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## **Self-Images of Hawks and Doves: A Control Systems Model of Militarism**

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*According to prevailing cognitive models, hawk and dove policy preferences originate in divergent information about the causes of war, not in divergent motivations. However, data from a June 1990 survey of the Council on Foreign Relations and two attentive publics indicate divergent motivations. Hawk and dove policy preferences are associated, for males, with "macho" and "idealistic" self systems respectively. Female hawks and doves are also found to maintain distinctive self-images.*

*While the present data support the contribution of personality to behavior, the contribution of cognition also has some empirical support. A new control systems model of political behavior is presented, subsuming the partial truths of cognition-driven and personality-driven explanations. Origins and dynamics of the hawk personality are briefly explained in terms of social learning and psychoanalytic theories. The article concludes with practical recommendations for reducing militarism at its psychological sources.*

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**KEY WORDS:** androgyny; authoritarianism; belief systems; Machiavellianism; personality

This article presents survey data on self-image and militarism that challenge purely cognitive explanations of political behavior. Control theory—or the theory of self-regulating, negative-feedback systems—is used to bridge the conceptual rift that currently separates personality-driven from cognition-driven explanatory models. The article concludes with some practical implications of the present data and theory for the reduction and eventual elimination of international violence.

Personality theorists tend to view the individual as an aggregate of complex needs and wants, some pathological, which drive and explain behavior (Reich, 1970; Lasswell, 1948; Adorno et al., 1950; Christiansen, 1959; McClelland, 1975; Etheredge, 1978, 1979; deMause, 1982). Cognitive theorists, on the other hand, tend to view the individual as an information processor whose behavior is

determined by his or her perceptions of the environment (Simon & March, 1958; Verba, 1961; Jervis, 1976; Larson, 1985; Taber, 1992). It is argued here that these internal and external sources of behavior need to be brought into a common frame of reference and that control theory provides a basis for doing just that. Before proceeding to discuss this control systems model, however, it will be helpful at this point to outline the basic features of the cognition-driven model.

## I. THE COGNITION-DRIVEN MODEL

One of the classic formulations of the cognitive explanation of political behavior is *Perception and Misperception in International Politics* by Robert Jervis (1976). For the sake of simplicity, this version of the cognition-driven model will be presented as an initial frame of reference.

Jervis undertakes to explain national security policy preferences in terms of cognitive factors.<sup>1</sup> This aim is conveyed in the author's designation of hawks as "deterrence theorists" and doves as "spiral theorists." Differences in policy preferences are conceptualized not as the characteristic stances of two different animals, but as a scientific debate between proponents of equally rational but competing theories or schemas.

For Jervis, the divergent policy preferences associated with each of these schemas flow logically from different assumptions about how the world works. Deterrence theorists believe that the fundamental cause of war is the appeasement of aggressors, for example, Britain's appeasement of Hitler in the 1930s. Only the preparedness and willingness to use force can deter such aggression and prevent war. This belief explains the policy preferences of deterrence theorists, which are characterized by willingness to compete in arms races, and to threaten and, if necessary, fight wars. Should deterrence fail because the aggressor believes its adversary is bluffing, successfully fighting a war will restore the defending nation's credibility, enabling it to successfully prevent war in the future.

Spiral theorists, on the other hand, believe that the fundamental cause of war is the escalating spiral of threat that occurs when nations act to deter one another militarily. Thus, in the decade prior to 1914, a naval arms race and an escalation of threats between Germany and Britain led to war. From this belief about how wars are caused, spiral theorists derive policy preferences involving unilateral initiatives to reduce threats, which would make possible a bilateral or

<sup>1</sup>I share Jervis's implicit assumption that hawk and dove policy preferences in fact matter. For a critique of the view that elite policy preferences are an epiphenomenon of the bureaucratic environment in which foreign policy is made, see *Self Perception and National Security Policy* (D'Agostino, 1993, Chapter Two), which is based upon Art (1973) and Hilsman (1992). This chapter also contains an original critique of Verba's (1961) and Larson's (1985) views that policy preferences are an epiphenomenon of the international environment.

multilateral process of military deescalation. In summary, for Jervis the policy preferences of deterrence and spiral theorists originate in different cognitive schemas of how the world works, specifically, of how wars are caused.

Universal cognitive mechanisms are invoked to explain how such schemas develop. The basis of these mechanisms is the finite information processing capability of the organism, and the consequent need to simplify experience, which would otherwise overwhelm the individual with information. In some cases, the specific simplification strategy used may result in misperception, as in misguided use of the Hitler analogy. However, even in such cases it is rational to persist with the schema as long as it works at all, since it is not possible to dispense with schemas altogether, and there is no way of knowing a priori whether a particular schema is fitting or not.

In a more recent study co-authored by Jervis (Koopman, Snyder, & Jervis, 1990), this feature of cognition in which the individual's belief system at any given time sets subjective parameters for what will be perceived is described as "theory driven" as opposed to "data driven." This is consistent with a "data driven" process also operating on a longer time-scale, as described in *Perception and Misperception*. There Jervis argues that belief systems have their ultimate origin in data and undergo long-term transformations to better accommodate data, much like the formation and periodic transformation of paradigms thought to characterize the evolution of science (Jervis, 1976; Kuhn, 1970).

Jervis suggests that different histories of experience of the international environment give rise to different belief systems. Specifically, the experience of World War I created a generation of policy-makers who then attempted unsuccessfully to cope with fascism on the basis of spiral theory. Those for whom the failure of appeasement and the subsequent outbreak of World War II were formative experiences turned to deterrence theory, which became the schema for coping with Soviet communism.

Although Jervis presented his cognitive explanation of political behavior as a scientific hypothesis, in nearly two decades neither Jervis nor anyone else has systematically subjected this model to empirical testing. (For this observation I am indebted to an anonymous *Political Psychology* reviewer). However, two predictions can be tested, among others. First, if the model is correct, we would expect statistically significant differences in policy preferences between World War I and World War II age cohorts. An adequate data set for testing this statistical hypothesis is not readily available and would have to be assembled from historical documents, but such research would have a high scientific payoff for anyone undertaking it.

Another element of the cognition-driven model, the theory that short-term belief system stability serves a purely cognitive or heuristic function, is the basis for a second prediction. If "deterrence" and "spiral" theories are simply schemas for making sense of the world, just as scientific theories are, individual differ-

ences in political belief systems should be uncorrelated with differences in self psychology. Thus, we would expect no correlation between hawk/dove beliefs and self-perception, just as we would not expect proponents of competing biochemical theories to differ systematically on the dimension of self-perception. This predicted independence of political belief systems from personality should hold all the more for policy elites and attentive publics, whose professional training and/or significant knowledge of public affairs is believed to make them more objective than the general public (Verba, 1961).

Survey data presented in Section III, however, indicate that hawks and doves *do* differ in their self-perception, with male hawks maintaining an image of themselves as "not feminine," male doves maintaining an image of themselves as "idealistic," and female hawks and doves also maintaining distinctive self-images. For a data set of 328 male elites and attentive publics, 44% of the variance in national security policy preferences and related beliefs is explained by self system differences. Insofar as policy preferences are a function of self system needs, it would appear that the personality-driven model of political behavior is applicable.

## II. PERSONALITY, COGNITION, AND CONTROL SYSTEMS

The relationship between self and beliefs established by the present research, while calling into question a purely cognitive explanation of political belief systems, does not support a purely personality-driven explanation. Prior research has established that policy preferences are to some extent related to information exposure (Page & Shapiro, 1992; Bartels, 1993). Much of the 56% of policy preference variance that is unexplained by self system differences in the present model may be the result of differences in information exposure, especially those resulting from the individual's location in one or another political subculture.

Control theory provides an alternative to one-sided explanations of behavior in terms of external information on the one hand, or internal needs and motivations on the other. The familiar example of a thermostat illustrates the basic structure of all control systems, including living organisms. In the case of the thermostat, the system controls room temperature by continuously comparing its perception of this variable with a "reference perception," namely, the thermostat setting. When perception deviates significantly from the reference perception, the resulting error signal activates a heater or air conditioner until room temperature is returned to the level established by the thermostat setting.

