permanently as an infant, always protected by others from all the hazards of life. What if a person were born without a drive to comprehend? Such a person would permanently act like an idiot, unable to learn the multitude of possible ways to cope with a complex world. Hare and his colleagues have already shown us what would happen if a person were born without a drive to bond. Such people, it seems, would be a permanent menace to others around them and these “others” would need to find special ways to protect themselves. For humans, all four drives are essential to lead a normal adult life that is highly adaptable to changing circumstances. To best predict human behavior, the observer must simply ask: Given the existing circumstances and the four drives, what would be the best possible way for a person to satisfy—or at least not violate—all four drives? The answer to this question is the best possible prediction of behavior. Of course, humans do make mistakes and this will generate prediction errors. And humans are also clever enough to come up, at times, with superior action plans that had not occurred to any predicting observer. But, when our proposed prediction process is accurate, isn’t it by the use of the same prediction process that was used by the “winning” players of the “ultimatum game” discussed in Chapter 2? We saw then that humans around the globe demonstrated an effective “common sense” capacity to predict quite accurately the choices of other humans when those making the predictions had a stake in the outcome of the others’ choices and also took account of their particular culture’s way of skewing the parameters.

The renewed Darwinian theory also proposes that the newer drives found in humans, dB and dC, arose by means of a genetic trick. Let me explain. We truly value long-term friends for themselves, in an unselfish way, but this very drive to bond became dominant in the gene pool because, according to Darwin, it provided a competitive advantage which improved the survival chances of individuals and hence of the entire species. In other words, our desire for friends is sincere, but that sincerity has persisted in our gene pool because it conferred a survival advantage on our ancestors. We were essentially tricked into wanting friends for reasons we knew nothing about—for species reasons.

Perhaps this tricking process can be made clearer if we discuss it in relation to sex. Animals do not have sex primarily because they make a conscious choice to start a baby. As far as we can tell, all bi-sexual animals are pre-wired to get great pleasure from the sex act. Individuals so pre-wired obviously will make more babies than ones who are disgusted by the sex act. So it was the “sex is fun” genes that made it into the next generation. Natural selection tricked us into making babies without which any species would, of course, die out. But knowing this does not make the sex act any less pleasurable. We are pleased to have been tricked. And think how much joy there would be in the world without children.

These evolutionary stories may also help clarify what is different in the minds of free-riders and why they behave so differently from everyone else. If one’s brain does not contain the drive to bond, then one does not have to make the hard choices normal humans must make. In every situation, a free-rider’s dA makes the choice, or really the non-choice, to act with unconflicted selfishness. (That is unless their dD signals them that it will be dangerous to go for the attractive acquisition. In such circumstances, they do have to make the more limited conscious choice of fight (dA) or flight (dD).) Such behavior looks to normal people like unbelievable super-selfishness. The free-riders’ drive to acquire is probably no stronger than it is in normal people, but it has no opposing dB to check it. Free-riders are simply doing what comes naturally. Which means—although it is awful to contemplate—that they are *us* minus one saving grace.

Reviewing the Theory by Contrasting It with Conventional Assumptions

As an additional way to characterize the renewed Darwinian theory, I will contrast its propositions with some of the more conventional assumptions about a selected set of issues. I must add that these conventional assumptions are not straw men. They all have been proposed, in more complex and elegant forms, as serious theories of human behavior.

Common Assumptions Regarding Human Behavior:

Common Assumption: No Drives: At birth the human brain is a blank slate that gradually fills with learning and experience drawn from the culture into which the child is born. This is known as cultural determinism and was first spelled out by Locke. In this formulation, genetically-based unconscious drives, for all practical purposes, do not exist.

Contrasting RD theory Proposition 1: While culture and experience both have an enormous influence on the concrete behavior of humans, they are only part of the story. Our four innate drives provide the ultimate motives (*what* to go after) while the related innate skill sets along with culture and personal experience guide us in the given circumstances (*how* to go after it). The pre-frontal cortex integrates all the elements.

Common Assumption: One Drive: There is only one human drive—the drive to behave in one's rational self-interest. All impulses can be traced back by logic, and by the Spencerian caricature of Darwinism, to this one drive. This is the assumption of neoclassical economics.

Contrasting RD theory Response: This assumption is not as much wrong as incomplete. The drive to behave in one's rational self-interest is the same as dA, but there are three other independent powerful drives. To act with reference only to dA would be like running a four-cylinder motor with only one cylinder wired up to fire.

Common Assumption: Dozens of Drives: If there are unconscious innate drives, there must be scores of them and hence it is all too complex to make sense of.

Contrasting RD theory Response: There are only four ultimate drives of any significance. Any other independent impulses that might be found have so small an

influence on human behavior that, for now, they can safely be ignored. The four-drive proposition is still open to the addition of other drives if others are empirically shown to be independent (not derived from the original four) and to have a significant influence on human behavior.

Common Assumption: On Drive Control: Human drives are subject to control by reason and cognition.

Contrasting RD theory Proposition 2: Drives can only be checked by another drive pushing in a different direction. Reason and cognition are essential in order to generate multiple options that can be reviewed by the drives to see how well these options simultaneously satisfy all four drives. This checking and balancing process is centered in the prefrontal cortex.

Common Assumption: On Skill Sets: The basic skills that humans develop to achieve their goals are entirely acquired, a product of mimicking, coaching, and learning from one's own experience.

Contrasting RD theory Proposition 3: Most of the multiple specialized skills that humans display are a product of both genetically-based predispositions for these skills and an individual learning process that draws heavily on the accumulated culture of one's society.

