ABSTRACT

Grand Challenges: Mapping the Brain-Mind Connection of Emotion and Politics

by

Lloyd S. Etheredge

Advances in neuropsychology, including brain imaging, create a new set of research methods and challenges to map the connections between the mind and the brain in politics. This paper outlines a background model of the triune brain of homo politicus. Then it draws upon this model to discuss four research programs that can help to understand emotions in politics: 1.) To understand the odd, unique, and emotion-charged psychology of political ideologies and how ideological impasses can be addressed by science; 2.) To place several persistent social problems in a new light (as expressing previously unrecognized followership and submission mechanisms in the brain) and suggest more effective remedies; 3.) To provide further test of theories about the arousal and manipulation of fear for domestic political advantages and that may improve the conduct of international relations; and 4.) To improve the ability of people (including leaders and followers) to connect with one another (intellectually and emotionally) in democratic discussions and to achieve an emotional consensus behind a good idea.

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Key terms: triune brain, brain imaging, hierarchical imagery, ideology, dominance/submission, aggression

Politics can be an arena of lifetime commitments motivated by inspired ideals. It also is an arena for brutality that has increased the percentage of the human race killed in political violence, each century, in recent centuries - with the 20th century being the most deadly on record.[2] Between these extremes are the daily emotional lives of established democracies: altruism and selfishness; competition, drama and soap opera, spectator pleasures, humor, perpetual hopefulness and cynicism.

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[1] An earlier version of this paper was prepared for the NSF Grand Challenges of Mind and Brain (2006) project.

[2] The number of people killed as a result of political violence in the 20th century (including starvation) equaled about 10% of the world's population in 1900: (Emmott, 2003 p. 13).

Mapping the Brain-Mind Connection

Continuing advances in neuropsychology, including brain imaging, create a new set of research methods and challenges to map the connections between the mind and the brain in politics (Martin, Brust, & Hilal, 1991 and the fifth edition, in press). I will outline a background model of the triune brain of homo politicus. Then I draw upon this model to discuss four research programs that can help: 1.) To understand the odd, unique, and emotion-charged psychology of political ideologies and how ideological impasses can be addressed by science; 2.) To place several persistent social problems in a new light (as expressing previously unrecognized followership and submission mechanisms in the brain) and suggest more effective remedies; 3.) To provide further test of theories about the arousal and manipulation of fear for domestic political advantages and that may improve the conduct of international relations; and 4.) To improve the ability of people (including leaders and followers) to connect with one another (intellectually and emotionally) in democratic discussions and to achieve an emotional consensus behind a good idea.

I. The (Triune) Brain of *Homo Politicus*

Paul MacLean's model of a "triune" human brain is based on studies of the evolution of the brain across animal species (MacLean, 1990 (2003) (Sagan, 1977) (Cory Jr. & Gardner Jr., 2002). The brains of higher animals are based on the brains of lower animals and add new

regions with new capacities. Thus, the human brain includes:

1.) The basic R-complex (the brain stem and cerebellum) of reptiles, dinosaurs, and other primitive species. This provides a powerful and primitive survival-oriented psychology: e.g., basic instincts and powerful drives such as eating (when the organism is hungry and attractive food is available) and mating, the fight/flight response to danger, etc.

2.) The limbic system. This adds the amygdala (involved in emotions and coordination of the autonomic and endocrine systems), the hippocampus (involved in memory storage) and the hypothalamus (Kelly & Dodd, 1991 p. 277). In shorthand, it adds the psychology of dogs, especially capacities for complex associational learning and stimulus response conditioning of behavior, and the linkage of emotion and physiological responses to images and sounds. Mammals at this level acquire a new and expanded range of emotions (and, for example, facial expression of these emotions, first studied by Darwin). The limbic system also creates a basic social and political psychology: Mammals with limbic systems usually live in social groups with established dominance hierarchies, kinship ties, etc.