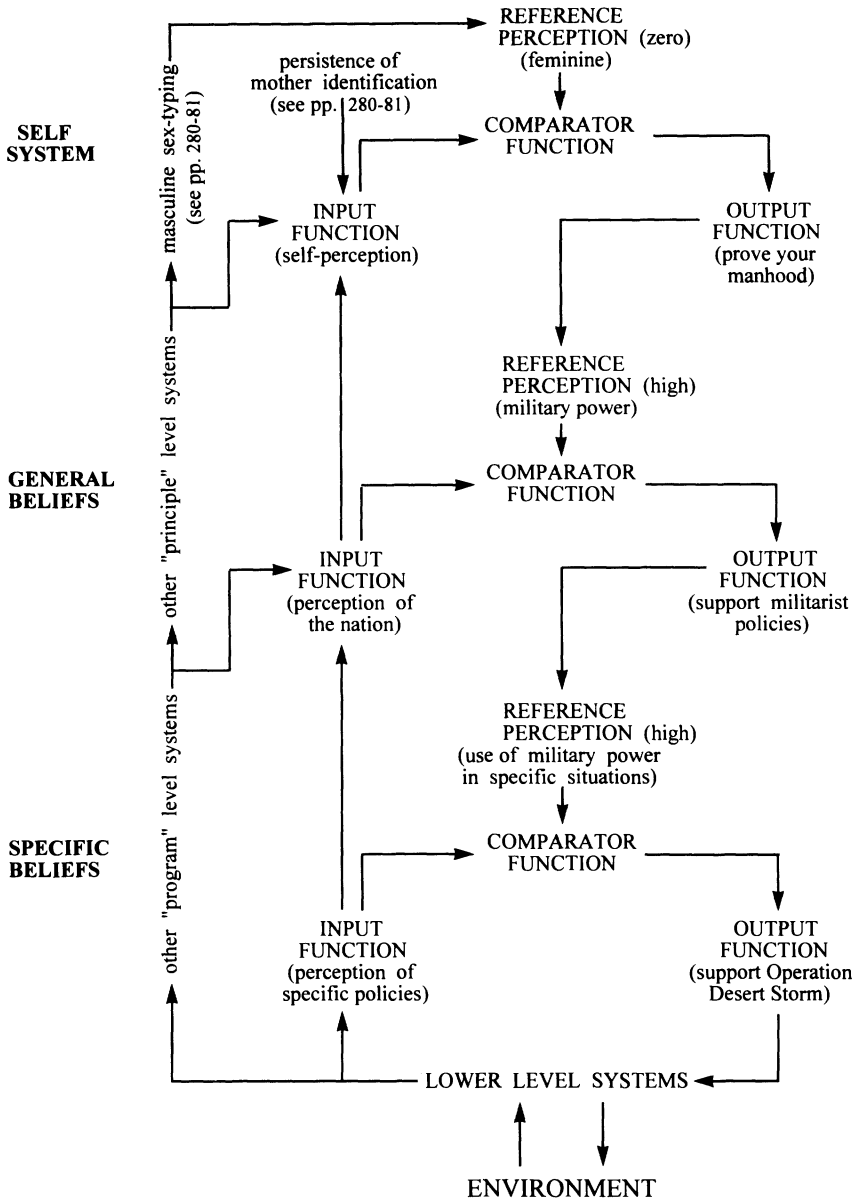
In the control theory framework, all human behavior can be viewed as the output of one or another control system, organized into a hierarchy of such

systems (Powers, 1973; Carver & Scheier, 1981; Hershberger, 1989; Robertson & Powers, 1990; Marken, 1992). Elementary sensory inputs and motor outputs constitute the base of the individual's control hierarchy, which interacts directly with the environment. Higher levels correspond to the individual's hierarchy of purposes, such as doing word processing, writing to a senator, and performing one's civic duties. At the apex of the individual's control hierarchy is the regulation of self-image, which constitutes the personality (Hershberger, 1989; Carver & Scheier, 1981; Powers, 1973). This includes genetically programmed bodily needs as well as higher order needs such as "self actualization" (Maslow, 1976) and "symbolic immortality" (Lifton, 1979). A hierarchical control model of male militarism, with the self system at the apex and the belief system subdivided into two levels is given in Figure 1.

At every level of the individual's control hierarchy, as shown in Figure 1, behavioral output is jointly determined by the comparison of perceptual input—or cognition—with a reference perception. The perceptual input, which ultimately originates in the environment, is the external component of behavior. The reference perception, which ultimately originates in the self system, is the internal component. Negative feedback loops continuously link perception and reference perception. This control systems model specifies the mechanism by which the external and internal sources of behavior interact, and therefore the nature of the onesidedness involved in trying to explain behavior entirely in terms of personality or in terms of cognition.

In this article, the behavior to be explained is support for or opposition to militarist policies, which is viewed as output of the individual's belief system.<sup>2</sup> Like other control systems, the national security belief system receives perceptual input from lower level systems and compares this input to a reference perception, in this case involving the military power of the individual's nation. A "hawk" can be defined as an individual who seeks to maintain his or her nation's military power at a high level, while a "dove" seeks to maintain a low level (or zero, in the case of pacifists). Precisely what constitutes "high" or "low" was operationalized in the present research by the extent of agreement or disagreement with 25 hawk and dove policy preferences and related beliefs. The term "militarism" is used here as synonymous with the hawk/dove policy preference dimension.

<sup>2</sup>It is necessary to distinguish two aspects of political belief systems, the cognitive and behavioral. The input side of a belief system consists of cognitive schemas that enable the individual to classify incoming information on the basis of past experience. The output side consists of political preferences that guide behavior. The term "belief system" is commonly used to refer to both schemas and preferences. Taber (1992) explicitly conceptualizes cognitive and behavioral aspects of belief systems in terms of input and output functions. Following the literature on control theory, D'Agostino (1993) makes fully explicit how the input and output functions are continuously linked through negative feedback loops.



[The three levels in this figure, beginning at the top, correspond to Powers' (1973) "system," "principle," and "program" levels.]

**Fig. 1.** A hierarchical control systems model of male militarism.

In another part of the survey, subjects provided data on self-perception using a list of 72 adjectives descriptive of personality. If the reference perception for military power originates in the individual's self system, then much of the variance in belief systems across individuals would be explained by self system differences, which is precisely what the data indicate.

A control systems model also predicts, however, that part of belief system variance is attributable to variations in perception across individuals. While the mass media component of information exposure can be assumed to vary little across individuals, reflecting national standardization of the media (Page & Shapiro, 1992), the individual's location in this or that political subculture can be expected to produce differences in information exposure across individuals. For example, members of a liberal/left party would be exposed to divergent information about national security policy compared to employees of a weapons contractor.

An empirical investigation of the external informational bases of national security policy perception, involving both common and divergent sources, is beyond the scope of this article. However, the particular control systems model developed here, which is limited to examining the self and beliefs levels of the individual's hierarchy, is consistent with the finding that 56% of belief system variance is unexplained by self system differences. How much of this unexplained variance can be attributed to differences in perception (that is, cognition) is an empirical question for future research.

The above discussion of belief systems in terms of the relative quantitative contributions of perceptions and reference perceptions can be further clarified by viewing cognition-driven and personality-driven models as limiting special cases of the control systems model. Jervis's model of national security belief systems, for example, is a control systems model in which hawks and doves alike are both seeking the same goal, namely, the prevention of war. Since this overriding reference perception is the same for all individuals, it ceases to be a variable and drops out of the model, leaving different histories of perception as the only variable explaining the divergent behavioral outputs of hawks and doves. Conversely, the control systems model can be viewed as a cognitive model in which reference perceptions have been made explicit and permitted to vary across individuals.

### III. DATA

A two-part mail survey on self-perception and national security beliefs was completed by 413 U.S. policy elites and members of attentive publics in June and July 1990. A demographics and voting record questionnaire was also in-



cluded, but was of only peripheral interest in the present research. The sub-populations and sub-samples were as follows:

	Males (N = 328)	Females (N = 85)
<i>Policy Elites</i>		
Council on Foreign Relations	228	16
<i>Attentive Publics</i>		
Readers of <i>National Review</i> (Edited by William F. Buckley, Jr.)	48	18
Individuals attending the annual "Socialist Scholars Conference" (hosted by City University of New York)	52	51

### Hawk and Dove Belief Systems

For the belief system part of the survey, 25 sentences regarding U.S. national security policy were evaluated on a 9-point scale from "disagree very strongly" through "no opinion" to "agree very strongly." The statements focused on the role of military power in U.S. foreign policy. Thirteen of these were "dove" statements critical of the extent of U.S. reliance on military power and/or advocating increased reliance on international law and organization. Twelve were "hawk" statements favoring continued reliance on various forms of military power. Figure 2 gives these statements as they were presented to survey participants, except they are labeled with "H" and "D" to indicate hawk and dove policy preferences. The scale is highly reliable, having a Cronbach's alpha of .95 for the male data set (see Technical Appendix).

Factor analysis of the beliefs data produced a hawk/dove factor on which the 12 items labeled a priori as hawk items had positive loadings and the 13 dove items had negative loadings (see Technical Appendix). The emergence of this bipolar factor confirms earlier factor analytic studies showing "militarism" to be one of the main dimensions structuring foreign policy beliefs (Hurwitz & Peffley, 1987). Two other dimensions explored in prior research, anticommunism and isolationism/internationalism, were not systematically represented in the present survey instrument. This militarism policy preference dimension was virtually identical ( $r > .95$ ) for elites and attentive publics, males and females. The scores of individuals on this militarism dimension were the dependent variable of the present study.