Common Assumption: On Human Choice: Science has proven that human choice is an illusion. Our behavior is pre-determined by automatic genetic processes over which we have no control.

Contrasting RD theory Proposition 4: The renewed Darwinian science of the human brain proposes that the defining feature of humans is choice itself. Our brain is designed to force us to resolve the hard choices that result from conflicting impulses generated by our innate drives.

Common Assumption: On Darwinism: As far as humans are concerned, Darwinism means the survival of the meanest, most ruthless people at the expense of all others.

Contrasting RD theory Proposition 5: Darwinism means the survival of the most adaptive, those individuals best able to choose behaviors that are appropriate to the realities of their complex and changing environment. For an intensely social and intelligent animal such as *H. sapiens*, this rarely means ruthlessness. Creatively reconciling and balancing the impulses of all four drives is the best built-in guide humans have to being adaptive, and, so far, it has proven very effective. These four drives evolved by the Darwinian mechanisms of sexual selection and social group selection, as well as by natural selection.

Common Assumption: On Morals Morals are cultural artifacts taught to people by social institutions such as religion in an effort to control primitive selfish impulses. Morals are a veneer over our basic urges.

Contrasting RD theory Proposition 6: A moral sense is present at birth and further develops toward maturity as an innate skill set that has evolved in humans to help them fulfill their drive to bond. This innate moral sense is further shaped by the capacity of humans for moral reasoning based on their drive to comprehend as well as by cultural rules reinforced by social institutions.

Common Assumption: On Pair-bonding The choice of monogamous pair-bonding instead of any other options for adult sexual relationships is an individual choice based on personal preferences as influenced by contemporary culture.

Contrasting RD theory Proposition 7: Monogamous pair-bonding between two committed people has evolved as a species-wide solution to deal with the long-term dependence of human children on loving adult care and guidance. Variance from this solution, while it clearly does happen, can usually be expected to bring relatively adverse consequences for the children involved and hence for the species as a whole.

Common Assumption: On Emotions Emotions, which are holdovers from our ancestral species, almost always mislead us in today's world, Modern humans are well advised to ignore them or to try to override them with reasoning.

Contrasting RD theory Proposition 8: Emotions are the language of discourse between the unconscious and conscious parts of our brain. While not foolproof, emotions are an important guide to making wise and balanced choices.

Common Assumption: On Science and Religion Science and religion deal with completely different realms of life. Trying to link them together is a big mistake because one is built on faith and the other on empirical evidence.

Contrasting RD theory Proposition 9: As regards humans, science and religion are both searching for answers to the same questions: Who are we? Where did we come from? Where are we going? What is the meaning of human existence? There is every reason to continue the search using both religion's method of insightful revelation and science's method of induction from empirical evidence. As I will spell out in Chapter 9, there are now indications of a possible convergence of religion (based on insightful revelation) with science (based on evidence) on the origin of the Big Bang that started the universe.

Common Assumption: On the Underlying Nature of People: Most people we meet are basically like us. They generally have good intentions and can provisionally be trusted to treat us, most of the time, as we would wish to be treated.

Contrasting RD theory Proposition 10: The assumption above works very well with the vast majority of people, but a very small minority of people, known as free-riders, have no drive to bond or an associated conscience. This makes such people very dangerous to others and appropriate safety measures need to be taken.

Common Assumption: On the Changing of Mind-sets and Ideologies: If new ways of making sense of the world and or ourselves are backed up by evidence, people will readily switch their thinking

Contrasting RD theory Proposition 11: Given humans' universal drive to comprehend, people are always seeking ways of making sense of the world. But once people have found a mind-set of beliefs or ideology that feels coherent and right, they resist changing it. Changing one's belief systems requires a great deal of mental work

which people are predisposed to avoid if possible. Thus, mind-sets are not frozen, but they are sticky. When they move it is more like a jump to a new mind-set than a gradual flow. Test this proposition by reflecting on your own reactions to the propositions above.

The Theory in Relation to Individual and Group Differences

In this book, I have focused consistently on the universals of human behavior because this crucial issue has been largely ignored by science since Darwin's time. My one conspicuous deviation from this focus has been the discussion of the free-rider phenomenon, a rare exception that is simply too dramatic and important to ignore. This focus on the universals does not, of course, mean that there are not important variations of behavior across individuals and groups, which a unified science of human behavior must strive to identify and to explain. Much of this work has already been done. I would argue, however, that a tested unified theory of behavior would make it much easier to proceed further, scientifically and practically, with our understanding of human differences.

There are, obviously, many lines along which human populations can be divided in order to study the differences. Think of the current interest in studying the differences between women and men—the gender difference. The recent book, *The Female Brain*, is an attempt to pull together some of these findings.ⁱⁱ The list of interesting dimensions along which we can examine human differences can become virtually endless—race, ethnic cultures, sexual orientation, cognitive styles of learning, educational levels, income, class, forms of pathology, innate skills and talents, strength, physical dexterity, sibling birth order, family structure, occupation, height, skin color, hair color, hobbies . . . all the way to birthdates and favorite colors. All of these and many more have already been studied. Although these various differences will always be of interest, I argue that a firmer grasp of the universals will enable us not only to develop better explanations of differences but also to keep the differences in perspective, handling human diversity with less anxiety and with more appreciation.