3.) The neo-cortex adds uniquely human capacities for speech and rational/abstract reasoning. It also creates the potential for self-awareness and self-reflective thinking to

affect emotions, improve coordination among elements of the triune brain, and other tasks.

Thus the mapping of brain connections involved in the behavior of ***homo politicus*** involves three major brain systems, each with a different psychology or set of operating principles. Two of the three parts, the primary locations of emotional life, lack the power of speech and reason, although they contribute knowledge, capacities, and operating principles that have proven useful for individual and species well-being and survival in earlier circumstances (Moore & Michel, 1998), (Timberlake & Hoffman, 1998). Thus, human political behavior and the emotional connections between the brain and mind can express three psychologies and types of mechanisms in ways that can vary with individuals and circumstances.

- The existence of three different psychological processes may be recognized by political professionals. In his recent memoir James Baker tells the story of warning President Gerald Ford against a press conference by Secretary of State Henry Kissinger, who wanted to discuss a diplomatic trip to Africa. There was a pending election primary in Texas and Baker feared that the President's enemies would use the trip [apparently, the fear-and-anger/R-complex-driven John Birch Society and campaign ads it would create for the public to associate President Ford with Kissinger's hated internationalism]: "President Ford puffed on his pipe and said, ' . . . You know, Jim, the *thinking* Republicans will understand my position on this.' Baker replies: 'Mr.

President, with respect to this issue there *are* no thinking Republicans in Texas right now'" (Baker III, 2006 p. 28).

II. Mapping Connections: Four Research Challenges

The four theories (below) are, as perhaps they should be, ahead of persuasive scientific evidence. They connect several dots about important problems in new ways and suggest new lines of investigations and predictions about the findings. The research programs will push outward the frontiers of brain research methods.

A.) Why Ideologues are Passionate and Do Not Learn

The triune brain model suggests a fresh look at the passions of recycling ideological arguments.

Both politics and religion are forbidden subjects in the wardrooms of Navy ships. People get into unusually intense arguments and impasses about both subjects. Yet why, of all the important topics addressed by the human mind, should these two arouse so much passion and simple, perpetually recycling, ideas?

One possible answer is that, in both cases, there may be similar internal (hierarchical) psychodramas underlying the verbal arguments.

Box 1 illustrates such psychodramas and emotional syndromes, based on post-Freudian investigations of the realm of the "Over- I" (a term that Freud's English translators awkwardly called the "superego") (Etheredge, 1982b).

For example, a higher image of government that vividly dramatizes potential hostility and control is associated with three syndromes:

a.) Law-and-order authoritarians who closely identify with the government;

b.) A step below this identification are rebels with a fight/flight reaction - radicals, libertarians, and conservatives who fear government and want to restrict, reduce, or weaken it. Or - in revolutionary response - overthrow it and seize its controlling power in the name of the people it now demeans, manipulates, and oppresses.

c.) At a furthest remove are people whose subjective reality is an underground, with government a unitary and impersonal "They" or "It," up there somewhere - hostile and to be avoided.

When it becomes an intense and total entrapment the clinical expression of this type of internal drama is paranoid psychosis.

Box 1

In Plato's Cave:

Vivid Higher Images and Emotional/Ideological Systems

Vivid Higher Image

Distance of self	Controlling & Hostile	Benevolent
Close	Authoritarian	Quiescent, blessed
	Rebellious opponent	Liberal activist
Distant	Underground	Despair, resignation

If there is a vivid, established image of a benevolent government (or God) three different emotional reactions and policy imperatives may result:

a.) Quiescent, blessed citizens trust their government and experience their leaders to be like Philosopher-Guardians, wise and working as hard as they can to bring a better world as quickly as possible. (This was an experience reported by more than 90% of the American adult population in the 1950s);

b.) A step below are liberal activists who experience a partially benevolent government power above. Its further (idealized) potential has a zero-sum relationship to inhabitants of the world within its purview, whose needs exactly mirror the affirmative capabilities that liberal activists seek to realize - i.e., for the poor, underdeveloped countries, those without health insurance, the environment.

c.) At furthest remove are citizens who have lost any hope for government. They are disillusioned, anomic, living lives of quiet desperation here on the barren windswept landscape of modernity.

