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Organizational Logic

Institutionalizing Wisdom in Organizations

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What a challenging theme! When I first started teaching many years ago, the wisest teacher I knew operated on the adage that wisdom cannot be taught. Why should I abandon his good advice now at my advanced years? But obviously I have done so. My excuse is that I did get two insights that just might make this most difficult topic a bit more manageable. First, I wondered what would happen if I dug into some of the details on how the Founding Fathers thought out the organizational design built into the U.S. Constitution. Perhaps that just might lead the way to some degree of understanding about institutionalizing wisdom in organizations. Second, I wondered whether analyzing the newer neuroscience findings of how the human brain works to produce wise adaptive decisions would also help. So this is essentially what I propose to do.

The Wisdom of the U.S. Constitution

Looking back across the 220 years since the Constitutional Convention met in Philadelphia, it is now clear that the U.S. Constitution was a truly significant turning point in all human history. The writers of the Constitution created an institutional framework of a radically new kind of government for a powerful, rapidly growing nation. Americans wanted a self-governed

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nation—of the people, by the people, and for the people. They wanted to create a workable humane republic. They were aware of Montesquieu's judgment that the republican form of government would work only for small nations, smaller than the United States. All traditional governments for larger nations at that time, and all those of earlier times that the writers knew about, stood on three foundational pillars: the monarch, the aristocracy, and the established church. These institutions were considered as essential for "civilization" and social order among the masses. The Founding Fathers saw, from their own observations of Europe, that these three pillars supported governments that consistently oppressed the many for the benefit of the elite few. They were in total agreement that they wanted to abandon all three of these pillars in their new government. This was a truly radical thought. But how could it be done? They assembled a diverse set of experienced men from across the states, set aside the time needed, and went to work, long day after long day. After all of the intense discussion and debate, they were able to reach a true consensus of the final result.

Did they develop any guiding premises? Did they employ a central organizing principle? Did they have a clear idea about the functions of government, about the limits of government, or about the necessity of government? Did they know what major hazards were to be avoided? And most important, did they share a model of man, of human nature? It turned out that they worked out answers to all of these questions. And we are fortunate that they left us with an amazingly complete record not only of their conclusions in the document itself but also of the thought process by which they reached their conclusions. The *Federalist Papers* are the heart of this record, supported by numerous supplementary notes, letters, and the like.

The Founding Fathers had a strong sense of the importance of the moment, the importance of their undertaking. Both the federalist supporters of the new Constitution and the antifederalist opponents saw themselves as having been thrust into a situation fraught with unique and far-reaching consequences. They had been given an opportunity to plan a government out of whole cloth. It was a very rare greenfield project, and the participants perceived that they were making history. As Simeon Baldwin, a Connecticut lawyer and federalist, said,

Revolutions in government have in general been the tumultuous exchange of one tyrant for another. . . . Never before has the collected wisdom of a nation been permitted quietly to deliberate and determine upon the form of government best adapted to the genius, views, and circumstances of the citizens. Never before have the people of any nation been permitted candidly to examine and then deliberately to adopt or reject the constitution proposed.¹

The Founders saw the challenge clearly, and they approached the assignment with trepidation. Patrick Henry warned,

You ought to be extremely cautious, watchful jealous of your liberty, for instead of securing your rights you may lose them forever. If a wrong step now be made, the republic may be lost forever . . . and tyranny must and will arise. . . . We are wandering on the great ocean of human affairs. I see no landmark to guide us.²

Benjamin Franklin, in response to the question of what kind of government had been created, replied, "A republic, if you can keep it."

Looking back on their accomplishment, James Madison said,

Why is the experiment of an extended republic to be rejected merely because it may compromise what is new? Is it not the glory of the people of America, that, whilst they have paid a decent regard to the opinions of former times and other nations, they have not [allowed] a blind veneration for antiquity, for customs to overrule the suggestions of their own good sense and the lessons of their own experience? Posterity will be indebted for the possession and the world for the example of the numerous innovations displayed on the American theatre in favor of private rights and public happiness. . . . Happily for America, happily we trust for the whole human race, they have pursued a new and more noble course. . . . They reared the fabrics of government which have no model on the face of the globe.³

So the Founders were conscious of working without a lot of useful building materials that European states had used to structure government. What did they have left to work with? The Founders hoped to use the raw forces, the "passions" of what they knew of human nature, and bend these human drives to the work of managing and upholding republican government.

The Founders started on the premise that government was absolutely essential if humans were going to live together in peace and prosperity. They talked with each other a great deal about the nature of humans, and they were by no means utopians. They were distrustful of human nature and warned that a constant hunger for power and wealth drove people to become tyrants. It was because of such human passions and the subsequent impulsive behavior of a few that the Founders firmly believed that people truly needed government to enable a peaceful and productive life for the many. As John Jay said, "Nothing is more certain than the indispensable necessity of Government, and it is equally undeniable that whenever and however it is instituted, the people must cede to it some of their natural rights in order to vest it with requisite powers."⁴ But the Founders also feared anarchy as much as they did tyranny. To them, "freedom" and "liberty" were never total, never license, but always relative to the despotism they saw in Europe.