Given the important role the four drives play in the renewed Darwinian theory, we must not forget the likelihood that there are individual differences in the strength of each of the four drives. For example, one setting where the analysis of such drive differences

might throw fresh light is that of political coalitions and their dynamics. The analysts of political institutions have for long made use of four terms to characterize coalitions of political actors: right wing, left wing, progressive and conservative. The right wing puts emphasis on property rights and on individual achievement. The left wing puts emphasis on universal human rights and the common good. The progressives put emphasis on innovative ideas that might improve society. The conservatives put emphasis on traditional solutions to common issues and are cautious about new ideas. These four orientations seem to offer a remarkably good fit with the four RD theory drives in the following way: a set of people with a somewhat stronger dA would be more comfortable in a right wing coalition; those with a stronger dB would be more comfortable with a left wing coalition; those with a stronger dC with a progressive coalition; and those with a stronger dD with a conservative coalition.

The interplay of these four groupings and their paired combinations may be helpful to political scientists in explaining political dynamics of legislative bodies. In the normal course of operations a legislature will strive to handle conflicts of interest between these four groups by negotiating compromises that satisfies all four, and, by definition, maximizes none. In America the two major political parties have historically shifted around in their way of positioning of the party in relation to these four orientations. In Theodore Roosevelt's administration the Republicans emphasized the progressive (dC) and the left wing (dB) combination, as we will see in Chapter 8. In Franklin Roosevelt's time it was the Democrats who built their coalition with this same combination. In Washington today the Republican administration has forged an opposite coalition of the right wing (dA) and the conservatives (dD). Political historians and psychologists who are interested could do a similar analysis of other administrations and other combinations.

To close off this issue I will offer just one additional extended example of how differences in human behavior can be better understood against the background of the universals of behavior that we have been discussing. In the last chapter, I finished the discussion of free-riders by citing the experiment in which Milgram acted as a particular kind of authority figure—a free-rider “experimenter” —who pushed his subjects, the

“teachers,” to obey his instructions and ruthlessly torture innocent “learners” in violation of the subjects’ own dB-based consciences. I hypothesized—but certainly could not prove—that the “teachers” who followed instructions did so primarily out of a latent fear of punishment from the alpha-like authority figure, perhaps because their dD was stronger than their dB.

Enter now Bob Altemeyer, a psychologist who studies individual differences in regard to what he calls *authoritarian submission*. He explains: “By ‘submission’ to the perceived established authorities I mean a general acceptance of their statements and actions and a general willingness to comply with their instructions without further inducement.”ⁱⁱⁱ He ties this variable directly to Milgram’s experiment as follows:

[Authoritarianism submission] is an individual difference variable, a personality trait if you like, developed on the premise that some people need little situational pressure to submit to authority and attack others, while others require significantly more. We can find evidence of this individual difference even in Milgram’s experiment. In two conditions of the initial study, the Learner sat in a separate room from the Teacher, which made it relatively easy for the Teachers to obey the Experimenter completely, as 64% did. In other conditions, however, the Learner sat right beside the Teacher... That made it harder to obey the Experimenter, as you can imagine: “only” 35% proved completely obedient. In one case, then, the situation pushed people toward obedience; but in the other, it promoted defiance. In both cases some people acted differently from the majority. They defied when it was hard to defy, or they obeyed when it was hard to obey. Who were they?

Elms and Milgram (1966) found that the twenty defiant ones scored rather low on a pioneering measure of personal authoritarianism, the California Fascism Scale; whereas the twenty obedient ones, whom the Experimenter could get to shock a helpless victim sitting at their side, scored much higher.”^{iv}

Altemeyer describes in his book how he went on to develop a more reliable questionnaire-based measure of *authoritarian submission*, a trait that can predict with reasonable accuracy the more obedient response (the high scorers to the questionnaire) and also the more defiant response (the low scorers) of people to situations such as the one that Milgram posed.. Altemeyer suggests that the people who are more obedient to authorities are driven by fear (a stronger loading on dD?). Could Altemeyer's high-scorers on authoritarian submission possibly be the kind of people who signed up to follow Hitler? Altemeyer, in his final chapter, states that his systematic data, collected from a broad sample of North Americans, clearly answers: Yes, they are. People who score high on his scale "are the people who, *driven by fear* [italics added] and huddling in... self-righteousness, could create the wave that would lift the monsters among ^{us to} power. And once the monsters acquire the powers of the state, their evil explodes."v Altemeyer spells this out further:

Few people, unless they are familiar with the history of fascism, understand that people as ordinary as you and I, and our friends, and neighbors, might bring down democracy if the going got tough enough... Can one credibly talk about fascism in the North American context as we approach the year 2000? Is it even remotely possible that the horrors of Nazi Germany could someday occur in Canada or the United States?...

Although the Nazis did monstrous things, it is a mistake to think that only ardent fascists and psychopathic killers became Nazis. Adolph Eichmann struck some as a bland person, not particularly anti-Semitic, who basically wanted to advance his career and so worked hard to impress his superiors. His evil was "banal." I can also imagine that many of those who made the arrests and transported the victims to the death camps would have been described as "good, decent people" by their families and neighbors. So would many of those who ran the slave labor camps in which hundreds of thousands of prisoners perished and maybe even the SS soldiers who massacred whole villages. You can be an ordinary Joe, or Lieutenant Calley, and still do terrible things. One of the things Americans learned about the militias [unofficial para-military groups such as were found in Michigan following the Oklahoma bombing] in an Associated Press story dated April 27, 1995, was that they were "ordinary people who feel pushed."

If you think our countries [referring to Canada and the United States] could never elect an Adolf Hitler to power, note that David Duke would have become the governor of Louisiana if it had just been up to the white voters in the state... About a quarter of American state legislators are already poised to “stomp out the rot.” And if you think a North American dictator could not find the people he needed to kill Jews, or professors, or Communists, or trade union leaders, or defiant clergy, or religious minorities, or the mentally “unsuitable,” or whomever he wanted to eliminate, then you might recall what Milgram found.