It should be noted that the militarism scale does not equate the dove viewpoint with pacifism. Hurwitz and Peffley (1987), while using policy preference statements similar to those used here, attempt to explain these policy preferences

After each statement write one number using the following scale:

Disagree Very Strongly -4	Disagree Strongly -3	Disagree Somewhat -2	Disagree Slightly -1	No Opinion 0	Agree Slightly +1	Agree Somewhat +2	Agree Strongly +3	Agree Very Strongly +4
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The long term defense needs of the United States must be evaluated in relation to Soviet capabilities, which remain formidable, not in relation to Soviet intentions, which can fluctuate. \_\_\_\_ (H)

The U.S. should maintain or increase budgets devoted to covert operations and low intensity warfare. \_\_\_\_ (H)

The U.S. should promote general and complete disarmament along with a stronger, reformed United Nations and other mechanisms of global conflict resolution. \_\_\_\_ (D)

Even if a particular weapons system is not needed for deterrence, we should not underestimate its value as a bargaining chip. \_\_\_\_ (H)

American security for the foreseeable future will depend upon nuclear weapons. \_\_\_\_ (H)

The expanding role of computers in our military technology is dangerous and makes it more likely that in a time of crisis a war could start by accident. \_\_\_\_ (D)

Nuclear weapons are not likely to be eliminated in the coming decades; the question is how to manage them so as to minimize the danger of nuclear war. \_\_\_\_ (H)

The decision of American leaders to drop the atomic bomb on Hiroshima was immoral and irresponsible. \_\_\_\_ (D)

Trying to develop strategic defenses would continue the wasteful spiral of weapons technology without bringing any real security. \_\_\_\_ (D)

A permanent war economy since World War II has undermined the competitiveness of American civilian industry. \_\_\_\_ (D)

Compared to most great powers, the United States has been fair and humane in its foreign policy. \_\_\_\_ (H)

The U.S. should compensate for quantitative reductions of troops and weapons by modernizing our remaining forces. \_\_\_\_ (H)

Adlai Stevenson was right that U.N. intervention, rather than a dangerous U.S. naval blockade, was the responsible way to resolve the Cuban Missile crisis. \_\_\_\_ (D)

Gorbachev and his reforms do not change the fact that Soviet economic and political interests are opposed to those of the United States. \_\_\_\_ (H)

The United States should accept the compulsory jurisdiction of the World Court. \_\_\_\_ (D)

The military buildup under Reagan was the main factor that brought the Soviets to the negotiating table. \_\_\_\_ (H)

The United States should work with the U.S.S.R. and other nations to prevent the militarization of outer space. \_\_\_\_ (D)

In the period since World War II, American nuclear and conventional forces have maintained peace and order in the world. \_\_\_\_ (H)

Economic conversion of nearly all military production should be planned now and implemented through disarmament treaties during the 1990's. \_\_\_\_ (D)

The United States should not support military regimes that represent rich elites in the Third World. \_\_\_\_ (D)

In the period since World War II, the U.S. has maintained nuclear and conventional forces far in excess of the nation's legitimate security needs. \_\_\_\_ (D)

Fig. 2. National security beliefs.

After each statement write one number using the following scale:

Disagree Very Strongly -4	Disagree Strongly -3	Disagree Somewhat -2	Disagree Slightly -1	No Opinion 0	Agree Slightly +1	Agree Somewhat +2	Agree Strongly +3	Agree Very Strongly +4
------------------------------------	----------------------------	----------------------------	----------------------------	--------------------	-------------------------	-------------------------	-------------------------	---------------------------------

The use of or threat to use nuclear weapons and other weapons of mass destruction is a serious violation of the laws of war and international law generally. \_\_\_\_ (D)

The United States has a history of imperialist violence—against American Indians, Latin Americans, Vietnamese. \_\_\_\_ (D)

The Reagan administration's bombing of Libya effectively reasserted American power. \_\_\_\_ (H)

The U.S. should maintain a vigorous program of weapons research for the foreseeable future. \_\_\_\_ (H)

Fig. 2. Continued

in terms of a pacifist core value, namely, categorical opposition on moral grounds to killing in war. Goertzel (1992) also implicitly equates doves with pacifists. Not all people who support dove policy preferences, however, are pacifists. For example, many advocates of "general and complete disarmament" have historically also advocated world government and thus a nonpacifist centralization of residual military capability in a world of disarmed nation states. The questionnaire used in the present study therefore included a dove statement on general and complete disarmament and a strengthened and reformed U.N.

Similarly, in the context of a system of armed nation states, many doves recognize that specific wars and wartime uses of force can be legitimate. While Goertzel concedes this point with respect to Einstein and other doves who supported World War II, he interprets this as an inconsistency, having defined doves as those who categorically oppose war and killing (Goertzel, 1992). This inconsistency does not arise, however, if doves are defined as those who view military power as an evil to be minimized, with only a minority of doves advocating that military power be unilaterally reduced to zero. This definition thus includes but is not limited to pacifists. Some of the dove items in the present survey that operationalized this definition were:

In the period since World War II, the U.S. has maintained nuclear and conventional forces far in excess of the nation's legitimate security needs.

The United States has a history of imperialist violence—against American Indians, Latin Americans, Vietnamese.

The use of or threat to use nuclear weapons and other weapons of mass destruction is a serious violation of the laws of war and international law generally.

The decision of American leaders to drop the atomic bomb on Hiroshima was immoral and irresponsible.

### Hawk and Dove Self Systems

Identifying the self-perception correlates of militarism required a comprehensive and variegated psychological instrument, if only because of inadequate

prior knowledge of the relevant variables. A suitable instrument was at hand in the self-assessment version of the California Q-set (Block, 1978, Appendix H). Each survey participant was asked to rank 72 adjectives descriptive of personality from "most characteristic" of himself or herself to "least characteristic."

From the control theory perspective, each of the 72 self-perception variables are aspects of self-image that the individual may or may not actively maintain, rather than inert and static "traits." Those self variables that a given individual ranks closest to the "most characteristic" and "least characteristic" poles of the ranking are the ones out of the 72 alternative items that the individual is most actively controlling.

Ranking the 72 self items as a general, multidimensional equivalent of what control theorists call the test for the controlled variable. This test consists of the investigator altering or "disturbing" some variable that he or she believes the subject is controlling; if the subject acts to restore the variable to its original value, this indicates that the subject is in fact actively maintaining the variable at or near some reference value. For example, an investigator can test whether a person is maintaining an image of herself as "cooperative" in a social psychology experiment by saying "Why are you being uncooperative?" If the subject is controlling this variable, she will act to restore her self-image by affirming that she *is* being cooperative. If the subject is not controlling this variable, her reaction will typically be one of indifference.

In the process of ranking the 72 self items, the subject is confronted with 72 potential "disturbances" of his or her self-image. The items that the individual reacts to most strongly, either positively or negatively, are most revealing about the aspects of self-image that the person generally controls. Items placed in the middle of the ranking are neutral to the individual's self system. Items placed in the negative pole represent variables for which the person has a low or zero reference perception. Items placed in the positive pole represent high reference perceptions.

While the militarism policy preference factor was virtually identical for both sexes, there were important differences between males and females with respect to self-perception. The male and female self-perception data were analyzed separately to take account of this gender specificity. Figure 3 gives this self-perception instrument as it was presented to survey participants, except that it is filled in with data representing the self system of the typical male hawk (see Technical Appendix). It should be noted that male doves control many of the same aspects of self as hawks. For example, both types perceive themselves as "intelligent" and not "cruel, mean."

### **Female Hawks and Doves**

Because the female sample was small ( $N = 85$ ), findings on the psychology of female hawks and doves cannot be reliably generalized to the population of

## I. Self-Perception

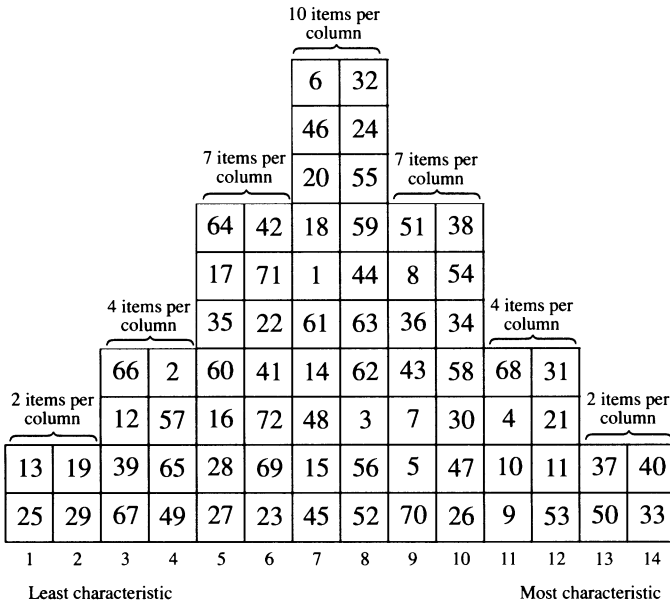
Use the following list of adjectives to describe yourself as honestly as possible. Record the numbers of the adjectives in the bell-shaped set of columns below.

First, check off the *two* adjectives that are *most characteristic* of you, record them in column 14, and cross them off the list. Of the remaining adjectives, check off the next two that are most characteristic, record them in column 13, and cross them off. Follow this procedure until column 8 has been completed. Note that the columns closer to the middle contain an increasing number of items, as indicated above the columns.

When you finish column 8, record the items that are *least* characteristic of you, beginning with column 1 and working toward the middle.