When it becomes an intense and total entrapment the clinical expression of this type of internal drama is dependent depression or suicide.

These psychodramas express mutually-defining images and emotional relationships of a higher government and a lower self. The model suggests why there can be so much self-assured ideological passion and preoccupation with selected themes, and why rational arguments do not connect across these systems: Like the play “Six Characters in Search of an Author” (Pirandello, 1998), people in passionate political arguments only seem to inhabit the same reality.

- In suggesting the emotional similarities of religion and politics, the model recalls an observation by the pollster John Zogby concerning the equivalent psychologies of religion and Republican/Democratic emotional syndromes in American political life: *"the vast majority of red state voters see God as one who punishes evil*" while *"a huge majority of blue state voters see their God as loving and tolerant*" (Zogby, 2004). [For other theories of ideology: (Lakoff, 2002) (Tomkins, 1963) (Smith, 1968) (Etheredge, 1982a). For implications of this model, if it is verified: (Etheredge, 2005 pp. 312-314, 319-321).]

A further application of this model is to test certain ideological assumptions, a task that now becomes possible. For example President Reagan (whose ideas are likely to return) imagined American economic and social problems to be caused by a growing welfare state, that misguided people erroneously believed was good for themselves, but that reduced their motivation and sense of responsibility for their own lives (Etheredge, 1984). Note that this imagines a type of world portrayed in the second column - i.e., yes, clinically, there *are* types of pathological dependency

syndromes where people just sit around and merely complain about any problems that arise. And note, too, that this ideological argument now becomes *testable* because we can measure whether samples of American adults live inside such a strongly imagined reality. *But if they do not*, or if the statistical distributions show only a small fraction do so, the national theories/diagnoses and passionate social and economic policy agenda of these Republicans can be rejected on scientific grounds.

B.) Followership/Submission Mechanisms

De Waal's Chimpanzee Politics presents compelling evidence that much of basic human political behavior, including the creation of dominance/subordination hierarchies, is based in the limbic system rather than the neo-cortex (De Waal, 2000). There are some differences across animal species (rhesus macaques tend to be fierce authoritarians and subordinates display a sickly "fear grin"; chimpanzees are inclined to be liberals) but the brain mechanisms appear to be universal.

A key finding is that a subordination/low status syndrome is a *package* (usually induced by fighting). Brain mechanisms trigger enduring motivational and postural changes and changes in the endocrine system. For example, chimpanzees who lose alpha male status automatically and universally shift their posture and walk in different - and easily recognized - ways. Testosterone levels increase and decrease, *both in chimpanzees and human males*, studied in experimental

conditions of winning and losing. Similarly, the syndrome of posture and behavior changes back when there is a victory and alpha-male status is regained, and so does the testosterone (De Waal, 2000)(Goldstein, 2001).[3]

There is similar evidence (for what might be a universal syndrome) across dominated and lower-status human groups that exhibit emotional and motivational inhibitions and (somewhat unexpectedly) cognitive inhibitions. For example, in their classic psychiatric study of American Blacks, The Mark of Oppression, Kardiner and Ovesey (Kardiner & Ovesey, 1951 p. 303) reported such adverse effects on self-starting motivation, and also induced cognitive inhibitions that limited abilities for abstract reasoning and more executive abilities to plan and work for long-term futures. Blacks on the plantation, in America before the civil rights movement of the 1960s, women in traditional societies, and - today - minority/lower status populations in many nations of the world are often described in similar terms: They are passive, lack self-starting

[3] Reviewing the scientific evidence in his *War and Gender* Goldstein quotes Secretary of State Henry Kissinger that "power is the great aphrodisiac" (Goldstein, 2001 p. 155). I.e., there is physiological evidence that this may be true and involved in the self-assurance of males in power. For many centuries the rhetoric of "regained manhood" has been used to rouse oppressed people to overthrow established hierarchies. Evidence may show that, for male Palestinian teenagers, throwing rocks at Israeli soldiers increases testosterone, an immediate feeling of well-being that they interpret as knowledge that they are doing a good and healthy activity.

motivation, have limited capacities for learning, abstract reasoning, rationality and long-term planning, etc. [And these traits are often wrongly interpreted as inherent, rather than *induced*.]