I am now writing the last page in my last book about authoritarianism. So for the last time, I do *not* think a fascist dictatorship lies just over our horizon. But I do not think we are well protected against one. And I think our recent history shows the threat is growing. Fascism has proven as vile and persistent in this century as prejudice, which has shown it can be quietly passed from generation to generation even when the state vigorously discourages it. And unlike Communism, fascism cannot be expected to fail because it makes some fatally wrong assumptions about human nature. Instead, democracy seems to be fighting the current here; by depending on tolerance, when fear and dislike come so easily; by asking for generosity of spirit, when selfishness is so natural; by championing equality, when hierarchy seems so inevitable.vi

Since Altemeyer could be misunderstood, I must clarify that his submissive authoritarians are *not* free-rider psychopaths. In talking to Altemeyer I learned that he knows little about the work of Hare and others on the rare psychopaths, the people Darwin called monsters. Altemeyer is focusing his work on the much larger number of people who are vulnerable into being conned into following clever psychopaths. These are people who have all the four drives but seem to have a tilt toward a stronger drive to defend that gives them this vulnerability. To clarify this distinction in regard to the current concern with ‘terrorists’, Osama bin Laden and some of his top fellow leaders may very well be psychopaths. But we can be very sure that the people who drive the car bombs and strap on the explosives are not psychopaths. Psychopaths would *never* engage in any such self-sacrificing behavior. Altimeter’s submissive authoritarians are the likely

candidates for those deadly jobs and clever psychopaths know how to recruit them. We can choose to put the terrorist label on either set of people but to put it on both sets is to totally confuse ourselves. Without psychopathic leadership the submissive authoritarians are fairly harmless.

Some kinds of individual differences, such as those found in free-riders, the super authoritarians, and also, unfortunately, in the very different but related ordinary people called submissive authoritarians, do call out for our special attention. Much more well-focused research needs to be given to both of these different kinds of people.

Reviewing the Criteria for Judging the Renewed Darwinian Theory

In Chapter 1, I posed six criteria to be met by a unified theory of human behavior. It had to (1) be empirically testable; (2) be universal or valid across different cultural settings and historical periods; (3) be as simple, parsimonious, teachable, and actionable as possible; (4) be able to work across levels of analysis—back and forth from the individual to the species level; (5) offer a stronger explanation of key human behaviors such as coconsciousness, free will, decision-making and morality, than other available theories; and (6) promote consilience, that is unity, between the major findings of all the various social and natural sciences bearing on human behavior. To what extent does the renewed Darwinian theory meet these demanding criteria? Does it offer a better understanding of human behavior than other available alternatives?

Is the Renewed Darwinian Theory Testable?

Milton Friedman, in a defense of neoclassical economics, argued that it is not crucial to test empirically the axiom that human beings are rational, self-interest maximizing actors. What is far more important is to test the accuracy of the predictions that derive from this axiom. If human beings behave in ways that appear consistent with this assumption, Friedman contends, we should embrace neoclassical economics because of its brevity and predictive power.vii

I expect the renewed Darwinian theory to be put to a more difficult test than the one proposed by Friedman. I believe that the propositions of RD theory can and should be tested empirically, as well as by the accuracy of their predictions. The basic elements can be tested because they have a concrete biological basis. The drives, the skill sets, and their coordination by the prefrontal cortex are all rooted in the physical structure and dynamic interconnections of our brains. I am not a neuroscientist, but I think, for instance, that the drive hypotheses can be verified or falsified by imaginative experiments using brain scanning methods to observe where and how our brains react to various stimuli. I expect that different parts of the brain's limbic center will record activity depending on whether the stimulus triggers the drive to acquire (such as pictures of luxury cars, chocolate desserts, or sexual activity), the drive to bond (such as pictures of family and friends and symbols of collectives with which one is closely identified), the drive to comprehend (such as abstract pattern-recognition puzzles), or the drive to defend (such as pictures of heights, snakes, spiders, and other hazards). As I have indicated so far, the preliminary evidence from experiments conducted along these lines supports the existence of the four drives.

In regard to free-rider testing, the brain scanning evidence of missing affective signals from the limbic area, cited in the last chapter (Kiehlviii), can serve as a model for much more extensive testing using this methodology. It would also be possible for evolutionary psychologists to contribute to this effort by conducting carefully designed experiments with neutral and emotionally-loaded words using EEG methodology. Geneticists should be able to identify the genetic signature of psychopaths, if it exists. Perhaps identifying the genetic differences between prairie and montane voles will point to the location in our DNA of the genes involved in humans. If the free-rider hypothesis is confirmed, this alone would provide strong support for the entire renewed Darwinian theory, since it would simultaneously offer strong evidence of the existence of dB in normal humans..

In addition to testing the theory's biological micro-foundations, it is possible to test its macro-predictions. In any given situation, people will attempt to reconcile the different and often competing tugs of their four drives, but their final *specific* choice of

resolution is not predictable in the kind of detail possible in large parts of the physical sciences. The theory is, in this sense, not deterministic. It allows one to predict only in terms of probabilities. What the theory predicts with assurance, however, is that, over time, any normal individual will behave in ways that reflect all four drives. Moreover, the behavioral pattern of a large enough cross-sectional sample of individuals responding to the same situation (such as an ultimatum game experiment) will also reflect all four drives.

