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QUEST FOR GOOD STEERING AND POSITIVE CONTROL

by Richard Waddell

Whatever runs counter to the mind and will of ordinary people hinders the Law of Men and the Law of Buddha. [\[i\]](#)

Forward

We should expect an Article V Convention to be a contentious affair and try to plan accordingly. We can ease some conflict by agreeing beforehand on some criteria for evaluating proposed changes. In this article I attempt to provide a dispassionate discussion of guidelines for obtaining a responsive and effective governing system.

To provide some orientation, the evaluation criteria suggested in this article could not likely be met by tinkering around the constitutional edges. Some clever scholars may suggest simple fixes that meet the suggested criteria, but that seems unlikely. If we conclude that the constitutional changes necessary to meet these criteria are not feasible, we need to at least understand what we are giving up for feasibility.

This article does not suggest an exhaustive set of criteria. This discussion is limited to criteria related to the dynamic behavior of the system.

This article was written from the perspective of a systems analyst and designer. Appreciating the arguments presented here require some changes in our usual perspective. I use the term *governing system* as opposed to *government* because forces outside of government per se affect the performance of our government. This applies especially to news reporting.

This analysis proceeds on the assumption that we want to use our governing system to pursue goals. These goals could be to achieve an altered state or to simply maintain the status quo. To develop an appreciation for the pertinent issues, the idealized governing system is discussed using the passenger car as a metaphor.

Introduction

A friend of mine, a sports car buff, tells me I don't know what good steering is, but I know what I like. For example, I liked driving a new 1964 Corvair off a showroom floor. The front-end had little weight, and driving through the streets of Dayton was a joy to my naive sensibilities.

However, I did *not* like the car's behavior when I drove onto the interstate highway. I began to pick up speed, and then, at about 65 mph, the steering started to go unstable. The car went into a big side-to-side pitching motion. I could get control only by bringing the speed down to about 50 mph.

Later I read the manual, checked the tire pressures and discovered that someone had inflated them improperly. The Corvair steering, as I learned later from Ralph Nader's book, *Unsafe at Any Speed*, is sensitive to pressure differences between the front and back tires. [\[ii\]](#)

I also did not like my old Hillman Minx. Former owners (survivors) call this car an "industrial joke." Even though the engine was in the front, the car had no power steering. Everything was all right as long as I wanted to go straight ahead; but, when I tried to turn, the car resisted me. The steering was sluggish, stubborn, and difficult. Governments can be sluggish, stubborn, and difficult for the citizens to steer also. Sadly, in much of the world, the governments drive the citizens.

The *ship of state* has been a common metaphor for the operation of government; but, for contemporary

governments, the operation of a car provides a more appropriate model. In both their cars and their governments, citizens want many of the same characteristics. First, they want to maintain positive control over both. With respect to the government, I refer, of course, to *collective* control. With both systems citizens want responsive steering. They want stability, efficient operation, safety, inexpensive maintenance, and, more importantly, they want both systems to close the gap between where they are and where they want to go. Perhaps most importantly, they want the ability to *apply the brakes* when either their car or their government is taking them someplace against their will.

My references to the operation of a car may begin to resemble an overworked literary device or a *tour de force*. However, I ask for your indulgence because the references are not simply for style, but they come from analytical procedures and a decision to analyze the efficacy of the governing system as a goal-seeking system. The most straightforward analytical procedure is to compare the governing system with a goal-seeking system that is familiar to most of us: the operation of a passenger car. I use the concept of operating a car as a prototypical goal-seeking system.

This prototype helped to organize my own thinking so, of course, using the operation of a car is the most direct way to report my thinking. Finally, references to operating a car provide the reader a framework for getting feedback. When I make a theoretical reference to goal seeking systems, the reader can test this reference against known goal seeking operations such as the operation of a car or other prototypical systems with which the reader may be familiar.

As a parenthetical aside (please forgive me), comparison between operating an automobile and operating a government may be more than a convenient analogy. I suspect it is more than coincidental that in Eastern European and Latin American countries the demands for democratic government grew in rough proportion to the size of the population operating cars. There is a danger here of confusing correlation with causality, but the possible causality raises some interesting questions. Is it possible that we carry habits of control developed in operating a car over into political areas of our lives? The East German Trabant may have done more for freedom than simply carry escapees to their jumping-off point. Operation of this lowly automobile may have implanted a familiarity with control, and control is a necessary condition for freedom. [iii] The citizen either controls government or government controls the citizen.

The operation of a car is, in many respects, a good simulator for the behavior of government. Time is compressed, a characteristic of most simulators, but otherwise the dynamic patterns remain intact. The distance between the destination and the present location represents the major *gap*, but, as with most goal-seeking systems, more immediate concerns exist. We frequently call these *short-term* goals. For the operation of an automobile, some of the short-term goals are to (1) follow the selected route, (2) stay on the road, and remain in the proper lane.

Instability and Discontinuities

Cars do not often exhibit as much instability as my old Corvair, but system designers are always concerned about stability. Control engineers usually define stability in negative terms. We say that a system is *stable* when it is not unstable. A system is unstable when oscillations become so large that the system cannot operate as intended [iv]. As I drove it off the showroom floor, control engineers would probably have described my Corvair as being marginally stable. During early development stages, some missile guidance systems were, on the other hand, truly unstable. These gave us the spectacular television news scenes where a missile began to tumble and had to be destroyed.