Madison said, "What is government itself but the greatest of all reflections on human nature?"⁵ In other words, if government is to work, it must

reflect human nature. The Founders delved deeply into what they referred to as human nature. They needed to figure out what “being human” meant. What were the ultimate motives or drives that made people tick? They recognized that they would need to tap into and properly regulate these forces if they hoped to fashion a functional government.

This phrase “human nature” appears 15 times in the *Federalist Papers*. This is a touchstone concept. And so was the equivalent concept of “passions,” a word that appears no less than 68 times in the text. Generally speaking, it carried a negative connotation for the Founders. Passions in the *Federalist Papers* are frequently violent, fleeting, and dangerous political impulses. The concept is a foil to “reason,” which the Founders upheld as the basis of sound and sober government undertaking the public interest. Madison imagined a scenario in which scheming parties would take control of the government: “The PASSIONS, therefore, not the REASON of the public, would sit in judgment. . . . The passions ought to be controlled and regulated by the government.”⁶

The passion about which the Founding Fathers worried the most was the one they called “ambition,” a word that appears 47 times in the *Federalist Papers*. Ambition was invariably used in a negative sense—as an impulse to be checked. So, for example, Alexander Hamilton warned against “the ambitious enterprise and vainglorious pursuits of a monarchy” and the “ambitious intrigues of . . . Executive magistrates.”⁷ And Madison warned against “the intrigues of the ambitious or the bribes of the rich.”⁸

Above all, the Founders feared the prospect of concentrated political power. Drawing on their deepest political instincts, they tried to create institutions of government that dispersed, rather than consolidated, power. The federalists held this conviction firmly, and in the Constitution they tried to create a structure of government that would contain and channel this drive of personal ambition into publicly constructive paths. Hamilton said,

Men are ambitious. Has it not . . . invariably been found that momentary passions and immediate interests have a more active and imperious control over human conduct than general or remote considerations of policy, utility, or justice? . . . Have we not already seen enough of the fallacy and extravagance of those idle theories, which have amused us with promises of an exemption from the imperfections, weaknesses, and evils incident to society in every shape? Is it not time to awake from the deceitful dream of a golden age and to adopt as a practical maxim for the direction of our political conduct that we as well as other inhabitants of the globe are yet remote from the happy empire of perfect wisdom and perfect virtue?⁹

Hamilton chose to emphasize that even in America there were clever people who would strive to seize the reins of power and become the absolute ruler of the nation.

As Madison observed,

If men were angels, no government would be necessary. . . . In framing a government, which is to be administered by men over men, the great difficulty lies in this: You must first enable the government to control the governed, and in the next place oblige it to control itself. A dependence on the people is, no doubt, the primary control on the government; but experience has taught mankind the necessity of auxiliary precautions.¹⁰

Yet the Founders did not think that human nature was irretrievably grasping and corrupt. People, they insisted, were capable of displaying wisdom, virtue, and public spirit. The passion they looked to as a check on ambition was called “virtue.” This term for a more benevolent dimension of human nature appears 23 times in the *Federalist Papers*. In general, the term signifies a public-mindedness and an instinct to act for the common good. In other words, people become “virtuous” as they put aside particular selfish interests in a search for the public good. Their virtue amounted to an instinct to bond broadly with others and act for the common good. And the Founders searched earnestly for ways to structure government so as to tap into this drive.

Take, for example, one of Madison’s remarks at the Virginia ratifying convention. He was replying to antifederalist George Mason’s prediction that federal congressional representatives would do everything they could to acquire and eventually abuse power under the new government. Madison conceded that it would be a mistake to “place unlimited confidence in them and expect nothing but the most exalted integrity and sublime virtue,” yet he insisted that citizens would be capable of finding, recognizing, and electing virtuous representatives: “I go on this great republican principle that the people will have virtue and intelligence to select men of virtue and wisdom. Is there no virtue among us? If there be not, we are in a wretched situation. No theoretical checks, no form of government, can render us secure.”¹¹

Madison also made essentially the same point in writing,

As there is a degree of depravity in mankind which requires a certain degree of circumspection and distrust, so there are other qualities in human nature which justify a certain portion of esteem and confidence. Republican government presupposes the existence of these qualities in a higher degree than any other form. Were the pictures drawn by some among us faithful likenesses of the human character, the inference would be that there is not sufficient virtue among men for self-government and that nothing less than the chains of despotism can restrain them from destroying and devouring one another.¹²

Madison concluded, “The aim of every political constitution is, or ought to be, first, to obtain for rulers men who possess most wisdom to discern and most virtue to pursue the common good of the society, and in the next place, to take the most effectual precautions for keeping them virtuous whilst they continue to hold their public trust.”¹³

Thus, the most basic point that the federalists clung to was the idea that the American people—and hence people generally—under the right political, social, and economic circumstances were capable of self-government. A confluence of circumstances, the Founders believed, had equipped Americans for republican government. Madison declared

It is evident that no other form [than republican government] would be reconcilable with the genius of the people of America, with the fundamental principles of the Revolution, or with that honorable determination which animates every [advocate] of freedom to rest all their political experiments on the capacity of mankind for self-government.¹⁴

The government created by the Constitution was anything but streamlined. In fact, it was designed to be intricate, complicated, and studded with process and procedure. It forced all important issues into open and extended dialogue. It tried to outlaw secret closed-door deals. Even though it grew out of an effort to centralize power in a new national government, the Constitution reflected political instincts that warned against concentrating the awesome power of government itself in a few hands. The Founders worked carefully to prevent consolidation of authority in the hands of any single person or dominant office. So how specifically did they do this?