- This theory makes a testable prediction, that enduring problems of labor force, political, and educational participation/attainment by Blacks in the US will reflect such unrecognized psychological mechanisms, that continue as an unintended residual (e.g., via mechanisms engaged by, and sustained by, hierarchical images in the brain) from an earlier era of discrimination and oppression.

[In this regard: the National Academy of Sciences (Shalala et al., 2006 in press) recently reported that more equal treatment of liberated women in America has virtually eliminated the gender difference in (lower) mathematical/analytical aptitude and attainment in public schools that was traditionally interpreted as a genetic deficit of women. If so, this may be dramatic evidence that unrecognized and reversible brain mechanisms - induced and sustained by vivid and established hierarchical imagery in the mind of the victim - play a wider inhibiting role than previously recognized.]

- A wider range of (measurable) physiological changes and health effects also may be part of the low status/submission syndrome. Even the relatively mild social/political/economic hierarchy in advanced, democratic, post-industrial countries apparently induces powerful neuroendocrine

and related changes, with long-term effects on health and longevity. Several decades of pioneering work in Great Britain by Marmot (Marmot, 2004), for example, finds that even with universal government-provided access to health care, there is a gradual decline in longevity and health from the top to the bottom of the social spectrum. The "status gradient" does not merely affect people at the bottom: it even emerges in differences at the top - for example, Ph.D.'s enjoy better health and longer life than those with M.A. degrees or those with BA/BS degrees. One current theory is that the underlying mechanisms of such effects in primates are neurobiological changes associated with externally-induced social stress in dominance hierarchies (Sapolsky, 2005). A pathway of hierarchical images and the brain mechanism of the follower/submission response gains standing, for the triune brain of *homo politicus*, because hierarchical images partly bypass the neo-cortex and have direct hardwired links to parts of the brain responsible for emotion and motivation. Bales, who extensively investigated the psychology of hierarchical human relations, believed that the "up-down" dimension of social/political life is encoded via images (Bales, 2001) (Hare, 1985).

- Useful insights and solutions (for individuals, economies, and societies that would benefit from higher levels of self-starting motivation and the full use of cognitive abilities of all citizens) might be achieved by understanding the effects of internalized hierarchical images. There may be straightforward ways to solve the problem.

C. R-Complex Political Behavior

> "The confrontation with wanton carnage, deception, and cruelty summons the Furies of revenge, who can convert peace-loving, liberal-minded elites into promoters of genocide. During World War II, J. Robert Oppenheimer, who frequently articulated ethical values that resonated with liberals, wanted to spray Strontium 90 (a baleful carcinogenic element) on Germany. . . During John F. Kennedy's presidency, the U.S. war plans for retaliation in the event of a Soviet nuclear attack provided for targeting millions of people in the hapless captive nations of Soviet-controlled Eastern Europe (which would have fiercely opposed the Soviet attack, given a chance). And the Kennedy era war plan would also have China instantly targeted, even though it might not have been involved in the Soviet attack."
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> - Iklé (Iklé, 2006 p. 79)