How does this discussion of stability apply to governments? Considering a government as a system, citizens usually do not concern themselves with instability as defined in terms of large oscillations. When governments become *truly* unstable, they soon self-destruct. This was, for example, the fate of the Russian Czarist Government; the Marcos Government of the Philippines; and, most recently, the Soviet Union. World leaders and other political commentators often lament the instability of various governments, but the more common and more serious problem is bad governments that are *too* stable. [v]

Closely related to problems of instability are *discontinuities*. Major discontinuities can adversely affect

businesses and individuals. For example, investments made under one set of economic conditions can become sources of losses when these conditions are altered. As applied to governments, we can define a *discontinuity* as an abrupt change in policy. For example, the Iraqi leader, Saddam Hussein, created a discontinuity when he invaded Kuwait. This is the kind of *instability* most political commentators have in mind and the kind which most often concern citizens. Many nations of the world initiated economic blockades and made military moves to restore *stability* to the Arab world. The concern was genuine that this discontinuity could cause other discontinuities of even more serious consequences.

The U.S. invasion of Iraq in 2002 represented a massive discontinuity in our foreign policy. The U.S. had shifted to a policy of preemptive strikes. Actions of the U.S. Federal Government have often exhibited discontinuities and other *pathological* dynamic problems. Some of these are problems found in only the worst cars such as my old Hillman Minx: massive flip-flops with sluggishness. The government is like a car that veers towards the left, and then, when the driver applies more pressure to the steering wheel than should be necessary; it careens back to the right. At times it veers in the other direction without any application of pressure.

These discontinuous characteristics have been especially pronounced in foreign policy. President Nixon was at one time a major spokesman for the policy of isolating Mainland China. Then, in a dramatic shift in policy, Nixon's envoy, Henry Kissinger, established contact with the Communist government. For several decades now the U.S. has enjoyed relations with China that oscillate between cool and cordial.

As another example, President Ronald Reagan once characterized the Soviet Union as the "evil empire," and seemed most reluctant to deal with the Soviets. Shortly afterward, he signed a major arms reduction treaty with these *demons*.

Most U.S. citizens welcomed these abrupt changes, and many voiced the complaint, "it's about time." That these dramatic changes were so popular indicates that the U.S. Administration had been resisting pressure for these changes. The changes were akin to the ungraceful opening of a stuck door. The defense against these sudden discontinuities is *responsiveness*.

This is a lesson that several repressive communist governments learned. All kinds of doors came unstuck after the people of Poland, Hungary, Czechoslovakia, East Germany and Romania ousted their Communist leaders.

Discontinuities also come from loose cannons such as Napoleon, Hitler, and Stalin; Western democracies have their *cowboys*. George W. Bush certainly comes to mind. Discontinuities can arise from a concentration of presidential power. When one person makes the policies, he does not have to compromise in moving from one policy to another. This problem is especially pronounced, as I write above, in the U.S. with respect to foreign policy. Discontinuities come from the enormous power of the U.S. President. When he has a revelation, he can, for the most part, act on it. He is, after all, the Commander-in-Chief and the "Decider."

The U.S. Founding Fathers were well aware of dangers from presidential power. Their solution was to split power between the President and Congress. Under the U.S. Constitution, the President was to act as Commander-in-Chief, but Congress was to retain the power to declare war, raise armies and navies, and initiate the funding of wars. This arrangement worked quite well until the Korean War. Since that time the country has had a standing army, navy, and air force, and the President has had - and used - de facto power to wage war without Congressional action to declare war or mobilize forces. Once the President has committed American forces to a conflict, Congress has not had the will to deny them funds. Congress has not declared war since World War II even though hundreds of thousands of Americans have fought and tens of thousands died in Korea, Vietnam, Lebanon, the Dominican Republic, Grenada, Panama and, most recently, Iraq. Congress has, in effect, lost its constitutional power to check the war powers of the President.

Discontinuities are signs of basic problems with a system's dynamic structure. Various discontinuities have been widely accepted and, given hindsight, are even more widely applauded by those affected favorably. Such discontinuities have included events such as the American Revolutionary War, the end of slavery in the U.S., and women's suffrage. However, in most instances, governments involved could have made the changes less abruptly. A more responsive British government could have given the Colonies more independence prior to 1776. The result might have been one mighty North American "Canada."

A more responsive South African government could have been making preparations over the past decades and

moving toward the end of apartheid. The discontinuity that marked the end of apartheid was welcome (to most people of good will), but the changes should have been coming steadily through the years.

The antidote for social discontinuities and the cure for sluggish ineffective government is, as I write above, *responsiveness*. This brings us to the first criterion for our improved governing system.

- ι Evaluation Criterion 1: *The system must be designed to respond quickly to changes in goals and to changes in the environment that would affect the realization of these goals.*

Lack of responsiveness in a goal-seeking system points to underlying problems. If the system moves forward in a series of jerking motions, it means the system is sticking someplace. We can always place these problems in one of two categories, *feed-forward* and *feedback*. In feed-forward problems the goals do not effectively reach the actuator, or they are subverted by the actuator. With feedback problems, the system does not accurately detect actions of the actuator. If the system reads the actions properly, the forecasts may be flawed. In either event, the goal-setter does not get the information needed to make informed decisions.

Feed-Forward Problems

Any driver who has ever had a tire go flat while driving, especially a front tire, has experienced a "feed-forward problem." For democratic governments, feed-forward problems start with elections. In the U.S, these problems have become pathological, especially in presidential elections. In theory, citizens articulate goals through elections. Candidates initiate the process when they make known their positions on various issues. Citizens then define goals for the government by electing those candidates whose positions on issues most nearly match their own desired goals. This procedure is somewhat like trying to reach a destination by asking a group of cab drivers where they are going and then selecting the one that seems to be going nearest to your intended destination. To further the analogy, imagine the drivers hedge and lie about where they really intend to go. Not surprisingly, the scheme does not work well.

Steering the U.S. government is not like steering a car because, among other differences, we do not have access to continuous steering. We can try to change the direction every two years at congressional elections and every four years at presidential elections. Imagine the difficulty if your steering were locked except at periodic intervals. The tendency would be to over-correct, and the path would be erratic. Indeed, controlling government through our two-party system is similar to having a further restriction: we can try to steer either 5 degrees to the left or 5 degrees to the right.