The one organizing algorithm, the one design mechanism, that the Founders relied on consistently in creating the constitutional structure can be summed up by the phrase “checks and balances”—or, more completely, checking the impulsive drives of human nature in some officials by the balancing effect of the drives of others. These checks and balances are built into every provision of the Constitution. Baldwin summed it up: “In this beautiful graduation, we find all those checks which are necessary for the stability of republican government.”¹⁵ Hamilton stated most bluntly the reason for using checks and balances so carefully:

An elective despotism was not the government we fought for, but one which should not only be founded on free principles, but in which the powers of government should be so divided and balanced among several bodies of magistracy, as that no one could transcend their legal limits without being effectively checked and restrained by the others.¹⁶
(italics in original)

All of this occurred in an effort to institutionalize wisdom into the essential, but dangerously powerful, organization of government.

The Wisdom of the Brain

Now I must make a significant digression. This is to point out the amazing similarity of the Founders' design principle—the checks and balances of the drives of human nature—to what contemporary science hypothesizes about how the human brain works, again by checks and balances of drives.

What follows is my summary of the recent work, primarily of neuroscientists but also of many other kinds of behavioral scientists, that I have assembled in detail in my book *Being Human: A Neo-Darwinian Theory of Human Behavior*, which is currently moving toward publication. This book draws heavily on a 2002 book I did with Nitin Nohria, *Driven: How Human Nature Shapes Our Choices*. This earlier book posited that humans have evolved four unconscious drives or ultimate motives. These drives are manifested in our consciousness as emotions or intuitive senses. We concluded that all people have a persistent drive to acquire (dA) objects and experiences that improve their status relative to others. In other words, they are motivated in part by self-interest as defined by neoclassical economics. But humans also have their other drives that are ultimate and independent in the sense that fulfilling one does not fulfill the others. They have a drive to bond (dB) with others and with collectives in long-term relationships of mutually caring commitment; they have a drive to comprehend (dC) and make sense of the world and of themselves; and they have a drive to defend (dD) themselves, their love ones, their beliefs, and their resources from harm. All four of these primary drives have been established in the human brain by means of Darwinian evolutionary mechanisms because the existence of these drives improved the odds that the genes of their carriers would be passed on to subsequent generations.

In *Driven*, Nohria and I recognized that all four of these drives were in play as humans decided on courses of action in complex circumstances, but we did not have an explanation as to how the brain worked out the combining of the drives into a coherent plan of action. This is the major step taken now by the second book, *Being Human*, which pulls together the work primarily of neuroscientists on the functions of the prefrontal cortex. This part of the brain is known as the executive center and has dense two-way connections with the limbic area, the locus of the drives.

In describing the role of the prefrontal cortex, I draw heavily on Rita Carter's description in her book *Mapping the Mind* and link this with my description of the functions of the drives in the limbic area. Carter summarized the overall role of the prefrontal cortex:

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, and, most important,

endowing those perceptions with meaning. . . . This is the only part of the brain that is free from the constant labor of sensory processing. It does not concern itself with the mundane tasks in life such as walking around, driving a car, making a cup of coffee, or taking in the sensory perceptions from an unremarkable environment. When something untoward occurs . . . the prefrontal cortex springs into life and we are jettisoned into full consciousness as though from a tunnel into blazing sunshine.¹⁷

I argue that these “untoward” events are signals from the limbic area that two or more of our drives have been activated by sense organ signals and are rapidly signaling, in conflicted ways, for the attention of the prefrontal cortex. This is what turns on our full, high-level consciousness. These emotionally loaded signals enter the module of the prefrontal cortex known as the ventromedial cortex. To quote Carter again,

This [ventromedial module] is where emotions are experienced and meaning [is] bestowed on our perceptions. This is the brain’s emotional control center. . . . The connections between this region and the limbic system beneath it are very dense, closely binding the conscious mind with the unconscious, and this configuration is probably what gives it its special status; it is, if you like, the part that best incorporates the whole of our being, making sense of our perceptions and binding them into a meaningful whole. . . . It makes sense of our existence.¹⁸

Carter did not call the ventromedial module the seat of the soul, but from this description it seems to me to be a candidate. Antonio Damasio, a prominent neuroscientist, was more explicit about this issue in his book, *Descartes’ Error*: “Feelings form the base for what humans have described for millennia as the human soul or spirit.”¹⁹

The ventromedial module sits alongside the orbitofrontal module, the second of four special prefrontal cortex modules that work tightly together to perform the brain’s executive function. This module, according to Carter, “inhibits inappropriate actions, freeing us from the tyranny of our urges and allowing us to defer immediate reward in favor of long-term advantage.”²⁰ In this sense, the orbitofrontal module seems to evaluate these conflicting emotional markers and initiate a downward checking with the limbic area concerning the prefrontal cortex’s tentative attempts to generate balanced action plans. As Carter suggested,