In the autumn of 68 BC a surprise pirate attack set ablaze Rome's port of Ostia, destroyed the Roman Empire's consular war fleet, and kidnaped two Senators, their bodyguards, and staff. Rome's leading soldier, Pompey (to be known as Pompey the Great), used the resulting fear to override opponents and push through the Lex Gabinia, by which he acquired an unprecedented broad dictatorship, with absolute and unchecked authority over everyone. Next, for Rome's "war on terror," he spent most of the Treasury, built 500 ships and raised an army of 120,000 infantry and 5,000 cavalry. He cleared the Mediterranean of pirates in three months. He then continued

to spend six years expanding Rome's wealth (and, allegedly, its security) by conquering lands and establishing puppet regimes in the Middle East. Pompey never returned the power that he acquired. The panic reaction of Rome's political response to its terrorist event became part of the historical change from the early traditions of the Republic, with a complex system of checks and balances, to an age of imperial dictatorship. Harris (Harris, 2006), who tells the story, notes that since Pompey cleared the entire Mediterranean of pirates in only three months the pirates probably were not as grievous a threat in the first place. He calls Pompey's maneuver to seize and hold power "the oldest trick in the political book."

Testing a R-complex theory of fear-related behavior, by direct measures of the brain, can clarify our scientific understanding of this (allegedly) recurring story in domestic politics.

1.) The *Lord of the Flies* model and domestic politics

Two thousand years later, a modern statement of this model of fear manipulation and political behavior is the novel *The Lord of the Flies* (Golding, 1954 (1999)). The author (William Golding) also viewed it as an archetypal, universal model of political behavior. He thought that it described (in 1954) the recent tactics and psychological mechanisms in the rise of Hitler and of Communist totalitarian dictators and the resulting violence.[4]

[4] Lasswell perceived a similar repeating psychological/political story, which he called the "garrison state" model: (Lasswell, 1941 (1997)).

In Golding's novel a group of British schoolboys is stranded on a tropical island paradise. The fear of an elusive, lurking Beast grows in their minds. One boy, Jack, uses this fear to make himself the aggressive leader of a band of hunters. Soon, by the end of the book, he has expanded his control by the death of rivals, engaged in torture and intimidation of subordinates (without respect for their human rights), and he has launched a final hunt to kill his last rival.

The Lord of the Flies model suggests (in the language of the triune brain) that when the fight-flight response of the R-complex is activated, a set of primitive, rationality-independent, psychological mechanisms also is activated (e.g., search for a strong, confident, aggressive male leader for defense, an intensification of group bonding, an exclusion of deviants, etc.) (See also (Janis, 1982)).[5]

- Activation of the R-complex may be especially easy (although for unknown physiological reasons) among adherents of the political and religious Right. Recently, there has been widespread suspicion that President Bush's campaign adviser, Karl Rove, creates campaign tactics to engage and manipulate fear - for example, by placing gay marriage initiatives on a ballot, to frighten and anger core members of President Bush's Republican constituency, and thereby increase turnout.

[5] These mechanisms did not affect Simon, Ralph or Piggy.

It would be exciting to test the Lord of the Flies model, historically, in different countries, and with brain imaging and secure compelling textbook evidence, for students in all countries, to judge whether such fear manipulations (in major crises, and also normal election battles) are "the oldest trick in the book."

2.) The R-Complex and World Politics

R-complex models also may be useful to understand international politics. And they make different predictions than popular rational-choice models. For example, during the Cold War, tough-minded "rational deterrence" theorists (e.g., Schelling (Schelling, 1960 (2006)), an economist) advocated the forthright use of threats to influence and deter the Soviet Union and other potential opponents. These theorists also advocated simple "rational calculation" policies to "raise the cost" of an opponent's behavior, for example to cause North Vietnam to cease its "aggression" in the Vietnam War. Once the North Vietnamese calculated the rising costs, they would stop.

Alexander George at Stanford, initially associated with the RAND Corporation, was quietly alarmed by the danger of Schelling's rational choice assumptions and forthright use of threats and "costs" (with the psychological assumption that being bombed by an enemy would be treated like a businessman reading numbers on a spreadsheet). He began a study of historical cases to test ideas about "coercive diplomacy" and crisis decision making (George, 2006 pp. 125-126)

(Holsti, 1972). He found that a professional diplomatic framework was preferable to a military threat alone. Threats, if they crossed a threshold, could activate a powerful danger response (a fight/flight, R-complex syndrome, in MacLean's terms) and undermine rationality (perhaps dangerously) and the possibility of non-violent political settlements. In Cambridge, Pool (Pool, 1969 (1998)) wrote a similar alternative to Schelling's framework, an article about deterrence, attitude change, emotions, and the wisdom of a foreign policy that was "more rational than the rationality assumption." (See also (Etheredge, 1992)).