Parliamentary governments have a better approach. Representatives can make a steering correction when they perceive the need for one. That is, when a crisis in confidence occurs, then the people can set the new direction. The British system can force elections in response to issues that surface. In the U.S. system, issues are developed, sometimes creatively invented, to coincide with the elections. [\[vi\]](#)

One of the more sinister aspects of the U.S. election system is the possibility for manipulating events to delay or hasten issues. Many believe that the U.S. Federal Reserve Board manipulates our economic system to delay inevitable economic corrections. Whether this does, in fact, occur, a potential for mischief exists. In that sense, the system is flawed.

Even if we accept the premise that the voters communicate a set of goals, however vague, through elections, problems remain in turning these goals into corresponding, actions. Change is a constant; issues that might have been heavily debated during an election often fade quickly into irrelevance. Politicians and public administrators lose their moorings, and lobbyists and other sources of public pressure quickly fill the information vacuum. Flip-flops occur when politicians perceive a shift in public sentiment. Politicians suddenly switch policies when they see the parade is going in the "other direction."

My hometown, Bartlesville, Oklahoma has had frequent feed-forward problems. Several years ago our sewer system deteriorated to the point that heavy rains left mounds of toilet paper around overflowing manhole covers. These monuments to filth and corruption told us developers had overloaded the sewers and raw sewage was running in our streets. Citizens formed The Neighborhood Councils of Bartlesville (NCB) to respond to these and related development problems.

The NCB was formed immediately before I was elected to the Bartlesville City Council. I was a proponent of the NCB, and I suggested to one of my constituents that he consider joining his local council. His response was, "Why do we need the Neighborhood Councils to represent us? We elected you to represent us."

His question left me disconcerted. I had not given the matter much thought but had simply taken it for granted that citizens needed special representation, lobbying, to get the council members to act. We could also ask our state and national representatives why we need lobbyists at those levels of government. We could ask why we must form organizations of environmental activists to protect our environment. We are in the ridiculous position of forming organizations to represent us to the organizations that were formed -- in the first place -- to represent us. We have come to accept the idea that -- in addition to being represented by a Congressman, Senator, and the President -- we must also be represented by lobbyists.

This situation is like hiring somebody to help steer your car. If your car were as difficult to control as your government, you would take the common-sense solution of replacing your car.

To add to this absurdity, we have formed Political Action Committees (PAC's) to pay for the election of people to represent us. The emergence of PAC's and special interest lobbies tends to compartmentalize our goals. Our government does not act to fulfill a set of integrated goals but, instead, tries to fulfill the goals of the dominant separate causes.

This trend also tends to compartmentalize our society, and, in turn, it tends to compartmentalize the lives and personalities of individuals. All of us benefit from the *synergy* that comes from association with people of different beliefs and backgrounds. The differing ethnic groups gave the United States an energy that we would not have gotten from a single culture. We are now diluting that energy and accentuating differences even though we share in common our most important goals--peace, freedom, survival, etc. We are wasting personal energy and other resources from trying to steer in many different directions. We need the synergism that comes from consensus steering.

We are also missing opportunities to develop *community*. Writers often use this term loosely; I use the term in the strong sense defined by Bellah, et al. in *Habits of the Heart*. Among other characteristics, a *community* is a group of socially interdependent people who decide issues through collaboration and close encounters of the amiable kind. Members of a community do not yell at one another in front of an abortion clinic. They try to find common ground using sincere, non-manipulative, one-on-one, and group discussions. [\[viii\]](#)

Instead of negotiating differences individually within a potential community, citizens are joining with groups of other *true believers*, and the groups confront opposing groups. Social interdependence within these *special interest* groups is typically weak and based only on the narrow purpose of the group. Such groups are subject to serious self-deception, and extreme positions tend to become viable within the group. (Anti-abortion organizations provide a vivid contemporary example of such groups.) Our government representatives become mediators between competing special interest groups and neglect their roles of representing *all* their constituents.

Western Society needs the benefits that come from the development of *communities* whose interests are broader than that of special interest groups. Citizens miss opportunities to develop *assertive* skills. I use this term not in its common association with aggressiveness but in the sense described by Bolton in *People Skills*. [\[viii\]](#) *Assertiveness* refers to those communications skills that enable one to satisfy his needs without dominating, manipulating, nor otherwise abusing others. We need such skills for the face-to-face discussions required to develop and make operative a moral consensus for society. .

Our society is sadly lacking in these skills. We are, many of us, intellectual and verbal *wimps*. The political issue of whether George H. W. Bush was a wimp reflected, I believe, an anxiety about our own assertive skills. Too many of us can deal with issues only by ignoring them or by using violence or threats of violence. We, especially the males, bolster our sagging self-esteem through vicarious adventures with John Wayne or Rambo. We are especially concerned -- even anxious -- that a non-wimp President represents us to the rest of the world.

Another benefit from community development is the possibility that the community can develop into an association closer to that of the village or small town. Something is radically wrong with a society when so

many of its members desperately want to numb their feelings with alcohol and drugs. We need to develop institutions to supplement the weakened extended family to pass on to our children those values and attitudes that will enhance their lives.