The orbito-frontal cortex has rich neural connections to the unconscious brain where drives and emotions are generated. The down signals from the cortex inhibit reflex clutching and grabbing, and if you take away that control—as happens sometimes in frontal lobe injury—the unconscious retakes the body. . . . Orbito-frontal cortex seems, then, to be the area of the brain that bestows a quality we may refer to as free will.²¹

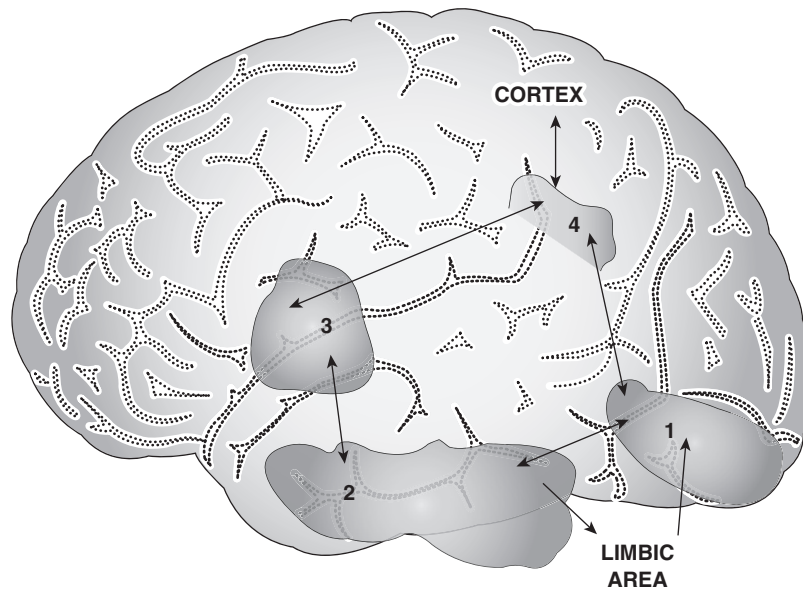
This module seems to have the capacity to discipline the emotional centers to defer an impulse on behalf of other essential impulses—a will to accept the pain of giving something up for a greater good or a lesser evil. It seems to be the “check” of the check-and-balance system. It also seems to be the final chooser of the brain, not in the sense of actually making the choices but rather in the sense that it counts the votes from the limbic area and announces the decision.

Just above this module lies the dorsolateral module. Here is where, according to Carter, “things are held ‘in mind’ and manipulated to form plans and concepts.”²² This is where tentative plans can be mentally juggled. It is the center of what has been called the “working memory.” It is the focal point of consciousness. Various action scenarios that are imagined can be fed back through the lower modules to the limbic area for multiple readings on their ability to fulfill the several drives. The dorsolateral module works very closely with the fourth module, which has actually been in full operation since the conflict of drives was first sensed by the ventromedial module.

That fourth module is the anterior cingulate cortex, which Carter maintained “helps focus attention and ‘tune in’ to one’s own thoughts.”²³ It is this module that is in constant close touch with other parts of the cortex where the various memories and skills are held. It is the module that calls the entire cortex to attention to focus on the critical issue at hand. It can call up the relevant representations and bring them into the juggling process going on in the dorsolateral module next door. To quote Carter again, “This part of the brain lights up when [the brain] does something of its own volition—it is one of the areas which seems to contain the ‘I’ we all feel we have inside us.”²⁴ It seems to be the site of the self-concept, the place that pulls together elements that are called personality, personal character, and competencies.

Figure 3.1, which has been adapted from Carter, summarizes the hypothesized functions and the interrelations of the four critical modules of the prefrontal cortex.

The next step in understanding the decision-making process is spelled out in Figure 3.2. This schematic diagram can be read as follows, starting from the bottom left corner. Current environmental information passes to the sensory areas of the brain through the sense organs. This information may be in the form of cultural cues (e.g., the raised eyebrow of an elder), observations of well-known things (e.g., a coveted sports car), or observations about a new situation (e.g., the cultural practices of an unfamiliar human group). Although our examples will deal with visual information processed through the eyes, the model applies equally to information processed through the ears, nose, skin, and so on. The signals from the sensory areas are passed through the limbic system, where the four drives reside. Here these signals are evaluated by the drive modules and pick up



1. VENTROMEDIAL CORTEX

Where emotions are experienced and meaning is bestowed on our perceptions. Tightly linked to the limbic area and possible location of the soul.

2. ORBITOFRONTAL CORTEX

Inhibits inappropriate actions. Where emotional impulses check each other and willful choices are made. Tightly linked to the limbic area and possible location of the will.

3. DORSOLATERAL CORTEX

Working memory where all signals are held "in mind" and manipulated to form tentative plans and concepts. Possible focus of consciousness.

4. ANTERIOR CINGULATE CORTEX

Helps to focus attention and tap into cortex for relevant representations, cultural memes, and skills. Possible location of the self-concept.