However Schelling's "rational choice" approach to international politics was never rejected scientifically. Tough-minded adherents of such theories are still around. It would be useful to establish, scientifically, whether R-complex activation has the wide ranging role and effects that George's early case studies implied.

- The quotation from Iklé, a leading arms control theorist, at the beginning of this section underscores evidence that, given the proper context, Americans also may exhibit R-complex international behavior. To forecast any American responses to new terrorist attacks, or to a growing nuclear threat from Iran or North Korea, it is worth recalling that the Japanese attack on Pearl Harbor (which produced fewer American deaths than the recent 9/11 and anthrax attacks) launched America into a world war on two continents, brought the fierce firebombing of civilian populations in cities across Japan, and the use of two nuclear bombs against Hiroshima and

Nagasaki to achieve unconditional surrender.

The new triune brain/R-complex model of *homo politicus* also suggests a reinterpretation of the "domino theory" of American leaders during the Cold War. The "domino theory" seems to rationalize both parts of the R-complex fight-flight system - i.e., a vividly imagined threat to survival [even though Vietnam was on the other side of the planet] combined with the aggressive and powerful determination to fight the enemy and prevail, even at a very high cost. Thus, calling the domino theory a "theory" (as if it were solely a contingent neo-cortex phenomenon of words and ideas based on evidence and readily open to scientific debate) may be inaccurate and misleading.

- Are the powerful emotions of the R-complex, rather than neo-cortex calculations, also shaping current world politics? Vice President Cheney's response to the 9/11 and anthrax attacks against America might fit the model: a worst-case imagining of attacks on American cities by terrorists with nuclear and biochemical weapons, and an aggressive global counterattack even if the imagined danger has only a "one percent chance" to occur (Suskind, 2006). Or consider the recent Iranian drive to acquire nuclear weapons: Could the fact that American conventional forces have recently destroyed three national governments (in Eastern Europe; and on two of its borders, Afghanistan and Iraq), declared de facto war on its fundamentalist clerics, and named it a target in the war on terrorism, activated a R-complex, and an Iranian *Lord of the Flies*

syndrome, that will cause its elected leaders to pursue nuclear weapons, no matter what the risk?

It is unlikely that direct brain measures of current leaders can be obtained. Yet notably, even during the Cold War, a MIT political scientist (Lincoln Bloomfield) was able (quietly) to conduct crisis decision making simulations in the Soviet Union, at very high levels of its government and to discuss research issues. Political leaders often have an interest in the rationality of their subordinates, professional analysts, and staffs. And improved indirect measures of R-complex mechanisms may be possible (Hermann, 1979). Any progress to learn the emotions that lie behind the assured self-presentations of political leaders, by methods other than informed conjecture, is likely to have practical benefits.

D. Mirror Neurons: Making Better Connections

A recent, exciting discovery is that portions of an observer's or audience member's brain can become activated by the behavior or emotion of another person, and in a pattern suggesting that the observer is experiencing what the other person is experiencing. Thus, the discovery of *mirror neurons* appears to provide a direct measurement of empathy and the effectiveness of communication that seeks to engage identification with the speaker's emotions and viewpoint (Rizzolatti, Fogassi, & Gallese, 2006).[6]

[7] A classic hypothesis from Goethe concerning international politics also becomes easier to test (e.g., empathetic responses to television news of foreigners): "There comes a point where

The ancient Greeks admired rhetoric, the capacity to appeal both to emotion and reason, and to achieve an emotional consensus behind a good idea (although they also feared the potential for demagoguery) (Kennedy, 2001)(Ober, 1989) (Worthington, 1994). An exciting line of research would be to analyze the (often, weak) ability of American political speakers, even in an age of mass communications, to arouse audiences - i.e., to foster identification with themselves and motivate political action.