*You must remember to cross off each item after you record it in order to avoid recording the same item more than once.*

- |                  |                        |                         |                               |
|------------------|------------------------|-------------------------|-------------------------------|
| 1. absent-minded | 19. dull               | 37. persevering         | 55. strict                    |
| 2. affected      | 20. easily embarrassed | 38. personally charming | 56. stubborn                  |
| 3. aggressive    | 21. energetic          | 39. feel powerless      | 57. submissive                |
| 4. ambitious     | 22. envious            | 40. reasonable          | 58. sympathetic               |
| 5. assertive     | 23. erotic             | 41. rebellious          | 59. tender                    |
| 6. bossy         | 24. extroverted        | 42. resentful           | 60. timid                     |
| 7. calm          | 25. feminine           | 43. reserved, dignified | 61. touchy, irritable         |
| 8. cautious      | 26. frank              | 44. restless            | 62. tough                     |
| 9. competitive   | 27. grandiose          | 45. sarcastic           | 63. unconventional            |
| 10. confident    | 28. guileful           | 46. selfish             | 64. undecided, confused       |
| 11. considerate  | 29. hostile            | 47. self-controlled     | 65. unhappy                   |
| 12. contemptuous | 30. idealistic         | 48. self-indulgent      | 66. uninterested, indifferent |
| 13. cruel, mean  | 31. imaginative        | 49. self-pitying        | 67. feel unworthy, inadequate |
| 14. cynical      | 32. impulsive          | 50. sense of humor      | 68. versatile                 |
| 15. defensive    | 33. intelligent        | 51. sentimental         | 69. feel vulnerable           |
| 16. dependent    | 34. introspective      | 52. shrewd, clever      | 70. warm                      |
| 17. disorderly   | 35. jealous            | 53. sincere             | 71. withdrawn                 |
| 18. dissatisfied | 36. masculine          | 54. sophisticated       | 72. worried and anxious       |



**Fig. 3.** Self-Perception (male hawk).

female policy elites and attentive publics. The problem is exacerbated by the nearly three to one imbalance of doves over hawks in the female sample, which resulted primarily from a data collection error involving the female *National Review* readers. With this proviso, it is still possible to draw some tentative conclusions from the female data set.

First, although some of the observed self-perception differences between female hawks and doves would likely disappear with a more adequate sample, it is also likely that some would remain. It is therefore probably safe to say that female hawks and doves maintain distinctive self-images, although precisely what these differences are will have to await future research.

Second, most of the self variables that distinguish male hawks and doves do not distinguish female hawks and doves. This suggests that at least some aspects of the psychology of militarism are gender specific, which is consistent with other evidence and theory (Miedzian, 1991).

Third, some aspects of the psychology of militarism are probably not gender specific. Hawks of both genders view themselves as significantly less "rebellious," "unconventional," and "erotic" than doves view themselves. This is consistent with theory and evidence on the relationship between authoritarianism and militarism, and the origins of both in sexual repression (Adorno et al., 1950; Reich, 1970). Hawks of both genders also view themselves as higher on self characteristics that seem related to the "Machiavellianism" construct (Christie & Geis, 1970). For females, these items are "cautious" and "guileful"; for males "cautious" and "reserved" would appear to be positive measures and "idealistic" a negative measure of Machiavellianism.

Finally, at least one self characteristic associated with feminine "sex-typing" (Bem, 1974; 1985) predicts militarist policy preferences for both genders. Specifically, hawks view themselves as significantly less "sympathetic" than doves view themselves. Items that significantly distinguish female hawks from doves are presented in Table I and Figure 4.

### Male Hawks and Doves

Eighteen items were significantly correlated with militarism ( $p < .01$ ) for the sample of 328 males (see Table II). Eleven of these items are identical or comparable to items in the masculine and feminine subscales of the Bem Sex Role Inventory (Bem, 1974). Like Bem's "androgyny" construct, a construct here labeled "machismo" is defined as the difference between aggregate scores on these independently defined masculine and feminine items (see Technical Appendix). Figure 5a plots the differences between male hawk and dove means on the machismo self items. As discussed above, items close to the negative or positive poles of the self item ranking indicate controlled self variables. Figure

**Table I.** Female Self Correlates of Militarism  
(N = 85) (females)  
Ranked by magnitude of correlation

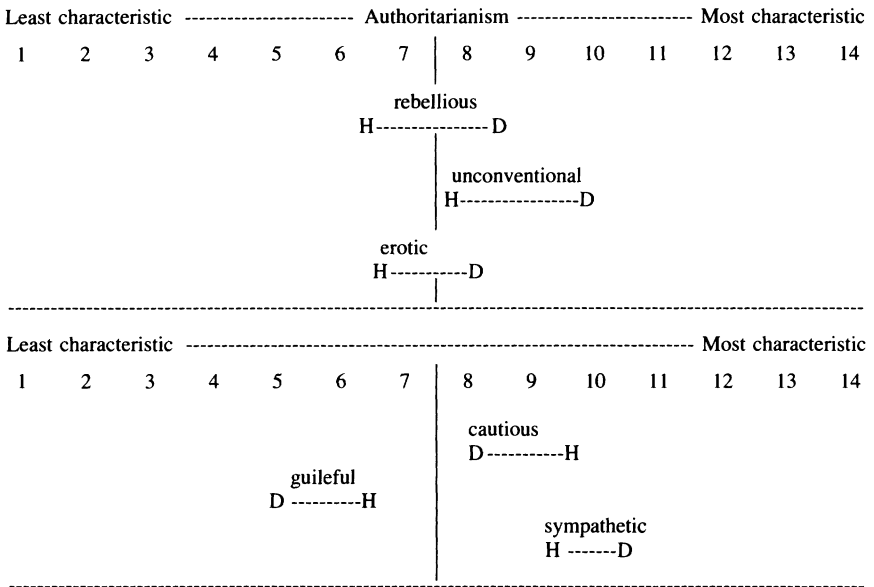
Variable number	Self dimension	Self variable	Correlation with militarism
41	AUTHORITARIANISM(-)	rebellious	-.39**
63	AUTHORITARIANISM(-)	unconventional	-.38**
8	MACHIAVELLIANISM(+)	cautious	.33**
28	MACHIAVELLIANISM(+)	guileful	.31*
58	FEMININITY(+)	sympathetic	-.30*
23	AUTHORITARIANISM(-)	erotic	-.30*

\*\* 1 tail probability < .001

\* 1 tail probability < .01

5a shows that “feminine” is apparently a controlled self variable for male hawks; specifically, male hawks control an image of themselves as “not feminine.” This datum is consistent with other evidence linking militarism with male gender insecurity, as discussed in Section IV.

Of the 18 self items that predict militarism for males, those other than the machismo items would appear to tap elements of both “Machiavellianism”



**Fig. 4.** Female hawk and dove means on authoritarianism and other self items (hawk and dove designated by “H” and “D”)

**Table II. Male Self Correlates of Militarism**  
(N = 328) (males)  
Ranked by magnitude and sign of correlation

Item	Militarism	9	3	4	36	5	6	62	25	58	69	59
		1.00										
9 competitive	.26											
3 aggressive	.24	.46	1.00									
4 ambitious	.21	.50	.37	1.00								
36 masculine	.18	.15	.18	.01	1.00							
5 assertive	.16	.29	.53	.27	.16	1.00						
6 bossy	.16	.26	.39	.16	.13	.41	1.00					
62 tough	.15	.19	.21	.06	.09	.25	.06	1.00				
25 feminine	-.39	-.15	-.15	-.15	-.26	-.06	-.07	-.11	1.00			
58 sympathetic	-.26	-.18	-.25	-.22	-.07	-.19	-.15	-.07	.17	1.00		
69 feel vulnerable	-.18	-.26	-.27	-.17	-.24	-.21	-.21	-.24	.09	.04	1.00	
59 tender	-.13	-.01	-.18	-.09	-.11	-.17	-.10	-.15	.11	.33	.09	1.00
<b>Machismo</b>												
41 rebellious	-.28	-.20	-.13	-.17	-.05	-.11	-.14	.06	.11	.04	.00	.08
30 idealistic	-.28	-.13	-.20	-.08	.04	-.14	-.09	-.08	.15	.27	-.00	.10
23 erotic	-.26	-.04	-.06	.06	.03	-.09	-.03	-.01	.31	.05	.04	.17
63 unconventional	-.19	-.17	.01	-.10	-.03	.01	-.07	.13	.07	.05	-.08	-.01
55 strict	.20	.14	.13	.02	.03	.06	.14	.25	-.18	-.07	-.09	-.07
43 reserved, dignified	.20	-.01	-.08	.05	-.01	-.13	-.01	-.01	-.15	-.03	-.12	-.03
8 cautious	.15	-.06	-.16	-.05	-.07	-.07	-.16	-.13	-.09	.03	.02	.01
<b>Liberation</b>												
		1.00										
		.17	1.00									
		.22	.09	1.00								
		.35	.07	.14	1.00							
		-.16	-.10	-.17	-.08	1.00						
		-.25	-.08	-.22	-.14	.17	1.00					
		-.20	-.08	-.17	-.24	.11	.30	1.00				