Figure 3.1 Modules of the Prefrontal Cortex and Their Functions

SOURCE: Adapted from Carter, *Mapping the Mind*, p. 182.

emotional markers depending on which of the four drives they activate. Any sensory signal may be loaded with more than one emotional marker such as when the sight of the coveted sports car triggers the dA module to load the signal with a positive evaluation while also triggering the dB module to load it with a negative evaluation arising from a sense of bonded obligation to save money and stay safe for the sake of one's family.

These emotionally marked signals are then processed in the prefrontal cortex. The prefrontal cortex has the cognitive capacities to generate potential courses of action that might satisfy the drives. This process is supported

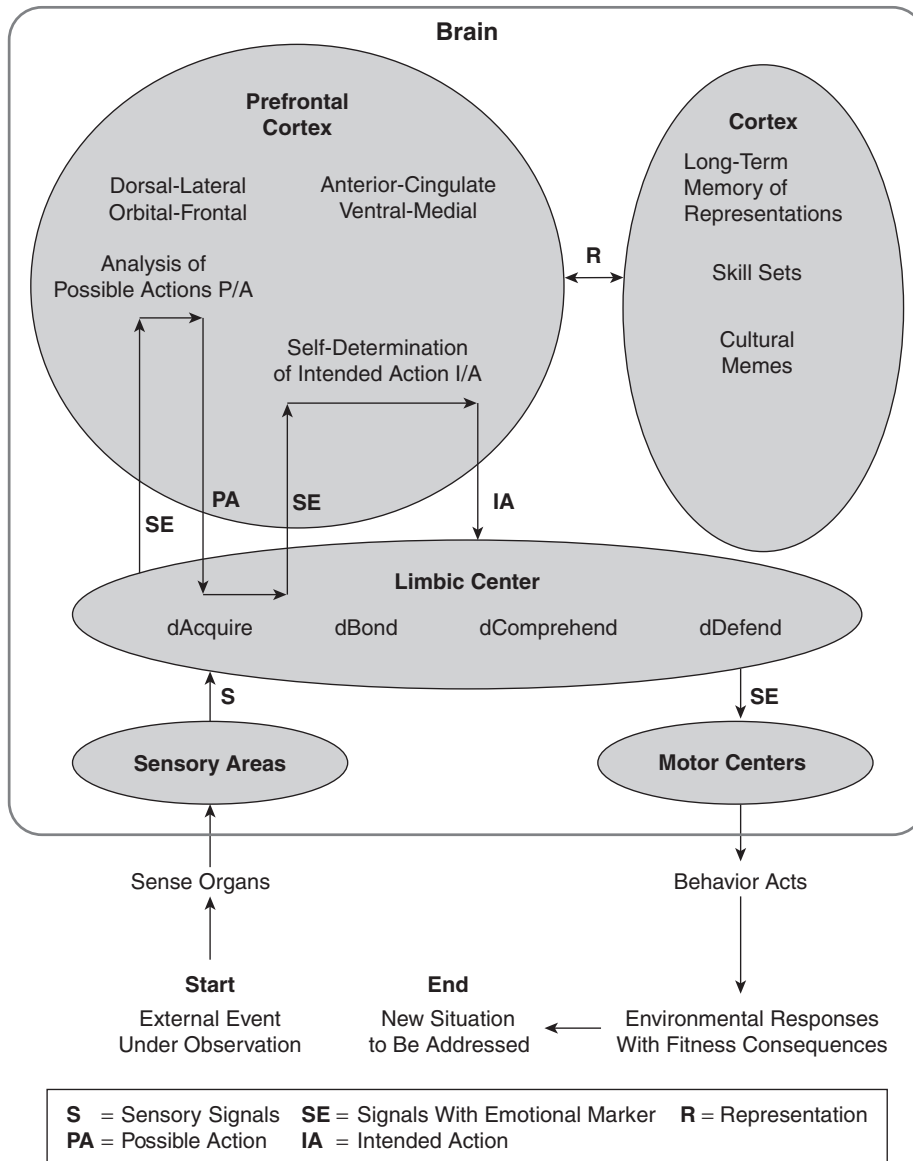


Figure 3.2 Schematic of How the Brain Makes Decisions

by long-term personal memories, skill sets, and cultural memes summoned as representations from the rest of the cortex.

Once a tentative action (e.g., to postpone buying the sports car) is chosen through the exercise of human will, this signal is fed back through the limbic center to test whether the proposal is at least tolerable to the four drives. If it is satisfactory, even though less than optimal to all of the drives, it will pick up the emotional energy provided by the drives. These energized signals are then relayed to motor centers that control the muscles

and other bodily parts. The resulting actions are what we recognize as deliberately intended human behavior (e.g., walking away from the showroom in which the tempting car is being displayed).

These actions in turn generate environmental responses with survival consequences (e.g., a spouse's loving appreciation along with a lingering regret from forgoing the sports car), a new situation with which the individual must now deal. The impulse/check/balance process has now played itself out. All of this can happen very quickly, and such cycles are repeated over and over in our everyday lives. We always have mixed emotions and real conflicts of interest facing off in our brains, and this is what forces us to make hard choices. This is what makes us human.