In spite of its faults, the regime of Louis XVI gave us one isolated example of a feed-forward system that exhibited some of the benefits described above. Immediately prior to the French Revolution, the government was desperately trying to avoid a financial collapse. Circumstances persuaded or perhaps forced the King to summon an Estates-General, a body representing each of the three Estates of French Society: the Nobility, the Clergy, and the Third Estate (Commoners). As part of this procedure, the government invited each of the three classes to draw up a *cahier des plaintes et doléances* -- a statement of complaints and grievances. Within each class, the delegates summarized the district *cahiers* to form the provincial *cahiers*. They then presented a synopsis of the whole to Louis. [\[ix\]](#)

Formation of the *cahiers* for the Third Estate began with local assemblies or, to use the medieval term, *bailliages* (bailiwicks). The village churches hosted many of the meetings. Each of these initial assemblies was convened for about one hundred voters. These meetings indelibly shaped later events of the revolution. This is where the peasants, proletariat, and bourgeoisie formulated ideas and crystallized their understanding of what they wanted for their nation. They sent to assemblies at the next level representatives who knew why they were going and what their constituents expected from them. These assemblies were probably a high point in French politics and well worth emulating, and provide the inspiration for our next criterion:

- 1 Evaluation Criterion 2: *There must be an effective community forum for citizens to formulate, crystallize and communicate goals to their chosen representatives.*

Feedback

The previous section focused on system response problems due to feed-forward problems. The second category of response problems is due to inadequate *feedback* channels. Most drivers have, at some time, experienced feedback problems. Several years ago, a friend was driving on the Ventura Freeway in Los Angeles when the wind picked up a newspaper and slapped it across his windshield. He managed, with great difficulty, to open his window and pull the paper away without a mishap. Another more common example of this type of problem is, of course, driving through fog. Steering is a feedback process, and we get most of our feedback through sight. Feedback is essential to any steering process. You cannot steer if you cannot see where you are going. The system dynamic control loop is incomplete. This would correspond to a situation where your home heating system could not measure temperature. Drivers know that feedback information is essential. It is also essential for other goal-seeking systems as well, especially governing systems.

Citizens cannot control their government if they cannot see where their government is taking them. Effective control requires not only the power to change the direction of a system but also requires an understanding of where the system is going.

With almost instantaneous communications and an accelerating pace of events, the need to know where we are going becomes even more pressing. U.S. President George H. W. Bush fielded an army of about 50,000 troops in Saudi Arabia within several weeks. This occurred before the public even had time to begin debating such action. More than a year after the decision was made to enter the war, we learned that the U.S. public was the target of a sophisticated twelve million dollar public relations campaign funded by the Government of Kuwait. One of the critical elements of this campaign was the testimony of a fifteen year old girl that Kuwaiti babies were taken from their hospital incubators and left on the floor to die. We have since learned that the girl was the daughter of the Kuwaiti ambassador to the U.S. The Congressional Human Rights Caucus, who heard the girl's testimony, knew of the relationship, but did not tell the public. Later, an ABC News investigation and an investigation by Middle East Watch, a human rights monitoring organization, failed in their effort to confirm the story and have good evidence that it did not happen. [\[x\]](#)

For many reasons, citizens may not know nor fully understand what policies their government is pursuing. It will not come as a surprise to most of us that our government is capable of lying about its actions. U.S. government deception was also especially blatant during the Vietnam War [\[xi\]](#) and Gulf War II

Our most important source of feedback from government action is the news media. We have other sources, of course, such as Congressional newsletters or direct contact with elected officials. However, the bulk of the feedback is from the commercial news media. The media selects the agenda and creates the issues.

Ideally, the feedback we get would compare our goals with government actions and forecasted results. Unfortunately, however, the agenda of any viable newspaper is to sell papers, and the agenda of any TV network is to sell time. Commercial TV networks are more interested in giving us titillation and entertainment than in giving us information. After the entertainment, most citizens have little time to become informed. They have adapted to "information overload" by using the principle of "management by exceptions." Their motto is "If everything is all right, don't bother me; but, the minute anything goes wrong, let me know." The reporting of negatives has become an important function and one that the U.S. news media often does rather well.

Some citizens complain that the news is too negative, and they want more good news. (These are the naive souls who think a half empty glass is half full.) President Nixon complained about the negative press orientation when he said, "For the press, progress is not news -- trouble is news." His Vice-President, Spiro Agnew, harped on the same theme when he complained about the "nattering nabobs of negativism."

Nixon and Agnew wanted, of course, *positive* news. In the terminology of systems analysis, this could be termed *positive feedback*, and this kind of feedback is usually de-stabilizing.

Positive feedback occurs when a deviation of the system from its goals causes a movement that drives the system further in the same direction. This is the cause of those screeches we sometimes hear from public address systems. The microphone picks up amplified sound from the speakers, and the system amplifies this sound even further, driving the PA system beyond its operating limits. For a more thorough discussion of positive feedback see Richardson (*Feedback Thought*). [\[xii\]](#)

This same kind of problem occurs with those governments that do not permit their news media to report negative news. The media emphasizes *good* news, and this encourages government officials to continue policies that only aggravate problems. These governments are their own worst enemies. Negative feedback serves a beneficial stabilizing function.

Government restrictions do not plague U.S. reporting, but it is not as free and independent as it should be. Unfortunately, ordinary citizens do not have the time and resources to evaluate reports; or, what is probably more pertinent, they have no systematic way of determining what remains unreported. All too rarely, a columnist will do this for us. Alexander Cockburn gave us, in a *Wall Street Journal* article, some insight into press reaction to events following President Reagan's dispatch of 3,200 troops to Honduras. [\[xiii\]](#)

The U.S. media reported intense opposition by citizens of Honduras only after the Hondurans had sacked the U.S. Embassy. The U.S. press also ignored demonstrations by thousands of opponents within the U.S. On the diplomatic level, the Presidents of Mexico, Peru, Colombia, and Argentina all expressed harsh displeasure about the troop movements. These statements were all relayed to this country by Associated Press bureaus but the news outlets did not then further relay the statements to the public.