Once, rhetoric was one of the seven parts of a classic liberal arts education, but it has disappeared from most schools (Bok, 2006). "Political rhetoric" is (with justification) a derisive term in America. Typically, the chambers of the two great deliberative bodies of American democracy, the House and the Senate, are almost empty: Members rise to deliver dull and uninspiring speeches to television cameras. The 2-3 sentence sound bite of American politicians is seldom memorable. Political campaigns have been captured by specialists in advertising; the television ads manage, at best, a 30-second message rather than a more sustained relationship.

To a degree, this American reduction of emotional arousal in political communication has been a choice of academic institutions. When the Kennedy School of Government was formed at

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one so to speak stands above the nations and where one experiences fortune or misfortune of a neighboring country as if it had happened to one's own."

Harvard the faculty debated (briefly) whether to include a curriculum for public leadership and speaking. The vision was rejected in favor of analytical and management skills - writing briefing memos rather than arousing mass audiences. The academic faculty also shared memories of Hitler and his destructive use of the mass media, propaganda, and demagoguery. They were mistrustful of encouraging ambitious public policy graduates to prefer and use emotion (and perhaps sophist trickery) rather than analytic rationality. (Perhaps, facing current wars against terrorism, there *are* grounds to prefer managerial rhetoric to other, emotion-arousing possibilities.)

Today, it is possible that a good research program, aided by direct and objective measures of whether a political speaker has induced empathy ("gotten through," "connected") can improve the performance of leaders and the rate of innovation in many organizations. There might be many good ideas in the world that can benefit from achieving an emotional consensus behind them.

References

Baker III, J. A. (2006). *Work hard, study . . . and keep out of politics! Adventures and lessons from an unexpected public life.* NY: Putnam.

Bales, R. F. (2001). *Social interaction systems: Theory and measurement*. New Brunswick, NJ: Transaction Publishers.

Bok, D. (2006). *Our underachieving colleges: A candid look at how much students learn and why they should be learning more*. Princeton, NJ: Princeton University Press.

Cory Jr., G. A., & Gardner Jr., R. (Eds.). (2002). *The evolutionary neuroethology of Paul MacLean: Convergences and frontiers*. New York: Praeger.

De Waal, F. (2000). *Chimpanzee politics: Power and sex among apes* (Revised ed.). Baltimore, MD: Johns Hopkins University Press.

Emmott, B. (2003). *20:21 vision: Twentieth-century lessons for the twenty-first century*. NY: Farrar, Straus and Giroux.

Etheredge, L. S. (1982a). *The liberal activist case* (Xerox. Archived at www.policyscience.net).

Etheredge, L. S. (1982b). *Political behavior within imaginative forms* (Xerox. Archived at www.policyscience.net).

Etheredge, L. S. (1984). President Reagan's counseling. *Political Psychology, 5*(4), 737-740.

Etheredge, L. S. (1992). On being more rational than the rationality assumption. In E. Singer & V. Hudson (Eds.), *Political psychology and foreign policy* (pp. 59-75). Boulder, CO: Westview Press.

Etheredge, L. S. (2005). Wisdom in public policy. In R. Sternberg & J. Jordan (Eds.), *A handbook of wisdom: Psychological perspectives* (pp. 297-328). New York: Cambridge University Press.

George, A. L. (2006). *On foreign policy: Unfinished business*. Boulder, CO: Paradigm Publishers.

Golding, W. (1954 (1999)). *The Lord of the Flies*. New York: Penguin.

Goldstein, J. S. (2001). *War and gender: How gender shapes the war system and vice versa*. NY: Cambridge University Press.

Hare, A. P. (1985). *Social interaction as drama: Applications from conflict resolution*. Beverly Hills, CA: Sage Publications.

Harris, R. (2006, September 30). Pirates of the Mediterranean. *The New York Times*. Online.

Hermann, M. (1979). Indicators of stress in policymakers during foreign policy crises. *Political Psychology, 1*(1), 27-46.