The third and final step in explaining the brain's decision making is to show how the four drives serve as checks of one another by way of the "dialogue" that proceeds between the modules of the prefrontal cortex and with the limbic area. This is shown in Figure 3.3, where each drive's ability to check the other three drives is displayed in a simplified form. It is this checking process that enables humans to sustain a very dynamic balance among their four powerful drives.

The analogy of riding a unicycle might help here by its obvious requirement for balancing skills. One can succumb to the pull of gravity in any of the four directions: right, left, forward, and backward. Furthermore, the balancing must go on all the time; a rider can never succeed on the basis of a single impulsive action for more than a very brief time. Also, to stay still

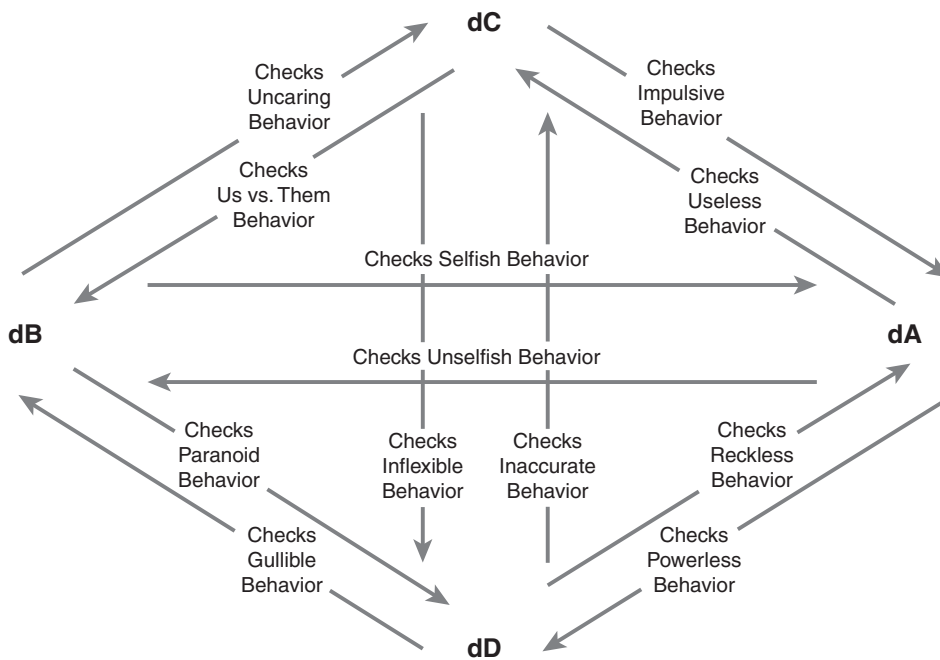


Figure 3.3 Impulses and Checks

is to fall; one must move forward to remain upright, continually compensating for each misstep with a move in the opposite direction. It takes extensive practice to develop one's unicycle skill, but it can be done. This is also true of keeping on track in one's own life, and this balancing act proceeds in the prefrontal cortex. Neuroscientists tell us that the last part of our developing brain to become fully functional is the prefrontal cortex—around the early 20s. This is why younger people need loving guidance. But once it is mature, this high-quality brain system works amazingly well to produce wise adaptive behavior. It is a personal governance system, but it is not foolproof—as the Founding Fathers well knew. Humans need governments to support and reinforce individuals in acting in a wise balanced manner. Steven Pinker, in his book *The Blank Slate*, offered a revealing example in this regard:

As a young teenager in proudly peaceable Canada during the romantic 1960s, I was a true believer in Bakunin's anarchism. I laughed off my parents' argument that, if the government ever laid down its arms, all hell would break loose. Our competing predictions were put to the test at 8:00 A.M. on October 17, 1969, when the Montreal police went on strike. By 11:20 A.M. the first bank was robbed. By noon most downtown stores had closed because of looting. Within a few more hours taxi drivers burned down the garage of a limousine service that competed with them for airport customers, a rooftop sniper killed a provincial police officer, rioters broke into several hotels and restaurants, and a doctor slew a burglar in his suburban home. By the end of the day, six banks had been robbed, a hundred shops had been looted, twelve fires had been set, forty carloads of storefront glass had been broken, and three million dollars in property damage had been inflicted before city authorities had to call in the army and, of course, the Mounties to restore order. This decisive empirical test left my politics in tatters.²⁵

So Pinker learned that humans really need to supplement their built-in check-and-balance mental system with that of government if they are to live together in peace and prosperity.

The Parallels Between the Wisdom of the Brain and the Wisdom of the Constitution

Now that we have described the check-and-balance system of the brain, we need to reexamine in somewhat more detail how this process was built into the Constitution. As we have seen, the Founders worked carefully to prevent consolidation of power in the hands of any single individual, dominant office, or institution. The phrase “checks and balances,” used over and over in

creating the constitutional structure, sums up the one organizing algorithm, the one design mechanism, on which the Founders relied consistently for this purpose. This counterbalancing was carried out by denying ultimate power to any one body and thereby forcing decisions to be made by reasoned debate. This is where dialogue that relies on logic is forced onto center stage to resolve the inevitable conflicts. This was the royal road—the only road—to wisdom in public affairs. Each governmental element was positioned as a check on the other governmental elements so as to sustain a dynamic balance.