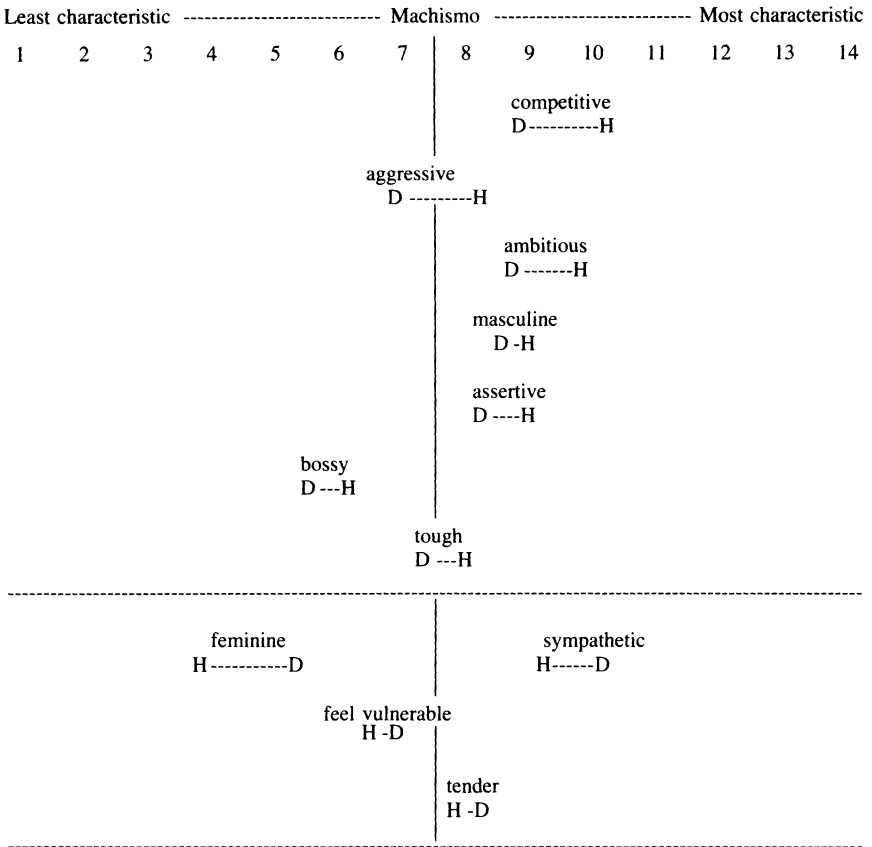


Fig. 5a. Male hawk and dove means on machismo self items (hawk and dove designated by "H" and "D")

(Christie & Geis, 1970) and authoritarianism (Adorno et al., 1950; Altemeyer, 1981). These items and their relation to the two prior constructs are given in Table III. Since these items were found to be intercorrelated, they were used to define a single self construct. While Machiavellianism and authoritarianism pertain respectively to the calculating and unconscious aspects of power, the inverse of both can be called "liberation," which was chosen as the label for this construct.

Control theory provided a rationale for conceptualizing and labeling this construct in terms of the inverse of Machiavellianism and authoritarianism. Of the seven self variables that define this construct, only "idealistic" is close to one of the poles of the self item ranking, as shown in Figure 5b. More specifically,

**Table III.** Relation of Male Self Variables to Prior Constructs

Self Variable	Prior Construct
idealistic	MACHIAVELLIANISM(-)
cautious	MACHIAVELLIANISM(+)
reserved*	MACHIAVELLIANISM(+)
rebellious	AUTHORITARIANISM(-)
unconventional	AUTHORITARIANISM(-)
erotic	AUTHORITARIANISM(-)
strict	AUTHORITARIANISM(+)
dignified*	AUTHORITARIANISM(+)

\*"reserved" and "dignified" were combined into a single self variable (item #43), which may be regarded as tapping a complex personality trait in which Machiavellianism and authoritarianism overlap.

highly idealistic males control this self variable, while the less idealistic males tend to rank it closer to the center of the self item ranking. In other words, idealism is a more important motivation for idealists than any self variable is for nonidealists (Machiavellians).

These data have important implications for the concept of Machiavellianism. Specifically, it would appear that high scorers on the Machiavellianism construct are not characterized by a distinctive motivational system, while low scorers are. I would argue that what was originally called Machiavellianism is the element of detachment in the motivational system Miedzian (1991) calls the "masculine mystique." This is consistent with evidence that the Machiavellianism construct tends to be specific to males (Christie & Geis, 1970). What remains of the original Machiavellianism construct is the idealism of the low scorers, which should therefore be conceptualized and labeled in terms of the inverse of Machiavellianism.

The present data set also sheds new light on the topic of authoritarianism. While few U.S. elites score high on prior measures of authoritarianism, such as the F scale and Altemeyer's RWA scale (Christie, 1991), the authoritarianism items in the present survey elicited significant variance from the Council on Foreign Relations sample. The difference is that these items directly tap the self system referred to by the original concept of authoritarianism, while prior constructs were indirect measures consisting of propositions about the world.

The fact that U.S. elites score low on these prior measures of authoritarianism simply means, I would argue, that they have more sophisticated understandings of the world than mass public authoritarians. The present data, however, indicate that authoritarianism defined and measured directly in terms of self-image may be found even at high levels of sophistication. This new finding, as

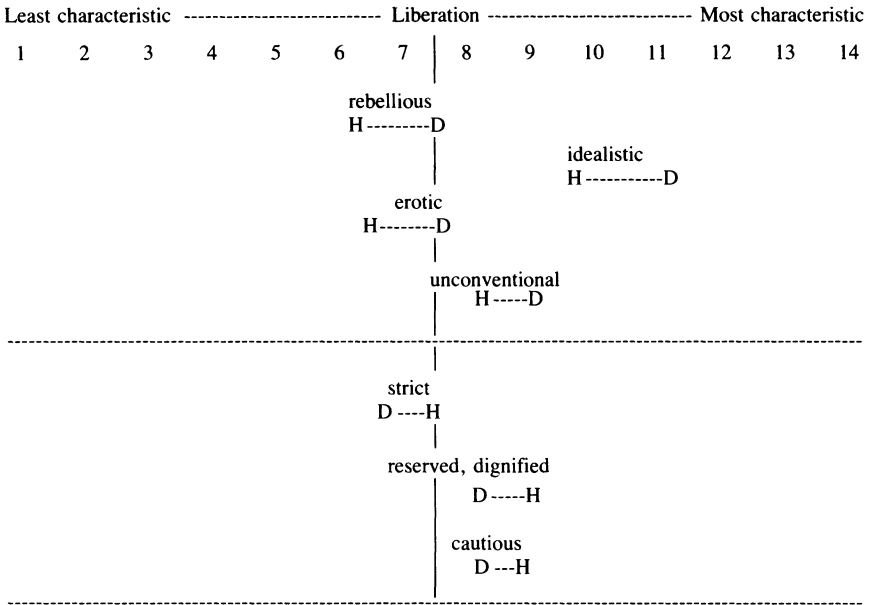


Fig. 5b. Male hawk and dove means on liberation self items (hawk and dove designated by "H" and "D")

well as the new findings on Machiavellianism reported above, are the fruits of direct measurement of the self system undertaken in the present research.

Classification of the liberation self items into Machiavellian and authoritarian categories, although useful in underscoring the relation between the present and earlier findings, must be viewed as tentative and in need of confirmatory research. Whether these concepts are eventually retained or abandoned in favor of better ones, the self items here labeled authoritarian and Machiavellian are in any case empirically intercorrelated and strongly predictive of militarist policy preferences.

The correlation matrix of all 18 self items with one another and with aggregate militarism scores is given above in Table II. Since both the machismo and liberation dimensions are defined by positive and negative measures, aggregate scores on each dimension were calculated by subtracting the individual's total on the negative measures from his total on the positive measures. (For "liberation," items 41, 30, 23, and 63 were counted as positive). The same method was used to calculate aggregate scores on the militarism dimension based on scores on the 12 hawk and 13 dove policy preference measures. The two self constructs and the militarism policy preference construct were then intercorrelated and corrected for attenuation. Table IV gives the regression of militarism on machismo and

**Table IV.** Multiple Regression of Militarism on Liberation and Machismo Self Dimensions (N = 328) (males)

Correlations		1-tailed signif. $p < .001$ [corrected for attenuation]			
	Militarism	Liberation	Machismo		
Militarism	1.0000	-0.5578	0.4921		
Liberation	-0.5578	1.0000	-0.2624		
Machismo	0.4921	-0.2624	1.0000		
Variable means substituted for missing data					
Dependent variable:	Militarism				
Independent variables:	Liberation				
	Machismo				
Multiple R	.66296				
R Square	.43951				
Adjusted R Square	.43606				
Standard Error	.75096				
Analysis of Variance					
	DF	Sum of Squares	Mean Square		
Regression	2	143.72014	71.86007		
Residual	325	183.27986	.56394		
F = 127.42547      Signif F = 0.0					
----- Variables in the Equation -----					
Variable	B	SE B	Beta	T	Sig T
LIBERATION	-.05202	4.86284E-03	-.46037	-10.697	.0000
MACHISMO	.02878	3.33613E-03	.37130	8.628	.0000
(Constant)	-.48301	.12090		-3.995	.0001

liberation, which together are found to explain 44% of the variance of belief systems along the militarism dimension.

#### IV. DISCUSSION

In addition to providing a coherent psychological analysis, the control systems model of militarism presented above links internal and external frames of reference that are normally isolated from one another. At its base, the control hierarchy of the individual terminates in the informational environment, linking the model to an analysis of the society's information infrastructure and the organized interests that shape it, and thus to media studies and political economy. At its apex, the individual's control hierarchy terminates in the self, linking the model with self psychology and psychotherapy.