Sometimes public interest groups will try to provide "feed-back" as a public service. If their message is at all anti-establishment, they may be unable to air their message even if they are willing to pay for the television time. A political group, Neighbor to Neighbor, tried to run television messages asking people to boycott Folgers coffee because the sale of El Salvadoran coffee was being used to finance the civil war in that country. "What it brews is misery and death," intoned Ed Asner in the commercial. Only two stations out of 30, WHDH -TV in Boston and a UHF outlet in Worcester, Mass., accepted the commercial. [\[xiv\]](#)

In response, Proctor and Gamble, parent company to Folgers, pulled from WHDH-TV its commercials for Folgers and all of its other products. The loss to WHDH-TV is about \$1 million per year. Effectively, P&G, the largest packaged-goods advertiser in the U.S., has veto power over our first amendment rights. This one incident echoes the slogan, "Freedom of the press belongs to those who have one." It also illustrates that our *system* of government is vulnerable to *ataxia*.

Ataxia is a word that describes a class of neurological disorders. Wiener (*Cybernetics*) describes one person

with ataxia who has *tabes dorsalis*.^[xv] The man can move his legs when ordered to do so, but he can walk only by looking at his legs. If blindfolded, he cannot stand. Syphilis has damaged the part of the spinal cord that normally receives sensations describing the position and orientation of his feet and legs. He has a *feedback* disorder and can walk only with great difficulty by substituting visual feedback for more direct messages.

Many small town governing systems suffer from something resembling ataxia. Unfortunately, shoddy and selective reporting seems to be fairly common in small cities and towns that have only one newspaper. Bartlesville, Oklahoma is a good example of a bad system. The city has one daily newspaper, two radio stations, and a cable TV service. The same company that owns the newspaper also owns the cable TV service.

It is the newspaper that sets the agenda, creates local issues, and comments on these issues. The newspaper is a captive of the local Chamber of Commerce because the advertising comes from members of the Chamber. In effect, the local newspaper functions as a newsletter for that organization.

The Chamber of Commerce does not like the reporting of negative news. It is said to be bad for the town's image and "bad for business." It is also said to discourage new businesses from coming to Bartlesville. (Our Chamber of Commerce worships the "bitch goddess" Growth.) Therefore, the newspaper and cable TV are reluctant to report unflattering news about any Bartlesville institution. There is almost no significant investigative reporting. Voting in local elections is somewhat like a game of "pin the tail on the donkey." To avoid voting blindly is the purpose of our next objective.

- 1 Evaluation Criterion 3: *An independent part of the Governing System must provide accurate and timely reporting. The system must also communicate evaluations of government actions with respect to assigned goals.*

Information Overload

In spite of the profound problems with the reporting of our news, the most serious feedback problems are not due to government's deceptions or failings of the press. If we accept the premise that our forefathers gave us an adequate system of government, then much of the fault, "dear Brutus," is with us, with our biological heritage. Our personal information processing systems, brains, were not designed to run a U.S. type of democratic government.

Our brains were not even designed to handle the U.S. type of traffic. Steering a car is a complicated process involving kinesthetic and visual feedback. However, this immediate process is only part of the *meta-process*. We also must decide where we are going and decide how to get there. The need for logical information processing can, at times, be overwhelming.

I formerly made frequent business trips to Houston and have experienced information overload while driving an unfamiliar rental car along unfamiliar streets. In one instance I was driving along a street that had at least six lanes coming to a major intersection. The intersection was huge (by my hometown standards) and had a myriad of commercial signs and other distractions. I could not locate the traffic signals. The situation threw my left-brain into panic, and my right brain took over completely. (This was my post-crisis analysis.) I tried to sense what the cars immediately ahead of me were doing and to keep pace. From the cacophony of horns as I went through the intersection, I suspect I went through on a red signal.

My precarious passage through the Houston intersection and the normal procedure of obeying traffic signals represent two different modes of decision-making. One mode makes use of *feelings*, and the other *rational* mode uses logical cause and effect. Our society has decided that the use of traffic lights and a consistent set of driving conventions will help drivers avoid collisions at intersections. The *rational* method may become an automatic motor function with driving experience, but the underlying logic is based on rationality. As I indicate previously, the decision modes also have some correspondence to popular concepts of "right-brain, left-brain" models of thinking. The *left-brain* mode of operation involves the logical and linear use of information to make decisions. By *linear*, I mean that conclusions are drawn in a sequence so that previously drawn conclusions are used appropriately (logically) to arrive at subsequent conclusions.^[xvi]

On the other hand, the *right brain* mode uses holistic thinking and feelings to draw conclusions and guide

actions. Holistic thinking uses information to obtain a conclusion all at once, without any evidence of an underlying linear process. The flash of insight is a common example of this process. The *right brain* is better at tasks that require the knowledge of spatial relationships. Thus, when I drove through the Houston intersection, I used the knowledge of my spatial relations to other cars going through at the same time. My action was one of maintaining a *feeling* that I was with the other cars.

Not all experts accept the validity of assigning each of these characteristics to the respective hemispheres. Some authorities refer to some of these hemisphere assignments and other two brain ideas as part of a "dichotomania."^[xvii] ^[xviii] However, I feel confident in postulating the existence of two dominant modes of thinking and corresponding modes of decision-making because (1) the idea strikes a chord in so many people and (2) I have experienced two modes in drawing exercises.^[xix] However, to avoid thin academic ice, I will use an operational definition to delineate the two modes. When a decision is said to have been made on the basis of logic or reason and the decision-maker can state the logic, then that is *left-brain* decision-making. Otherwise, it is *right-brain* decision-making.^[xx]

However we choose to describe them, a dichotomy in modes of thinking and in modes of making decisions is quite evident in our political processes. At the approach of elections, I often experience a sense of panic similar to what I experienced going through the Houston intersection. I have been indoctrinated with the idea that I have a responsibility (almost a sacred duty) to study the issues, study the candidates, and vote intelligently. The panic comes from an inability to make intelligent choices. I have been guilty many times of "winging it" through the voting booth with my "right brain."