The Founders poised the voting rights of the people as a check on the entire governmental apparatus, even as the government and its laws were to check the impulsive behavior of the people. Each branch of government—legislative, judicial, or executive—was designed to balance any rash and hasty actions by the other branches. The president commanded the military, whereas Congress funded it. The House was given the power to bring articles of impeachment, whereas the Senate had the power to try them. The federal right to levy taxes, incur debts, and regulate foreign and interstate commerce served to check the individual states, whereas the states explicitly retained all other rights not conferred on the federal government.

The president was given the power to negotiate treaties, whereas the Senate had the power to ratify them. Hamilton stated explicitly that the goal was to disperse the power of treaty making:

The security essentially intended by the Constitution against corruption and treachery in the formation of treaties is to be sought for in the numbers and characters of those who are to make them. The JOINT AGENCY of the Chief Magistrate of the Union, and of two thirds of the members of a body selected by the collective wisdom of the legislatures of the several States, is designed to be the pledge for the fidelity of the national councils in this particular.²⁶

Another example—and this was a major innovation—was the principle of an independent judiciary. In a traditional government, the judges were under the control of the monarch. Even Britain, whose laws at the time were enacted by Parliament, left the enforcement and interpretation of the law to judges serving at the pleasure of the monarch. This left the ordinary citizen subject to the judgments of men beholden to the monarch, who was himself largely above the law. Under the leadership of John Adams, Massachusetts took the initiative in establishing the principle of the independent judiciary in its state constitution, and the U.S. Constitution writers followed this example.

Religion posed a unique problem that resulted in a unique solution. Although Americans were certain that they could do without a monarchy and an aristocracy, they had no intention of doing without the third traditional pillar of governance—religion. But how was religion to be checked? With what could it be balanced? There was no answer, and for perhaps the

first time in history a government explicitly denied itself the right to name an established religion. This was by no means an obvious step at the time—even in America. Six of the colonies had records of recognizing an established church. But they were different churches. In Virginia and other southern colonies, it was the Anglican Church; in Massachusetts and Connecticut, it was the Congregational Church; and in Pennsylvania, it was the Quaker Church. The separation of church and state was first hotly debated in Virginia, but under Thomas Jefferson's leadership it was enacted into law in 1785, and other colonies quickly followed. The leaders of all the colonies had come to realize that to establish any one church would make it impossible to unite the states. This did not mean that these men did not share a belief in a divine creator. Some of them may have been agnostics, but it is very unlikely that any of them were atheists. A number of them were in fact Deists, a faith that emerged from the Enlightenment and expressed a belief in a divine creator of the universe but eschewed more specific doctrines.

The final masterstroke of the system of checks and balances was the Bill of Rights, which was not added until 1790 but which has become, in most Americans' minds, the very heart of the Constitution. The Bill of Rights explicitly named those rights of the people on which the government had no right to infringe. It became a linchpin of legitimacy for this new kind of government, unique in being defined not only by what government could do but equally by what it could not do.

Baldwin summed it up:

By the Constitution of the United States, all the essential rights of freemen and the dignity of individual States are secured. The people have the mediate or immediate election of their rulers—to the people they are amenable for their conduct and can constitutionally be removed by the frequency of election. While the voice of the people is heard in the House of Representatives, the independent sovereignty of the several States will be guarded by the wisdom of the Senate, and the disinterested penetration of the President will balance the influence and prevent the encroachments of each. In this beautiful gradation we find all those checks which are necessary for the stability of republican government and the due deliberation of the most perfect legislature.²⁷

The U.S. Constitution remains the preeminent example in human history of a social invention that truly embodied wisdom in a large-scale human institution. Its parallels with the design of the human brain are truly amazing. Translating the Founders' language into the terms of the *Being Human* book, "human nature" is our innate features of the brain. More specifically, the Founders' "passions" and "impulses" are our innate drives: their "ambition" is our drive to acquire, their "virtue" is our drive to bond, their "reason" is our drive to comprehend, and their "wisdom" is our state of dynamic

balance. For the Founders, impulses are checked by counterimpulses in others and by the process of dialogue. In the brain, impulsive drives are checked by other drives and by the neural exchanges, the dialogue among the prefrontal modules and the limbic drives. Amazingly, the Founders created a government that, in essence, serves the American people as a prefrontal cortex in relation to the limbic drives. What an insightful design—if we can keep it.

As the Founders finished their work, they still had two big worries about the future of the country. The first was the continuing existence of the institution of slavery. They knew that slavery was a major contradiction to the nation's founding premises and was a horribly cruel fact of American life that needed to be eliminated. They also knew that this could not be done at that time while still getting the new government under way. They knew, for example, that the expression "United States of America" still called for a plural verb form. The United States of America did not have first call on the loyalty of most of its citizens; the individual states did. It took some 70 years for the loyalty to the Union to build up to the point where the federal government could face up to the slavery issue. This precipitated the horrendous crisis of the Civil War and its aftermath.