The theory also predicts that individuals will enjoy an adaptive advantage to the extent that they are able over time to fulfill to a reasonable level—that is to satisfice—all four of our basic human drives. This is also predicted for all social institutions that satisfice all the four drives of all their involved stakeholders. Individuals and institutions that focus on maximizing one drive at the expense of the others will be less adaptive over time. I argue that these important propositions are testable and I will discuss specific ways in Part IV. One way for the reader to confirm or refute my argument that the new theory is testable is to return to the twelve propositions stated earlier in this chapter and try to imagine empirical ways to test each one. It will obviously take some highly creative work, but I think it is possible.

Is the Theory Universal?

The anthropological literature (see Murdock for a classic review) offers us no example of a society or culture whose members did not display some measure of each of the four drives in their behavior, along with the various cognitive elements of the RD theory. The one important exception to the universality of the four drives is the free-riders, a very small minority whose genes express neither the drive to bond nor its associated moral sense.

To be more specific about the universality of each of the four drives:

- *The drive to acquire (dA)*. The tendency for people to seek status distinctions, which satisfies their drive to acquire, is universal. As Michels discovered, even

in the most egalitarian societies, some measure of distinction or status—the iron law of oligarchy—inevitably surfaces.

- *The drive to bond (dB)*. As hard as it is to create a communal utopia in which everyone is equal, it is equally hard to create a true Hobbesian state in which everyone is at war with each other. Even in highly competitive arenas, people develop bonded relationships and respect the mutual commitment implied by these relationships. Putnam'sxi study of the perennial strife that has characterized the history of southern Italy shows that, even in this landscape of vicious competition, there are bonds that unite people into tightly knit groups.
- *The drive to comprehend (dC)*. It is found in every society and cannot be stamped out. Whether it was the Inquisition in the Dark Ages, the Cultural Revolution in China, or the Pol Pot regime in Cambodia, efforts to suppress the drive to comprehend inevitably ended in failure. We might be tempted to imagine that somewhere in the world there are remote societies, disconnected from modern civilization and frozen in time, where nothing has changed or been learned in centuries. Yet, as the anthropologist Levi-Straussxii has noted, whenever it seems that such a society has been found, the so-called “savage” mind is found to be just as engaged in forever learning and creating new mental patterns as our “civilized” minds.
- *The drive to defend (dD)*. Members of even the most peaceful societies will defend themselves when their property, loved ones, or beliefs are attacked. This universal tendency to defend against aggression has been underscored by Wilsonxiii after a comprehensive review of the anthropological evidence.

Is the Theory Simple, Parsimonious, Teachable, and Actionable?

Good theories must follow Occam's principle: “As few (variables) as you can; as many as you must.” So why four drives? Why not three? Or seven? Or maybe just one?

I would be happy to oblige Occam by declaring one or two of the independent drives as derivative instead of primary and independent. The most obvious choice would

be to treat dB and dC as derivatives of dA. But this would remove from our innate nature the very traits that I believe make us truly human and so different from the other primates. The independence of these drives is what has created the very human feature of high-level conscious choice with its surge of greater adaptability, our major competitive advantage over other earthly creatures. Having four drives rather than just one or two gives humans significantly greater choice, more degrees of freedom to be adaptive. Note, however, that the term “competitive advantage” is itself now outmoded by the new theory. We could as accurately call it our “cooperative advantage” or our “learning advantage” or our “defensive advantage.” We need all four drives, all four directions, not just dA, on the human navigational compass. Let us simply speak, as Darwin himself did, of an “adaptive advantage.”

When it comes to adding more drives, I will be glad to do so if others can be proposed that are independent, cannot be derived from the basic four, and have a significant influence on human behavior. I do think a case might be made for separating the sexual drive (possibly in combination with other pleasurable bodily experiences) from the drive to acquire, thus adding a fifth drive. This could be indicated if the brain modules and circuitry underlying sex are entirely different from those involving the acquisition of material resources. This change could be accommodated without making major shifts in other features of the theory.

The only other repeatedly suggested additional drive that warrants discussion is a drive for power. Power in human affairs can usefully be defined as the clear capacity of one person to influence another to behave in ways that they would not otherwise do. For example Milgrim clearly had, in this sense, power over his experimental subjects. Could a drive for power over others be the universal single drive underlying all our others, dA, DB, dC and dD? This proposition has to be taken seriously since only a bit of reflection indicates that an individual who can be more successful than another in achieving any one of the four drives has some capacity thereby to use the fruits of their superior performance to influence any less successful other. The resource rewards of dA performance can obviously be used to influence others—think of the power of having more money. The same is true of dB; think of having more devoted friends and allies.

The same is true of dC; think of the power over others of having more valid knowledge. And finally in regard to dD; think of the power of the person with a gun over the person without a gun. Mao in fact said that all power comes out of the barrel of a gun. This analysis has generated four different kinds of real-life power that is derived from the superior performance of the four drives and I find it difficult to think of any other important kinds of power over others. So to repeat the question is power a drive in our unconscious brain from which all four drives of the RD theory of human behavior can be derived? For me the answer is very clearly negative for the following reasons.

The human imagination is capable of conceiving that a drive for power can explain it all, but this explanation by no means fits the observable facts of how the human brain actually works. If the power hypothesis were true it would be a matter of indifference to us whether we achieved the desired power differential over others by the dA or the dB or any other route. There would, therefore, be no conflict between the drives and no need for conscious choice. We would all be engaged in an ultimate Hobbesian war of each against all other for power by any means possible. Such a species could not for any length of time pass the ultimate test of survival. It would not be adaptive. Such a species would simply self destruct.