The independent contributions of the self and the information infrastructure

to belief systems can be better understood by considering the effects of a given perceptual input on individuals with three different reference perceptions for military power, then considering the effects of independently varying the perceptual input. Let us take the example of policy preferences regarding a proposed increase in military spending. First, consider the effect on these policy preferences of media coverage depicting the nation's military power as somewhat adequate for its defense needs. (For a critique of the literature claiming that media exposure has minimal effects, see Bartels, 1993). For hawks, this intermediate perception will be compared with a high reference perception for military power, and the hawk will experience an error perception driving support for more military spending. For doves, the intermediate perception will be compared with a low reference perception, and he or she will experience the opposite error perception, driving opposition to more spending. For intermediates, perception will match reference perception, and such individuals will take no action.

Now consider the effects on hawks, doves, and intermediates of media coverage depicting the nation's military power as inadequate. Hawks will experience a greater discrepancy in the same direction as they did with intermediate coverage and will support the spending increase even more vigorously. Other things being equal, doves will experience less of a discrepancy in the same direction as they did in the case of intermediate coverage. They will therefore oppose the spending increase, but not as vigorously. Intermediates, who are not normally predisposed to militarism, will experience a discrepancy in this case that will determine support for the military spending increase, although their support will not be as vigorous as that of hawks. Thus, biases in socially constructed perceptions of public affairs can shift the entire spectrum of political belief and behavior to the left or the right.

In summary, the problem of militarism cannot be reduced to the distribution of hawk personalities in a given population. Rather, the above analysis makes clear how militarist propaganda and ultimately the economic interests served by such propaganda are integral to any explanation of militarism. At the same time, however, a control systems analysis makes clear the independent contribution of self psychology to militarism. This side of the analysis yields new and important insights into the causes of militarism compared with purely cognitive models.

As mentioned above (p. 265), Jervis's cognitive model assumes that "deterrence" and "spiral" theorists are equally motivated to prevent war,<sup>3</sup> and that their policy disagreements pertain essentially to the means for best achieving this universal goal. This is a purely theoretical assumption, unsupported by any data, even though the question is an empirical one. The present research, informed by

<sup>3</sup>"Militarism" and "war" are related but not identical topics; D'Agostino (1993 pp. 10–12) analyzes the inadequacies of attempting to explain the outbreak or prevention of individual wars without reference to the larger processes of militarism and the war system.

different, control theory assumptions, yields data that shed light on this question. While these data and their interpretation are bound to be controversial, such controversy may spark a fruitful and needed debate having scientific and political dimensions.

The data at issue are summarized in Figures 5a and 5b, which depict statistically significant differences between male hawks and doves on two groups of intercorrelated self variables. From a control theory viewpoint, the most important among the "machismo" variables is "feminine," which appears near the negative pole of the self item ranking for hawks but not for doves. Conversely, "idealistic" appears close to the positive pole of the ranking for doves but not for hawks. Since "hawks" and "doves" are defined entirely with respect to policy preferences and related beliefs, these data can be summarized by saying that hawk policy preferences are associated with a "machismo" motivational system, while dove policy preferences are associated with an "idealistic" motivational system.

A preoccupation with preventing war, like every other effort to make the world more humane, is an aspect of what is commonly meant by "idealism." If war prevention is a motivational constant, as assumed by cognitive theorists, then hawks and doves would not be expected to differ significantly on the "idealistic" self variable. This prediction is not borne out by the present data, in which this self variable is strongly correlated with hawk/dove policy preferences. To be sure, Figure 5b shows that both hawks and doves score themselves relatively high on "idealistic" compared with the 71 other self variables, which is the grain of truth in the constant motivation assumption. However, this does not negate the fact that male doves view themselves as significantly more idealistic, and therefore presumably more preoccupied with preventing war, than hawks.

Conversely, "machismo" would appear to be a motivation significantly more characteristic of male hawks than doves. Further, Figures 5a and 5b show that male hawks are more concerned about being "not feminine" than about being "idealistic," while for male doves the opposite pattern holds. These data should engender some skepticism towards the unproven assumption that "deterrence theorists" support high levels of military power and frequent recourse to the use and threat of force for purely rational reasons associated with the pursuit of peace and the prevention of war. Rather, the possibility should be explored that for such males military power has a symbolic value associated with maintenance of their macho self systems.

Whether and to what extent a symbolic valuation of military power overwhelms rational considerations of actual military utility for hawks is a separate empirical question beyond the scope of this article. However, symbolic processes would go a long way toward explaining why equally well-informed military experts can differ so sharply in assessing questions of military utility. This is

apparent, for example, from a comparison of hawk expert assessments of military utility with those presented by dove experts such as the Boston Study Group (1982), Gervasi (1986), Rotblat et al. (1993), and Hartung (1994).

### Self System Origins and Dynamics

To summarize the above analysis, the present data call into question the cognitive assumption that personality and motivational systems do not differ enough across individuals to significantly explain divergences in policy preferences. The origins and dynamics of self systems therefore warrant some discussion, for theoretical as well as practical reasons. Specifically, why are some males macho, some androgynous, and some effeminate? Why are some authoritarian and others idealistic? Because of limitations of space, this discussion will be limited mainly to social learning and psychoanalytic explanations of machismo.

Social learning theorists such as Mischel (1970) explain sex role differences in terms of socialization. According to this view, males vary on the machismo dimension because some are socialized to be macho, others to be androgynous, and so on. For example, some boys may be given toy guns to play with, while others are given dolls as well as guns (dolls other than toy soldiers, that is).<sup>4</sup> Although Mischel's focus is on the differences between male and female socialization, which is the usual context of the guns versus dolls example, the same kind of explanation also applies to differences in sex-typing within the male population.

Feminist psychoanalytic theorists such as Chodorow (1978) and Dinnerstein (1977) explain sex role differences in terms of object relations, that is, incorporation into the adult self system of the individual's experience of the mother during infancy. According to this view, a male raised in infancy almost exclusively by a female will not be able to achieve a masculine gender identity except by negating his early identification with the mother. This early identification, however, must to some extent and on a deep level remain constitutive of his self system. As an adult, therefore, the mother-raised male is chronically insecure about his gender identity.

This gender insecurity is depicted at the top of Figure 1 as a control system set to maintain a zero reference perception for "feminine," but which succeeds only imperfectly and with great effort because of continued identification with the mother. Such identification can be understood as a chronic intrapsychic

<sup>4</sup>I have no intention here of contributing to the myth that playing with dolls makes boys effeminate, which Miedzian (1991) effectively refutes. The guns vs. dolls example is used simply as a particularly vivid illustration of the general structure of social learning explanations of gender identity formation. For an introduction to specific empirical theories on the effects of war toys and dolls, see Miedzian (1991).

“disturbance” in the control theory sense (see page 269). According to Chodorow, this system is driven by a negation of the feminine because that is the only way individuals lacking a masculine object can code masculine sex-typing. (I use the term “object” in the sense it is used in object relations theory, that is, as the internalized experience of the infant care provider). The negation is therefore independent of the mother’s personality or the quality of mothering, which is generally overlooked by theorists of compensatory masculinity who focus on whether the mother was domineering (a separate source of insecurity).

Although social learning and psychoanalytic theories of gender identity are generally presented as alternative explanations, I would argue that the conflict is more apparent than real. Psychoanalytic explanations cannot account for male gender insecurity without implicitly referring to socialization. If mother-raised males did not experience social pressures to conform to the masculine sex-type, they would simply remain effeminate and would experience no gender insecurity. On the other hand, social learning theory does not by itself take into account the psychological contradiction that masculine sex-typing creates for mother-raised males. If males were sex-typed but entirely father-raised from birth onward, their gender identity would be securely rooted in a masculine object and they would experience no gender insecurity.

To be sure, at the societal level, sex-typing and assignment of infant care to females can never occur separately since they are constitutive of one another. The above thought experiments, however, help clarify the separate contributions at the individual level of internalized sex-typing and gender of object. As shown in Figure 1, sex-typing programs the individual’s reference perception for gender identity, while gender of object contributes to self-perception. For the mother-raised, sex-typed male, a chronic discrepancy between perception and reference perception is experienced as gender insecurity and drives incessant behavioral outputs intended to establish his manhood. Since social learning and psychoanalytic theories focus on different aspects of this single control system, they should be understood as interdependent rather than alternative explanations.

The above analysis raises the question whether gender of the infant care provider and sex-typing vary enough within a given culture to explain differences in machismo within the male population. In addition to these factors, I would argue that adult males come to differ on the machismo dimension because of different developmental paths. Some males are more successful than others at reprogramming their sex-typed reference perceptions, integrating the repressed feminine, and achieving androgynous personalities. Such development would be unnecessary for non-sex-typed individuals raised by parents of both genders, who would be naturally androgynous as adults.

As in the case of gender identity formation, the problem of authoritarianism can also be conceptualized from a social learning viewpoint (Altemeyer, 1981) and from a psychoanalytic viewpoint (Reich, 1961; 1970). Here too, social



learning theory has a contribution to make, but cannot by itself account for certain findings, such as the fact that the "erotic" self variable in the present data set is negatively correlated with authoritarianism and militarism. This datum could be predicted, however, from the psychoanalytic theory that people who idealize the nation and its military power are projecting repressed sexual libido onto these symbolic objects (Reich, 1970).