The second major worry of the Founders going forward was the "factionalism" of political parties or special interests. They feared that some faction might seize the powerful reins of government for some narrow special interest. Madison again spoke to the issue: "By a faction, I understand a number of citizens who are united and actuated by some common impulse of passion, or of interest, adverse to the rights of other citizens, or to the permanent and aggregate interests of the community."²⁸ He warned that the problem would not be solved easily: "The latent causes of faction are . . . sown in the nature of man."²⁹ Madison argued in particular that this was true because people were actuated by powerful "acquisitive instincts."

Madison recognized that societies would inevitably fractionate into special interests:

Those who hold and those who are without property have ever formed distinct interests in society. Those who are creditors, and those who are debtors, fall under a like discrimination. A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations and divide them into different classes, actuated by different sentiments and views. The regulation of these various and interfering interests forms the principal task of modern legislation and involves the spirit of party and faction in the necessary and ordinary operations of the government.³⁰

Although Madison recognized the inevitability of such special interests, he believed strongly that no one of them should ever be allowed to dominate government.

Relevant Questions Concerning the Building of Wisdom Into Corporate Governance

In regard to the current status of this hazard of special interest factionalism, I can only raise some pointed questions. But first I should point out just a few relevant facts. At the time the Constitution was written, there were no corporations that were set up as legal entities as we know them today. These new institutions have, over the years, grown into massive organizations that have concentrated power in a few hands. Consider the corporations that we know and constantly study. We all know that corporations can be tremendous engines of innovation and efficient producers of vast goods and services for the benefit of all. But we can also not duck the fact that corporations do, from time to time, go off the constructive path and use their great power to exploit the many for the benefit of the very few at the top who are serving only their narrow self-interests. Think of the robber barons of only a century ago and of the recent leaderships of Enron, Tyco, WorldCom, and the like. The abuses of corporate power can take any combination of six forms: (a) the abuse of employees, (b) the abuse of small stockholders, (c) the abuse of consumers, (d) the abuse of suppliers, (e) the abuse of the natural environment, and (f) the corruption of government. Enron seems to have engaged in all six forms of these abuses.

Now for the tough questions. Do corporations have checks and balances permanently built into their top-level governance mechanisms? Would it be possible to build into corporation governance checks and balances, comparable to those in the Constitution, that would keep corporations on the constructive path for the common good? What would they look like? Have corporations ever gone through a constitutional convention process similar to the one that created the Constitution? Does more organizational design work need to be done before corporations can be considered as self-governing institutions, trusted to act wisely in regard to both the public good and private rights? What might be the role of national government in specifying the required governance structures in all corporate charters and in monitoring the ongoing compliance with these rules and procedures?

I believe that such questions about corporations are calling out for our attention, and I have made a start toward this process in the application chapters of *Being Human*. I base my suggestions not only on the newer understandings of how the human brain makes decisions but also on the premise that we still have much to learn from our Founding Fathers about how to institutionalize wisdom.

Notes

1. Baldwin, Simeon, *The Debate on the Constitution: Federalist and Antifederalist Speeches, Articles, and Letters During the Struggle Over Ratification*,

Vol. 2: *January to August 1788*. Bernard Bailyn, ed. New York: Library of America, 1993, pp. 520–521.

2. Henry, Patrick, *Debate on the Constitution*, p. 596.
3. Madison, James, *The Federalist Papers*. New York: Bantam Books, 1982, No. 14.
4. Jay, John, *Federalist Papers*, No. 2.
5. Madison, *Federalist Papers*, No. 51.
6. *Ibid.*, No. 49.
7. Hamilton, Alexander, *Federalist Papers*, No. 34.
8. Madison, *Federalist Papers*, No. 57.
9. Hamilton, *Federalist Papers*, No. 6.
10. Madison, *Federalist Papers*, No. 51.
11. Madison, quoted in Bernard Bailyn, *Faces of Revolution: Personalities and Themes in the Struggle for American Independence*. New York: Knopf, 1990, p. 260.
12. Madison, *Federalist Papers*, No. 55.
13. *Ibid.*, No. 57.
14. *Ibid.*, No. 39.
15. Baldwin, *Debate on the Constitution*.
16. Hamilton, *Federalist Papers*, No. 48.
17. Carter, Rita, *Mapping the Mind*. Berkeley: University of California Press, 1998, p. 182.
18. *Ibid.*, p. 187.
19. Damasio, Antonio, *Descartes' Error*. New York: Avon Books, 1994, p. xvi.
20. Carter, *Mapping the Mind*, p. 197.
21. *Ibid.*
22. *Ibid.*, p. 182.
23. *Ibid.*
24. *Ibid.*, p. 195.
25. Pinker, Steven, *The Blank Slate*. New York: Viking, 2002, p. 331.
26. Hamilton, *Federalist Papers*, No. 66.
27. Baldwin, *Debate on the Constitution*, p. 521.
28. Madison, *Federalist Papers*, No. 10, p. 43.
29. *Ibid.*, p. 44.
30. *Ibid.*