Left-brain decision-making is not superior to the right-brain mode or vice versa. Our survival requires the ability to use both modes. However, the use of one mode exclusively has perpetuated some gross errors. For example, our right brain spatial feelings told us the earth was flat. Later, after we learned the truth about the geometry of our earth, our right brains told us that the celestial bodies revolved around us.

The survival of democracies requires that voters make their decisions using both modes. However, election campaigns make increasingly greater use of *feelings*. Those candidates are successful who make the voters *feel* good about them. This has been especially true in U.S. Presidential campaigns. Perhaps this is understandable because, if candidates discussed all the significant issues, citizens would suffer from oppressive information overload.

In the 1984 Presidential campaign, for example, Ronald Reagan used the *feel good* strategy almost exclusively. The campaign resembled nothing more than an advertising campaign for perfume. The "morning in America" theme was designed to make us *feel good* about ourselves, about the country, and about the candidate. Advertisers cannot express many left-brain ideas about perfume. Perfume advertising tries to invoke good romantic *feelings* towards the product. Unfortunately, the *perfume strategy* seems to work as well for political candidates as for perfume. However, the survival of our democracy requires the discussion of left-brain ideas.

The need to use right-brain decision-making comes partly from information overload. This overload develops from at least three different sources:

- (1) Issues are complex. For example, how can laymen resolve the technical issues related to Strategic Defense Initiative (SDI)? How can they evaluate risks from global warming?
- (2) Government is complex. Most of us in the U.S. elect officials to local, county, state, and national governments. We may also elect officials to other special government and quasi-government districts (for example, water, sewer and school).
- (3) Elections campaigns usually add much useless information to the process of selecting the best candidates.

Many people (maybe most) admit their confusion about how to weigh issues and select candidates. Under these circumstances, not surprisingly, the right brain takes over and votes by intuition and "common sense." Unfortunately, common sense can tell you the world's flat.

Individuals in technologically advanced societies increasingly encounter new and complex systems. In recent

decades these have included automatic systems for dispensing currency, selling tickets, washing cars, dispensing gasoline, etc. For the system to be successful, it must be easy to use (that is, user-friendly). The potential customer will avoid those systems that are too difficult to use because they are time-consuming, require significant learning effort, or are otherwise inconvenient.

Most systems evolve, and over time they become easier to use. Manufacturers learn how to provide the customer with meaningful information. They learn where to place and how to shape controls. Automobiles are, of course, a prime example. In older cars, the user had to set a spark control, set a choke, and turn a crank to start the car. Now the user simply turns a key. In older cars, the user had to coordinate operation of a clutch and gearshift as he drove. Now these operations are automatic in most cars.

In contrast to these trends toward simplification of technical systems, our social systems, especially government, have become more and more complex. In response, increasing numbers of citizens are behaving predictably by ignoring the systems. To counter the trend towards complexity is the purpose of the next criterion.

- l Evaluation Criterion 4: *The structure of the Governing System must be easy to understand and the system must be easy to use.*

Feeling Our Way

Aside from the problems of information overload and complexity, voters still encounter problems in making decisions. These involve the same types of problems one is likely to encounter in the navigation of a car.

Suppose the navigator of a car is trying to reach a specific destination. First, he probably tries to get the pertinent *facts*.

The word, *fact*, comes from the Latin word, *factum*, that which is done. This is consistent with legal usage in which a fact is established by a reliable witness who testifies that an action occurred. I like the Missouri definition: A fact is something that was seen, is seen, or can now be seen. However, we might want to expand the definition to include information directly experienced or potentially experienced through our other senses.

The facts pertinent to navigation decisions will tell us: (1) Where we are, and (2) Where we want to go. Ordinarily the navigator can look around and see street signs or other landmarks to determine his location. If his destination is sufficiently defined for navigation, he will know the street intersection (something that could be seen or some other set of landmarks to identify that destination).

The facts, by themselves, remain insufficient for navigation. The navigator also needs a map, either an actual map or one carried in his head. The map is not a set of facts. It is simply a representation or model of reality. The map may not be an accurate reflection of reality. A bridge shown on the map may be out, or a street on the map may have been closed. Maps and other models are always abstractions of reality and never truly represent the real landscape, that is, the structures and other objects that can be seen.

The voter has a task much more difficult than navigating a car over the earth's surface. The voter must navigate through time. He must understand where he is, that is, what the state of the world is. Pertinent facts include levels of poverty, crime, pollution, etc. He also needs to know where he wants to go. For example, the average voter in a Western developed country probably wants to reduce crime and pollution and end war.

The most difficult part of navigating through time is selecting a route to reach the destination. It is in the route selection that the voter exercises his decision-making skills, and this may be the weakest part of the democratic process because few individuals are equipped by education and training to do it well.

The maps, forecasting models that guide us through time fall into two major categories: intuitive and logical, corresponding again to the left-brain right-brain characteristics. The best decisions are typically made using both modes of thinking. We use our intuition to make a selection, then use logical models to confirm or, if we are objective, to disavow our intuitive selection.

The logical mode of thinking provides a valuable source of feedback. If our reasoning is logical, then we can

communicate our reasoning procedures to other individuals. These are often critics who "keep us honest." However, the best source of feedback is Nature. Testing against the rules of reality is critical to the scientific method and is the essence of experimental science.

Reality does not play political games. A skillful actor and politician may convince voters that we can cut taxes and increase government spending while, at the same time, reducing deficit spending; but reality will not be denied.