### **Practical Applications**

The artificiality of the debate between social learning and psychoanalytic theorists is nowhere more apparent than in the area of practical solutions to social problems. (For a systematic presentation of this viewpoint in the field of clinical psychology, see Wachtel, 1977; 1987). One of the most successful social programs for inoculating entire populations against psychopathology draws from both traditions, namely, the teaching of classes in parenting to school children (Miedzian, 1991). Such classes, which are currently available in only a small number of schools, embody the psychoanalytic insight that adequate child care is the key to mental health. At the same time, they embody the social learning insight that even behaviors as complex as parenting are transmitted by the social environment, which can and should be designed to create a better society.

It is encouraging that boys have been found to enjoy these classes in parenting as much as girls. Further, when the classes are mandatory for both sexes, boys are relieved of the stigma of choosing to participate in a traditional female activity. Thus the classes break down the society's gender caste system and begin to prevent its attendant pathologies at the social system level. At the same time, such instruction influences the quality of child care, making it possible to break the vicious cycle of child abuse and the forms of psychopathology attendant to it (deMause, 1982; Miller, 1983).

In addition to improvements in the quality of child care and increased paternal involvement, a control systems model of political behavior also suggests the desirability of increased utilization of psychotherapies relevant to the hawk self system, especially for policy-makers. The appearance of authoritarianism as a correlate of militarism in the present data suggests the continued relevance of the ideas of Wilhelm Reich, who was a pioneer in the psychotherapy of the authoritarian personality. Reich reported success working with the client's body language to dismantle the authoritarian self system and release the chronic muscular tension associated it (Reich, 1961).

A second therapeutic process relevant in the present context is exemplified by Jungian analysis (Neumann, 1969; Samuels, 1985; Wehr, 1987). This involves the gradual incorporation of unconscious parts of the self into the conscious self system. For example, a macho male in Jungian analysis will encoun-

ter his repressed feminine side in dreams and other products of the unconscious. Through the interpretation of these images, the individual becomes less and less threatened by them and eventually recognizes them as parts of himself. This produces a transformation of the personality in the direction of androgyny, which can be expected to heal the gender insecurity associated with militarism.

While the authoritarian and macho elements of hawk psychology suggest the relevance of Reich's and Jung's therapeutic systems for hawks, it is less clear whether this means hawks are necessarily psychopathological. Reich's view was that authoritarianism and militarism are indeed pathological. Jung, on the other hand, explicitly rejected the concept of psychopathology. From a Jungian perspective, many male doves are just as much in need of integrating their unconscious "macho" sides as male hawks are of integrating their unconscious "feminine" sides.

Assuming this is true, however, the present data do not support the view that hawk and dove self systems are psychologically symmetrical. Rather, there is a symmetry between macho ("sex typed") males on the one hand, and effeminate ("cross sex typed") males on the other. While effeminate males tend to approximate the ideal type of the dove belief system better than other males, the majority of male doves are androgynous rather than effeminate. Conversely, psychological androgyny (Bem, 1974) is associated with dove rather than intermediate policy preferences.

## CONCLUSION

The new foundation for political psychology made possible by control theory, combined with the two-part design (self and beliefs) of the survey research presented above, provides a more reliable understanding of the psychological causes of militarism than was previously available. To be sure, the findings presented here remain to some extent tentative, to be refined and corrected through interviews, further survey research, and improved theory-building. There are, of course, exceptions to the statistical pattern, such as male hawks who are not motivated by machismo and male doves who maintain macho self systems through behaviors other than militarism. Granting these limitations, however, the present model provides a basis for social practice directed at the psychological roots of militarism.

The above attempt to draw practical conclusions from the theory and data presented here is necessarily more tentative and speculative than the theory and data themselves. Yet without such an attempt, this article would remain an academic exercise only, leaving untouched the real world of militarism itself. The preceding section only begins the task of relating theory and data to social practice; the author welcomes a critical discussion of these recommendations, as

well as different practical conclusions that others may draw from the same research. Improved understandings of militarism will require, in part, reflection on the successes and failures of such social practice.

Apart from disagreements social scientists may have over the specifics, however, it should be noted that the practical applications just discussed are of a fundamentally different *kind* than those generated by cognition-driven models. The strongest practical recommendation the cognition-driven model can make is that common misperceptions in international politics can be ameliorated by awareness of their origins in cognitive processes. Such common misperceptions include overestimating the centralization of the adversary or one's own importance as a target or an influence over others (Jervis, 1976). These and similar generalizations, however, are essentially statistical and apply in the first instance only to large numbers of cases over the long run. They are therefore of little use in correcting specific misperceptions, which result from the application of cognitive schemas that are not fitting for particular cases.

Since there is no a priori way of knowing whether a schema is fitting for a particular case, the cognitive model leaves policy-makers ultimately with the recommendation of being more cautious in applying schemas. Jervis himself recognizes the weakness of this advice, since the very process of cognition requires that *some* schema be applied. If, on the other hand, militarism functions for many males to maintain an image of themselves as "not feminine," addressing this underlying gender insecurity therapeutically and socially can only result in better policy, that is, policy less distorted by inappropriate psychological needs of the policy-maker.

Of course, militarism has economic and global/systemic as well as psychological origins. Overcoming militarism will therefore require economic conversion and other economic reform at the global, national, and local levels. It will also require an international legal and organizational framework for disarmament and common security. The present study, however, indicates that self-system needs play an important role in maintaining militarist policies and institutions. To that extent, psychotherapy for policy-makers and reform of child care arrangements and practices can play important roles in the conquest of militarism.

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### TECHNICAL APPENDIX

This appendix supplements the presentation of data in Section III of the main text, and contains information on data collection procedures, response rate, statistical methods, the Q-sort instrument and its relation to prior constructs, and reliability of the self and beliefs constructs. A more detailed version of this and related information is contained in *Self Perception and National Security Policy* (D'Agostino, 1993). Tables are presented within this single appendix, rather than as separate appendices.

The 1990 survey involved collection of three kinds of data: (1) a personality self-assessment, (2) hawk and dove policy preferences and related beliefs, and (3) miscellaneous data labeled "demographics" but also including party identification, a presidential voting questionnaire, and questions on the liberalism/conservatism of self, father, and mother. Party identification was the only variable from the demographics section of the present data set that met statistical criteria for inclusion in a regression model with the militarism and self constructs. Party identification was not included, however, because its reciprocal causal interaction with policy preferences could not be modeled with the available data. No other combination of independent variables explained as much variance of the dependent variable as party identification plus the two self constructs.

A cover letter on Columbia University Political Science Department letterhead was mailed with the survey to all members of the Council on Foreign Relations whose addresses were available in *Who's Who in America*. The letter mentioned that the research was for a doctoral dissertation under Roger Hilsman (a member of the Council). It described the survey as a study of the relationship between self-perception and national security policy preferences. The letter described the target population as "opinion leaders in the field of U.S. foreign policy" and assured potential participants that the data would be strictly confi-

Table V. Response Rate Data by Target Population and Gender

		Individuals Contacted	Completed Surveys	Response Rate
Council on Foreign Relations	males	1084	228	21%
	females	83	16	19%
<i>National Review</i> Readers	males	193	48	25%
	females	89	18	20%
Socialist Scholars Conference	males	188	52	28%
	females	195	51	26%

dential. The only incentive offered was a report of the survey findings, but participants were given the option of participating anonymously and forgoing the report; about half chose to participate anonymously.

Similar letters were sent to members of the two attentive publics. The surveys were sent in early June 1990, with a follow-up mailing to nonrespondents about three weeks later. Final response rate data disaggregated by target population and gender are given in Table V.

The investigator's a priori labeling of the 12 "hawk" and 13 "dove" belief items was tested empirically by factor analyzing the 25 items. A principal components analysis extracted three factors, the first of which was the militarism factor and which accounted for about half the variance of the 25 x 25 correlation matrix. The hawk and dove items all had loadings on this factor of more than .50 and in the expected direction. The second and third factors were statistically weak and are theoretically uninteresting in the present context. These factor analysis results confirm the assumption that the 25 belief items are in fact negative and positive multiple indicators of a militarism construct. Scores on this construct were used as the dependent variable of the present study.

The militarism scores were calculated by subtracting the sum of the individual's scores on the dove items from the sum of his or her scores on the hawk items. This method produced aggregate scores that were perfectly correlated ( $r > .99$ ) with the factor scores from the principal components analysis, which are normalized and weight the raw data using factor loadings. The nonnormalized scores, which vary between a theoretical maximum of 100 (most hawkish) and minimum of -100 (most dovish), were suitable for estimating the distribution of hawks, doves, and intermediates in the sample. Hawks were arbitrarily defined as individuals having a score of 20 or higher, doves as having a score of -20 or lower, and "intermediates" as having a score between 20 and -20. By this definition, about 40% of the male sample ( $N = 328$ ) were hawks, 32% intermediates, and 28% doves.

Using this classification, the profile of the typical male hawk in Figure 3 was obtained by computing mean scores on each of the 72 self items for the hawk

subsample, then rank ordering these 72 items according to their means and mapping the ranked items onto the Q-sort shown in Figure 3. For mathematical reasons the means themselves tend to cluster closer to the center of the 14-point scale than the mapped scores resulting from rank ordering the items according to the means. This is apparent from a comparison of the scores in Figure 3 with the means of select items in Figures 5a and 5b.