According to the RD theory of human behavior, the only people whose behavior somewhat resembles such a hypothetical power driven person would be that of a psychopath. For them the absence of the drive to bond can make them appear to be obsessed with power. But, I would argue, that this appearance would be an illusion created by their single-minded obsession with acquisition, and that achieving power over others by securing powerful authority positions in social hierarchies is simply an obvious means to that end of acquiring more resources, not an end in itself. The idea that a power drive needs to be seriously considered as a fifth drive does not stand up to analysis and much less as the universal drive underlying all drives. Even in normal four-drive humans the seeking of power is only a means used to succeed in fulfilling the basic drives.

No other serious candidate drives have so far appeared.

In writing our *Driven* book Nitin Nohria and I clearly thought that a parsimonious set of drives would be far better than a long list. There can be no question that the more powerful scientific theories have been the simple ones. Think of Newton's one law of gravitation, his three laws of motion, the three laws of thermodynamics, or Darwin's V/S/R mechanism. Remember, as a cautionary tale, the chaotic search for dozens of drives that William James inadvertently triggered. The original idea was to have a short list headed by such drives as hunger and sex. Then candidates for additional drives came in from all directions. With no clear criteria for what constituted a drive and what constituted evidence of its existence, the list quickly expanded to a ridiculous length and the theory became useless. Nohria and I did not wish to follow that example. It is fortunate that as few as four drives are enough to cover the topic of ultimate human motives. It helps the theory be teachable and actionable. But, of course, since these drives were selected by the evolutionary process to make us adaptable, what else would we expect? These four fit nicely inside our cranium and we only need to use them effectively.

Does the Theory Work across Multiple Levels of Analysis?

The need to develop multi-level models has been addressed by many scholars of human behavior, especially Coleman, an eminent sociologist.^{xiv} Although Coleman's framework—unfortunately, I would say—bought into the single-utility model of neoclassical economics, it did demonstrate not only the need but also the feasibility of moving from the level of the entire socio-economic system down to the level of the individual and back again. The renewed Darwinian theory works relatively seamlessly across all levels of analysis—from the individual to the family and local community to the corporation and the nation-state and on to the entire species—using the same language and theoretical propositions.

To the extent that people organize themselves through implicit and explicit social contracts into collectives in order to pursue their drives, these collectives will reflect the four drives shared by their members. But we must be careful not to anthropomorphize

social institutions. An organization or a nation does not have a drive to acquire or to bond, or a memory, or a nervous system that controls muscular action. Only human beings have the four drives and the apparatus of the prefrontal cortex to help integrate them. Social institutions thrive to the extent that they provide their members opportunities to reasonably satisfy their four drives. Institutions that do not are eventually changed or cease to exist. Thus the viability of social institutions, at any level of analysis, can be assessed using the renewed Darwinian theory. Important social institutions can be carefully structured to take account of how the human brain works; in Chapter 7, I will offer the U.S. Constitution as a prime example of this process. It is in this sense, rather than in attributing the drives found in human brains to our social institutions, that the theory is applicable across levels of analysis.

Does the Theory Offer Better Explanations of Key Human Behaviors?

In Chapter 1, I listed some key aspects of human behavior that a unified theory would be obliged to explain better than current theories do. I believe that, for each of these aspects, I have offered an explanation that arguably advances existing theory. Summary statements have been made for each of the listed aspects and need not be repeated here. As a reminder, the items in the Chapter 1 list were: ultimate motives (discussed in Chapter 2), significant degrees of free choice (discussed in Chapter 3), the role of emotions in human choices (discussed in Chapter 3), the sense of self (discussed in Chapter 3), how humans evolved to our present state from earlier forms (discussed in Chapter 4), morality and conscience (discussed in Chapter 5), and the predictability of human behavior (discussed in Chapter 6). This leaves only human consciousness, which, although discussed at various points above, is such a key topic that it needs further explanation.

With respect to consciousness, the renewed Darwinian theory supports the existing neuroscience theory that the modules of the prefrontal cortex, particularly the dorsolateral cortex, are the locus of consciousness. The theory adds only the explanation that the agenda of issues to be addressed in terms of deliberate conscious choices is generated by conflicting impulses sent from the four individual drives. Having four

drives, rather than only the two possessed by non-humans, adds to the number and the significance of conflicted issues that are juggled by the prefrontal cortex, and this heightens the level of human consciousness compared to that of other primates. To test these ideas further I will cite in its totality what Francis Crick, the Nobel-prize-winning co-discoverer of the DNA code, has written to summarize a theory of human consciousness which he published, in 1998. I will indicate by parenthetical insertions how the Darwinian theory follows closely in the track of Crick's theory and helps to flesh it out.

Consciousness—Not a Thing But A Process

The explanation of consciousness is one of the major unsolved problems of modern science. Indeed, the overwhelming question in neurobiology today is the relation between the mind and the brain. In the past the mind (or soul) was regarded as something separate from the brain but interacting with it in some way. But most neuroscientists now believe that all aspects of the mind, including its most puzzling attribute, consciousness or awareness, are likely to be explainable in a more materialistic way as the behavior of large sets of interacting neurons. As William James, the father of American psychology, said a century ago, consciousness is not a thing, it a process. Until recently, however, most cognitive scientists and neuroscientists felt that consciousness was either too philosophical or just too elusive to study experimentally. But in my opinion, such timidity is ridiculous. I believe that the only sensible approach is to press the experimental attack until we are confronted with dilemmas that call for new ways of thinking. The major question that neuroscience must answer is as follows: What are the differences between the active neuronal processes in our heads that correlate with consciousness and those that don't? Are the neurons involved of any particular type? What—if anything—is special about their connections and firing? Although, in the long run, an all-embracing theory taking in emotion, imagination, dreams, mystical experiences and so on will be necessary, my work assumes that all the different aspects of consciousness involve a basic common mechanism (or perhaps a few such mechanisms). I hope that understanding the mechanism for one aspect will go most of the way to helping us understand them. So my colleague Christof Koch and I, thinking it wise to begin with the aspect of consciousness likely to yield most easily, selected the

mammalian visual system because firstly humans are very visual animals and secondly because so much work has already been done on it.