Considering voter performance, we have to question whether political decisions made through the common democratic processes reflect logical procedures. Several studies have been conducted over the past thirty years to learn more about how people reason. Probably the best known are those conducted by Philip Johnson-Laird and the team of Daniel Kahneman and Amos Tversky. [xxi] These empirical studies effectively refute the Greek notion that man is a rational creature; as a rule, even educated people do not reach conclusions in a rational manner. These studies show, consistent with research in artificial intelligence, that people generally reach conclusions using patterns, metaphors, and schemata.

Describing these studies exceeds the scope of this discussion. I simply refer the reader to summary descriptions in Howard Gardner's *The Mind's New Science* and William F. Allman's *Apprentices of Wonder*. [xxii] [xxiii] For additional perspectives, see David I. Kertzer's *Ritual, Politics, and Power* and Jon Elster's *Solomonic Judgments*. [xxiv] [xxv]

We may gain some intuitive understanding of these study results by considering the debate that occurred immediately before the UN-Iraq War. This was probably one of the momentous debates of the century. Thousands would lose their lives and the political orientation among Arab countries would change dramatically. No one, to my knowledge, argued that we should make the decision using anything other than rational arguments. Political leaders and pundits advanced several such arguments. The differences of opinion usually hinged on the truth of various premises; for example, how soon Iraq would or could develop nuclear weapons. What was striking was the weight given to argument by analogy. Typically such arguments took the form, "Hitler invaded Poland in 1939 and we did nothing." The unspoken assumption, I believe, was that if the U.S. had sent an army into Eastern Europe, then the tragedy of World War II would not have occurred. Then the argument was that "Saddam Hussein is like Hitler and he must be stopped" President Bush, many Republican politicians, and the ubiquitous man-on-the-street favored this argument. This argument was made, in fact, after Iraq had been *stopped*; the rapid deployment of several thousand troops to Saudi Arabia had stopped their advance beyond Kuwait. The analogy was thus flawed, but it was also flawed because conditions were substantially different now from those in 1939. The most significant difference is that the U.S. can now mount massive airlifts to move troops over the world. Also, the U.S. has a trump card, nuclear weapons with accurate and reliable delivery systems. The intellectually lazy comfort themselves that history always repeats itself when, in fact, it never does.

We may also gain some intuitive understanding of typical reasoning by considering typical uses of syllogisms. Aristotle considered the syllogism to be the core of logic, and this form of reasoning pervades our culture to the extent that we seldom notice its use. Examples envelope us as does the air.

A syllogism consists of three parts, for example: (1) All ruminants are quadrupeds. (2) All cows are ruminants. (3) Therefore, all cows are quadrupeds. The three parts are known respectively as the *major premise*, *minor premise*, and *conclusion*.

Because of extensive observations and accepted definitions, people have difficulty finding fault with the syllogism stated above. The premises are easily accepted, and the conclusion readily follows. Other arguments may have a similar form, but the conclusions, while they may be valid, do not necessarily follow from the premises. Advertisers understand our tendency to accept invalid conclusions if presented in the form of a valid syllogism. These pseudo-syllogisms are typically stated in a subtle form to make them more palatable, but the argument has the distilled form:

All wines of exceptionally fine quality are expensive. This wine is expensive.

Therefore, this wine is of exceptionally fine quality.

If wine consumers have problems with common reasoning, voters have even more problems with complex questions related to public issues. Technical and scientific issues only exacerbate the problem.

To discuss effectively many of our more technical issues, we must make use of statistical theory. Consider a relatively simple contrived situation. You intend to do some gambling involving the single tossing of a coin presumed to be fair. You engage a statistician to advise you. (One has to wonder how you acquired your money for gambling.) Unless he is a charlatan, he would not simply predict one of the two possible results. He is more likely to give you an accurate description of the situation by telling you that the probability for either outcome is 50%.

Similarly, a reputable scientist is not likely to discuss the question of global warming entirely in deterministic terms. The projections for climate changes are best understood as statistical processes. A forecast for such a process might take the form of a probability that the average temperature during some future interval will be within a specified range of temperatures.

Do most voters have a good understanding of probability and statistical theory? Of course not. Consider a question applied to a series of coin tosses in which H = heads and T = tails. Most lay people consider the series, TTTTTTTT, to be less likely than the series, THHTHTTH. Yet, any trained statistician, if he stops to consider he is answering a statistical question, will tell you the two series are equally likely.

The Jeffersonian vision consists of an educated electorate making educated and rational choices as reflected by their choices of representatives. We seem to be far from that ideal and moving no closer. Even if our educational processes were improving (which is a hotly debated question), then the complexity of issues takes us even further from Jefferson's vision. What, then, is the reality? How do voters make their political choices?

I know of no systematic study that answers these questions but the best way to gain some insight is to observe the campaign techniques used by winning candidates. Probably the most successful strategy is to be well-liked and trusted.

General Dwight D. Eisenhower, during his 1952 and 1956 U.S. presidential campaigns, used the slogan, *I like Ike*. This proved effective against Adlai Stevenson who had a quick intellectual wit. However, such a wit can be a liability because, as the saying goes, "Nobody likes a smart ass." This sentiment seemed to have worked against Stevenson.

Personality and perceived character probably decided the 1960 Presidential elections. Simply put, John F. Kennedy was well liked, and Richard M. Nixon was not. Personality also played a big factor in Ronald Reagan's Presidential campaigns. Reagan, a skilled actor, could project an amiable personality and a character worthy of trust.

A technique complementary to the "I'm a nice guy" approach is to portray political opponents as stumbling bumpkins of dubious character. Recent campaigns favoring this negative approach have been quite effective in various parts of the country.

While it is impossible to measure the degree to which we decide elections by intuitive feelings about the candidates, it seems certain that these feelings play a major part in most campaigns. Some political observers may despair that rational discussions do not play a more central role in campaigns. However, listening to our intuitive feelings may be the best tactic for dealing with complex and obscure issues. If we do not understand geo-political strategy and macro economic theory, and few of us do, perhaps the best tactic is to try to elect people of good character whom we can trust to make informed decisions for us.