Although the present research was intended to be confirmatory with respect to the prediction that self and beliefs would be correlated, it was exploratory with respect to the question of what the relevant self variables would be. A self-assessment version of Jack Block's California Q-set (Block, 1978, Appendix H) was ideally suited for an exploratory personality assessment of this kind. The survey facilitated the collection of self profiles by providing a bell-shaped grid for recording the 72 items, an innovation over Block's data collection design. The shape of this grid insured precise measurement of the negative and positive poles of the self item ranking, which are the foci of interest from a control theory viewpoint. At the same time, this grid was easier to complete than a full rank ordering of all 72 items, thus maximizing response rate.

Block's instrument was further adapted to the purposes of the present research by adding 14 new self items that were potentially relevant to the psychology of militarism and by removing 12 items from Block's original set that were found in pretests to be almost completely uncorrelated with militarism. Block's self-assessment Q-set is given in Table VI, with the items removed from the set for the 1990 survey indicated by "X" and the new items given at the bottom of the table. This modification of Block's Q-set proved most fruitful, since half the new items turned out to be significantly correlated with the militarism policy preference dimension. These items are: "aggressive," "erotic," "masculine," "strict," "tender," "tough," and "feel vulnerable" (see Table II).

Table VI also systematically relates the Q-set items to prior personality syndromes, including Etheredge's "narcissistic personality" and the 13 other types described in "Hardball Politics" (Etheredge, 1979). Since most of these prior syndromes were either qualitative descriptions or indirect measures using sentences ostensibly referring to the world, parallels with the direct self measures in Table VI are necessarily somewhat loose and in need of empirical confirmation.

The self system correlates of militarism were then identified by calculating bivariate correlations for each of the 72 self items with the militarism scores. For the males, 18 of these items were correlated with militarism at the  $p < .01$  level. A principal components analysis of these 18 self variables resulted in a solution of six factors which, even when rotated, did not have any simple theoretical interpretation. However, it so happens that the 18 items could be sorted into two groups on theoretical criteria, and the items in each of these groups then proved to be intercorrelated in the expected ways, as shown in Table II. The self system

**Table VI.** 70-Item Self-Assessment Version of the California Q-Set (Block, 1978, Appendix H) and Relation to Prior Personality Syndromes

“X” indicates item not included in the 1990 survey; “+” and “-” indicate items assumed to be positive and negative measures of the prior syndrome.

Prior Syndromes

Q-set item	Bem, Masculine Sex Type (1974)	Bem, Feminine Sex Type (1974)	Etheredge, Narcissistic Politician (1979)	Lasswell, Power Compensation (1948)	Adorno, et al, Authoritarianism (1950)	Eysenck, Tough Mindedness (1954)	Rokeach, Dogmatism (1960)	Christie and Geis, Machiavellianism (1968)	Barber, Active-Negative (1972)	Winter, N-Power (1973)	Iremonger-Berrington, Phaeton Complex (1974)	Friedlander-Cohen, Compensatory Masculinity (1975)	Mazlish, Revolutionary Ascetic (1976)	Slater, Male Narcissism (1977)	Tucker, 'Warfare' Personality (1977)	Holsti, Type B (1977)
1. absent-minded																
2. affected																
3. ambitious	+		+	+			+			+	+				+	
4. assertive, [dominant X]	+		+	+		+				+		+		+	+	+
5. bossy			+	+												
6. calm																
7. cautious								+								
8. competitive	+		+					+		+				+		
9. confident			+													
10. considerate			-					-					-			
11. cooperative X												-				
12. cruel, mean														+		
13. defensive															+	
14. dependent								-					-			
15. disorderly													-			
16. dissatisfied			+								+				+	
17. dramatic X																
18. dull																
19. easily embarrassed			+			-					+	+				
20. easily hurt X											+			+		
21. energetic			+						+							

(continued)

Table VI. (Continued)

“X” indicates item not included in the 1990 survey; “+” and “-” indicate items assumed to be positive and negative measures of the prior syndrome.

Prior Syndromes

Q-set item	Bem, Masculine Sex Type (1974)	Bem, Feminine Sex Type (1974)	Etheredge, Narcissistic Politician (1979)	Lasswell, Power Compensation (1948)	Adorno, et al, Authoritarianism (1950)	Eysenck, Tough Mindedness (1954)	Rokeach, Dogmatism (1960)	Christie and Geis, Machiavellianism (1968)	Barber, Active-Negative (1972)	Winter, N-Power (1973)	Iremonger-Berrington, Phaeton Complex (1974)	Friedlander-Cohen, Compensatory Masculinity (1975)	Mazlish, Revolutionary Ascetic (1976)	Slater, Male Narcissism (1977)	Tucker, “Warfare” Personality (1977)	Holsti, Type B (1977)
22. fair-minded, objective X																
23. feminine		+														
24. frank																
25. friendly X																
26. guileful								+								
27. helpless X																
28. hostile					+				+				+			
29. idealistic																
30. imaginative						-										
31. impulsive			+													
32. intelligent								+								
33. versatile				+												
34. introspective																
35. jealous																
36. lazy X																
37. likable X																
38. persevering			+													
39. personally charming											-		+			
40. reasonable																
41. rebellious																
42. resentful				+											+	

(continued)



Table VI. (Continued)

“X” indicates item not included in the 1990 survey; “+” and “-” indicate items assumed to be positive and negative measures of the prior syndrome.

Prior Syndromes

Q-set item	Bem, Masculine Sex Type (1974)	Bem, Feminine Sex Type (1974)	Etheredge, Narcissistic Politician (1979)	Lasswell, Power Compensation (1948)	Adorno, et al, Authoritarianism (1950)	Eysenck, Tough Mindedness (1954)	Rokeach, Dogmatism (1960)	Christie and Geis, Machiavellianism (1968)	Barber, Active-Negative (1972)	Winter, N-Power (1973)	Iremonger-Berrington, Phaeton Complex (1974)	Friedlander-Cohen, Compensatory Masculinity (1975)	Mazlish, Revolutionary Ascetic (1976)	Slater, Male Narcissism (1977)	Tucker, “Wartfare” Personality (1977)	Holsti, Type B (1977)
43. reserved, dignified					+			+			+					
44. restless																
45. sarcastic																
46. poised X																
47. self-controlled						+										
48. self-indulgent					-											
49. selfish																
50. self-pitying																
51. sense of humor			-													
52. sentimental																
53. shrewd, clever			+													
54. sincere																
55. sophisticated																
56. stubborn																
57. suspicious X			+		+		+									
58. sympathetic		+	-	-				-								
59. timid, [submissive X]																
60. touchy, irritable											+					
61. tactless X																
62. unconventional													+			
63. undecided, confused			+				-									

(continued)



**Table VII.** Comparison of Machismo and Androgyny Constructs

	More masculine than feminine	Equally masculine and feminine	More feminine than masculine
Androgyny	LOW	HIGH	LOW
Machismo	HIGH	INTERMEDIATE	LOW

correlates of militarism for females were also interpretable in relation to prior constructs, as presented in Table I.

The above analyses resulted in a dependent variable labeled “militarism,” and two independent variables for the male data set labeled “machismo” and “liberation.” As in the case of the militarism scores, the machismo and liberation scores were calculated by subtracting the sum of the individual’s scores on the negative measures from the sum of his or her scores on the positive measures.

The 11 “machismo” self variables were identical or comparable to items in the Bem Sex Role Inventory (Bem, 1974). The machismo construct was calculated by subtracting the individual’s aggregate score on “feminine” items from his aggregate score on “masculine” items, which is similar to the method of

**Table VIII.** Reliability and Correction for Attenuation

Scale	Scale Reliabilities		
	(number of items in the scale)	(mean inter-item correlation)	Cronbach's Alpha
	N	p	$a = N(p)/[1 + p(N - 1)]$
Militarism	25	.4418	.9519
Machismo	11	.1901	.7208
Liberation	7	.1674	.5846
Observed Scale Intercorrelations			
	r (i, j)		
	Militarism	Machismo	Liberation
Militarism	1.0000		
Machismo	.4076	1.0000	
Liberation	-.4161	-.1703	1.0000
Scale Intercorrelations Corrected for Attenuation			
	$r (i, j) \div \sqrt{a(i) \times a(j)}$		
	Militarism	Machismo	Liberation
Militarism	1.0000		
Machismo	.4921	1.0000	
Liberation	-.5578	-.2624	1.0000

calculating Bem's "androgyny" construct. For Bem's purposes, the absolute value of this difference between feminine and masculine scores was the variable of interest, with zero being a perfect score on this androgyny variable. In other words, "cross sex typed" (effeminate) males deviate from androgyny as much as "sex typed" (macho) males.

In the present context, however, the variable of interest is a linear function of the difference between feminine and masculine scores. In other words, sex-typed males and cross-sex-typed males define opposite poles of the variable of interest, with androgyny being intermediate between the two. The relationship between the androgyny and machismo constructs is summarized in Table VII.

Reliabilities of the militarism, machismo, and liberation constructs as given by Cronbach's alpha, are presented in Table VIII. This table also gives the observed intercorrelations of the three constructs and the correlation matrix corrected for attenuation using the reliabilities of each scale (Carmines & Zeller, 1979). The multiple regression of militarism on the liberation and machismo self dimensions using this corrected matrix is presented in Table IV. The standardized residuals from this model are uncorrelated with the independent variables, indicating a consistency of the data with the assumptions of multiple regression analysis.

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