Holsti, O. R. (1972). *Crisis, escalation, war*. Toronto: McGill-Queens University Press.

Iklé, F. C. (2006). *Annihilation from within: The ultimate threat to nations*. NY: Columbia University Press.

Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascoes* (Second ed.). Boston: Houghton Mifflin.

Kardiner, A., & Ovesey, L. (1951). *The mark of oppression: A psychosocial study of the American Negro*. New York: Norton.

Kelly, J. P., & Dodd, J. (1991). Anatomical organization of the nervous system. In E. R. Kandel,

J. H. Schwartz & T. M. Jessell (Eds.), *Principles of neural science. Third edition.* (pp. 273-282). Norwalk, CT: Appleton & Lange.

Kennedy, G. A. (2001). Classical rhetoric. In T. O. Sloane (Ed.), *Encyclopedia of rhetoric* (pp. 92-115). NY: Oxford University Press.

Lakoff, G. (2002). *Moral politics: How liberals and conservatives think* (Second ed.). Chicago, IL: University of Chicago Press.

Lasswell, H. D. (Ed.). (1941 (1997)). *The garrison state*. New Brunswick, NJ: Transaction Publishers.

MacLean, P. D. (1990 (2003)). *The triune brain in evolution, role in paeleocerebral functions*. NY: Springer.

Marmot, M. (2004). *The status syndrome: How social standing affects our health and longevity*. NY: Times Books.

Martin, J. H., Brust, J. C. M., & Hilal, S. (1991). Imaging the living brain. In E. R. Kandel, J. H. Schwartz & T. M. Jessell (Eds.), *Principles of neural science* (Third ed., pp. 309-324). Norwalk, CT: Appleton & Lange.

Moore, C. I., & Michel, G. F. (1998). Sociobiology. In G. Greenberg & M. M. Haraway (Eds.), *Comparative psychology: A handbook* (pp. 182-190). NY: Garland Publishing, Inc.

Ober, J. (1989). *Mass and elite in democratic Athens: Rhetoric, ideology, and the power of the people*. Princeton, NJ: Princeton University Press.

Pirandello, L. (1998). *Six characters in search of an author* (E. Storer, Trans.). New York: Dover

Publications.

Pool, I. de Sola. (1969 (1998)). Deterrence as an influence process. In L. S. Etheredge (Ed.), *Politics in wired nations: Selected writings of Ithiel de Sola Pool* (pp. 47-57).

Rizzolatti, G., Fogassi, L., & Gallese, V. (2006). Mirrors in the mind. *Scientific American, 295*(5), 54-61.

Sagan, C. (1977). *The dragons of Eden: Speculations on the evolution of human intelligence*. NY: Random House.

Sapolsky, R. M. (2005). The influence of social hierarchy on primate health. *Science, 308*, 648-652.

Schelling, T. G. (1960 (2006)). *The strategy of conflict* (Reprint ed.). Cambridge, MA: Harvard University Press.

Shalala, D., et al., (2006), in press. *Beyond bias and barriers: Fulfilling the potential of women in academic science and engineering*. Washington, DC: National Academy Press.

Smith, M. B. (1968). A map for the analysis of personality and politics. *Journal of Social Issues, 24*, 15-28.

Suskind, R. (2006). *The One Percent Doctrine*. NY: Simon and Schuster.

Timberlake, W., & Hoffman, C. (1998). Comparative analyses of learning. In G. Greenberg & M. M. Haraway (Eds.), *Comparative psychology: A handbook* (pp. 531-542). NY: Garland Publishing, Inc.

Tomkins, S. (1963). Left and Right: A basic dimension of ideology and personality. In R. W.

White (Ed.), *The study of lives* (pp. 388-411). New York: Atherton.

Worthington, I. (Ed.). (1994). *Persuasion: Greek rhetoric in action*. New York: Routledge.

Zogby, J. (2004). The unifying spirit of Jefferson must prevail. *Financial Times*, 15.