I hold that the biological usefulness of visual consciousness in humans is to produce the best current interpretation of the visual scene [by means of the placement by the drives of Damasio's markers on visual signals of importance to the self] in light of past experience (either our own, [stored in the long-term memory in the neocortex] or that of our ancestors embodied in our genes [as genetic memories in the limbic modules]), and to make this interpretation directly available for a sufficient time to the parts of the brain [the prefrontal cortex] that contemplate and plan voluntary motor output such as movement or speech. But there actually seem to be two systems: the rapid action "on-line" or unconscious system [that controls action when there are no conflicting impulses from the drives] and the slower, conscious "seeing system" [whenever there is conflicting firing of impulses from the drives]. To be aware of an object or even an event the brain has to construct a multilevel (for example, lines, eyes, faces), explicit, symbolic interpretation of part of the visual scene. A representation of an object or event will usually consist of representations of many of the relevant aspects of it, which are likely to be distributed over different parts of the visual system [and built up with feedback loops as long-term memories in the six layers of the cortex.] Much neural activity is needed for the brain to construct a representation, most of which is probably unconscious [agreed].

The term "visual consciousness" almost certainly covers a variety of processes. When one is actually looking at a visual scene the experience is very vivid, whereas the visual images produced by trying to remember the same scene are much less vivid or detailed. I am concerned here mainly with the normal, vivid experience. Some form of very short-term memory seems almost essential for consciousness but this memory may be very transient, lasting for only a fraction of a second, Psychophysical evidence for short-term memory suggests that if we do not pay attention to some aspect of the visual scene, our memory of it is very transient and can be overwritten by subsequent visual stimulus [agreed].

Although working memory expands the time frame of consciousness, it is not obvious that it is essential. [The renewed Darwinian theory differs on this point by arguing that the working memory of the dorsolateral cortex is essential for holding selected marked aspects of the current visual scene and combining them with items which have been called up from long-term memory in order to generate multiple optional action scenarios that will be judged by feedback to the drives before voluntary decision-making.] Rather it seems to be a mechanism for bringing an item or a small sequence of items into vivid consciousness, by speech or silent speech. In a similar way, episodic memory, enabled by the hippocampal system, is not essential for consciousness but a person is severely handicapped without it.

[High-level] Consciousness, then, is enriched by visual attention, though attention is not essential for visual consciousness to occur. Attention is either caused by sensory input or by the planning parts of the brain. Visual attention can be directed to a location in the visual field or to one or more moving objects [by the anterior cingulate cortex]. The exact neural mechanisms that achieve this are still being debated. But in order to interpret visual input the brain must arrive at a coalition of neurons [the four drives] whose firing represents the best interpretation of the visual scene [the implications for self-survival registered by the drives], often in competition [competition between the drives] with other possible but less likely interpretations.^{xv}

To add one final note on consciousness, I would cite John Searle, the well-known philosopher of the science of the mind, in his (quite negative) review of *Seeing Red: A Study in Consciousness*. He leads off his review by saying, “After having been neglected for most of the twentieth century, the subject of consciousness has become fashionable. Amazon lists 3865 books under “consciousness,” a number of them new releases of the last year or two. What exactly is the problem of consciousness, and why exactly is it so difficult, if not impossible, for us to agree on a solution to it? ... The hard problem of consciousness is to account for how it can exist and function in a way that is private, subjective, and qualitative, in a world that consists of public, objective, physical phenomena.”^{xvi} In other words, how is it that the brain represents the world, not as a

purely objective image from an objective instrument such as a video camera, but rather as a scene that signals what the current environment moment means to the viewer in a private, qualitative, and subjective manner.

I believe that the renewed Darwinian theory directly addresses this key problem. Building on Damasio, the Darwinian theory posits that all the signals from our sense organs are evaluated by our drive modules in terms of personal criteria—their relevance to self-survival and reproduction—and signals found to be relevant are so marked. It is the marking process that converts these signals from objective information (a view through a camera) into qualitative, private, and subjective information (consciousness). Only those signals that are marked for relevance are then sent on to the prefrontal cortex for further conscious processing, decision-making, and action, as well as to other parts of the brain such as the long-term memory of the neocortex. All other signals quickly fade out and are superseded by the changing scene, as suggested above by Crick.

Readers can judge for themselves the quality of all of these explanations, including that of high-level human consciousness.

Does the Theory Promote Consilience, The Unity of Knowledge?,

The renewed Darwinian theory explicitly forges a connection between the social sciences and the natural sciences, especially biology. Starting with the biological building blocks, the theory can cut across disciplinary lines (see Figure 1 in the Introduction) and enable multi-disciplinary analysis. It helps us recognize the relevance of both emotion and cognition in understanding human behavior. In this regard, I would comment on the assertion made by some scholars that rational behavior is only reflected in people's efforts to meet their economic needs and that other behaviors are non-rational or even irrational. With the new Darwinian theory, this issue is moot, since people can accurately be described as employing their rational cognitive powers, not only to address their individual economic needs, but also to address their drives for social bonding, for comprehension, and for defense.