Exhortations to "study the issues" and to vote from an informed position of enlightenment are futile. Only evolution can mold thinking mechanisms, and minute changes take thousands of years. We cannot recast citizens to fit the ideals of Jefferson. If the people will not go to the system, the system must go to the people. Thus, our next criterion:

- ▮ Evaluation Criterion 5: *The governing system must give citizens meaningful opportunities to come to know candidates for representative bodies. Ideally, each citizen would be represented by someone with whom he/she could meet personally.*

Summary

It is fair to say these criteria would likely require radical changes to our constitution. Only the collective wisdom of an Article V Convention ^[xxvi] can tell us whether such radical changes can or should be achieved. Meeting these goals will require excessive optimism and creativity. Our mission should be to inspire our nation to demand a responsive and effective government that meets these goals.

^[i] R.H. Blyth in "Ikkyu's Doka," *The Young East*, vol.2, no.7, (Tokyo, 1953.)

^[ii] Ralph Nader, *Unsafe At Any Speed* (New York: Grossman Publishers, 1964), p. 7.

^[iii] Another interesting analogy is the political activism of the Teamster's Union.

^[iv] *Stability* is often defined in positive terms for "linear" systems, but not many real systems, including cars or governments, could be truly described as linear.

^[v] A startling example of the "establishment's" penchant for "stability" occurred when Great Britain's Prime Minister, Margaret Thatcher, was informed that the Communist government of East Germany had opened its borders. These borders had been heavily guarded for years and many people had been killed trying to escape the repressive communist government. During a television interview Mrs. Thatcher admonished the East German citizens, "You people are moving too fast."

^[vi] One of the more well known examples was the famous "missile gap" of the 1960 US presidential election. This is described by Robert S. McNamara, *Blundering into Disaster* (New York: Pantheon Books, 1986), p. 43.

^[vii] Robert N. Bellah, Richard Madsen, William M. Sullivan, Ann Swidler, and Steven M. Tipton. *Habits of the Heart, Individualism and Commitment in American Life* (New York: Harper & Row, 1985), p. 333.

^[viii] Robert Bolton, Ph.D., *People Skills*, (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1979), p. 12.

^[ix] Simon Schama, *Citizens, A Chronicle of the French Revolution* (New York: Vintage Books, 1989) pp. 308-309.

^[x] John Martin, television report for 20/20, ABC News, January 17, 1992.

^[xi] Neil Sheehan, Hedrick Smith, E.W. Kenworthy, Fox Butterfield, *The Pentagon Papers: as published by the New York Times*, ed. by Gerald Gold, Allan M. Siegal and Samuel Abt (New York: Bantam Books, Inc., 1971), p. 1-25ff.

^[xii] George P. Richardson, *Feedback Thought in Social Science and Systems Theory* (Philadelphia: University of Pennsylvania Press, 1991), pp. 5-9.

^[xiii] Alexander Cockburn, "Human-Rights Ruling on Cuba Twisted Into Victory for U. S.," *The Wall Street Journal*, (April 14, 1988).

^[xiv] Zachary Schiller and Mark Landler, "P&G Can Get Mad, Sure, But Does It Have To Get Even." *Business Week*, (June 4, 1990).

^[xv] Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: The M.I.T. Press and John Wiley & Sons, Inc., 1948), pp. 95-96.

[xvi] Sally P. Springer and Georg Deutsch, *Left Brain, Right Brain* (San Francisco: W.H. Freeman and Company, 1981), p. 179ff.

[xvii] *ibid.*, p. 187.

[xviii] Michael S. Gazzaniga, *The Social Brain; Discovering the Networks of the Mind* (New York: Basic Books, Inc., 1985) pp. 47-59.

[xix] Betty Edwards, *Drawing on the Right Side of the Brain* (Los Angeles: J.P. Tarcher, Inc., 1979), pp. 46-50.

[xx] There is much to suggest that linear reasoning and logic is, in fact, not part of our thought process except as a means of justifying our conclusions. Thinking (drawing conclusions) some authors suggest mainly involves the use of "schemata" (e. g. , patterns or metaphors). See Jeremy Campbell, *The Improbable Machine* (New York: Simon and Schuster, 1989) p. 87ff.

[xxi] Howard Gardner, *The Mind's New Science; The Cognitive Revolution* (New York: Basic Books, Inc., 1985) p.361 ff.

[xxii] Howard Gardner, *The Mind's New Science: The Cognitive Revolution* (New York: Basic Books, Inc., 1985) pp. 360-379.

[xxiii] William F. Allman, *Apprentices of Wonder: Inside the Neural Network Revolution* (New York: Bantam Books, 1989) pp. 17-38.

[xxiv] David I. Kertzer, *Ritual, Politics, and Power* (New Haven and London: Yale University Press, 1988) pp. 77-101.

[xxv] Jon Elster, *Solomonic Judgments: Studies in the Limitations of Rationality* (New York: Cambridge University Press, 1989) pp. 1-35.

[xxv] **Article V of the U.S. Constitution**: The Congress, whenever two thirds of both houses shall deem it necessary, shall propose amendments to this Constitution, **or**, on the application of the legislatures of **two thirds** of the several states, **shall call a convention** for proposing amendments, which, in either case, shall be valid to all intents and purposes, as part of this Constitution, when ratified by the legislatures of **three fourths** of the several states, or by conventions in three fourths thereof, as the one or the other mode of ratification may be proposed by the Congress; provided that no amendment which may be made prior to the year one thousand eight hundred and eight shall in any manner affect the first and fourth clauses in the ninth section of the first article; and that no state, without its consent, shall be deprived of its equal suffrage in the Senate.