As the scientific community moves toward a unified theory of human behavior, there must be movement beyond the narrow specializations of the human sciences as they are presently constituted. Scientists will need to study each other's fields carefully

enough to engage in respectful dialogue, even as they continue to pursue their own specializations. Each of the major disciplines seems to have a characteristic bias that will need to be adjusted in some way if that discipline is to make its potential contribution toward consilience:

- Biologists seem to have a bias toward understating the significant differences between humans and other primates, such as their sexual and family behavior. This bias might well reflect their desire to overcome the public's continuing doubt about the evolution of humans from earlier primates. Biologists have also been slow to use any of Darwin's evolutionary selection mechanisms other than natural selection in their theorizing.
- Sociologists seem to have an aversion to "reductionism," to working their analysis back and forth between the societal and the individual levels. They also have an aversion to recognizing any genetic influence on behavior.
- Psychologists have a strong attraction to controlled laboratory experiments that are not always the most useful method for testing developmental, path-dependent theories. They also seem to be resisting the study of non-cognitive elements of the brain and, like sociologists, have been slow to recognize genetic influences on behavior.
- Cultural anthropologists tend to be heavily committed to an exclusively culture-driven theory of human behavior that will need to be broadened.
- Economists will, perhaps, need to make the greatest adjustment because they are so wedded to a theory that axiomatically treats human beings as rational maximizers of self-interest. This will need to be changed if economists are to move toward consilience with biology and with the other social sciences. As we will see more of in Chapter 12, a new group of economists—behavioral economists—are already leading the way in this direction.

For well over a century, each branch of the natural and social sciences has focused on a limited part of the puzzle of human behavior, its practitioners talking almost exclusively to each other while treating the other behavioral disciplines more as competitors than as collaborators. This has served to stimulate a great deal of creative effort but at the cost of an unacceptable risk—the risk of the significant unintended

negative side effects of seriously applying such incomplete theories. Scientific ideas, like ideological fashions, are no longer local phenomena. They tend to go global very quickly. New social, economic, and psychological theories are being rapidly applied on too large a scale to tolerate significant errors. For the safety of the species, scholars and scientists need to adopt the medical dictum of “least harm” and to subject any new theory of human behavior to painstaking testing before advocating its general use. In this regard, I would add that, if the aspect of renewed Darwinian theory that surprised me the most—the existence of free-riders—is disproved by subsequent research, I will be relieved, since any remedy for this issue almost certainly will involve significant constraints on the freedom of choice of these individuals. On the other hand, if the free-rider hypothesis is supported, humankind will have opened up not only a set of hard choices but also a pathway toward a more promising future.

In the face of the great unknown, all scientists need to cultivate humility, avoid hubris, and strive for the consilience of knowledge. In this regard Darwin is a wonderful role model and the record of the human sciences during the past decade is encouraging. In this book, I have cited the work of scientists from all the major relevant disciplines who are striving toward consilience in our understanding of human behavior. They represent the best of multidisciplinary work. Or, perhaps, they are the pioneers of an emerging interdisciplinary science of human behavior, with no specialist modifiers. The “least harm” rule applies more to the renewed Darwinian theory than to most, not only because the theory claims to be more general and complete than others, but also because its subject—human behavior—is of ultimate importance to us all. I am very much aware that, in spite of significant supporting evidence, the theory is still incomplete and largely untested. It is inevitably incomplete because, like all theories, it is a set of mental representations, an approximation of reality. The relevant test is not the unattainable goal of perfect accuracy in representing reality but rather the goal of relative accuracy in comparison with other available theories. However, we should have no doubt that reality is out there, waiting to put any theory to the ultimate test. As Winston Churchill is credited with saying, in answer to the familiar philosophic question about whether there is any reality beyond perception: “I can't answer the philosophic question but I do know for sure that, whether you perceive the sun or do not, if you fly too close to it, you will be

burned to a crisp.” I fervently hope that others who are qualified will undertake broad and rigorous testing of the renewed Darwinian theory, readily accepting the risk it will be burned to a crisp in the process.

So what I most hope is that this work will stimulate many more scholars from all the relevant scientific disciplines to address once again the big question of the universals of human behavior. And I hope that scholars from the humanities will join the effort. The renewed Darwinian theory needs to be tested by scholars of history, religion, literature, philosophy, and contemporary culture. The results of such work would be much more important than whether or not the particular theory proposed in this book is accepted as the currently most useful approximation of the true nature of humans.

ⁱ Darwin, 1998, *Descent*, p. 65.

ⁱⁱ Brizendine, L., 2006, *The Female Brain*, New York, .Morgan Road Books.

ⁱⁱⁱ Altemeyer, R., 1996, *The Authoritarian Specter*, Cambridge, MA, Harvard University Press, p. 9.

^{iv} Altemeyer, 1996, p. 8.

^v Altemeyer, 1996, p. 305

^{vi} Altemeyer, 1996, p. 305-306.

^{vii} Friedman M., 1953, *Essays in Positive Economics*, Chicago University Press..

^{viii} Kiehl, 2001

^{ix} Murdock, G., 1945, *The Science of Man in the World Crisis*.

^x Michels, R., 1948, *The Iron Law of Oligarchy*.

^{xi} Putnam, R.- 1993, *Making Democracy Work*, Princeton NJ, Princeton University Press..

^{xii} Levi Strauss, C., 1963, *The Savage Mind*, Chicago, Chicago University Press.

^{xiii} Wilson, E., 1978, *On Human Nature*, Cambridge, Harvard University Press.

^{xiv} Coleman, J.,, 1990, *Foundations of Social Theory*, Cambridge UK, Cambridge University Press.

^{xv} Carter, 1998, p. 204-205.

^{xvi} Searle, J., Nov. 2, 2006, “Minding the Brain” *New York Review of Books*, p. 52.

