The Relationship Between Male Dominance and Militarism: Quantitative Tests of Several Theories[i]

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This paper asserts that an understudied question in war research is the possibility of a relationship between militarism and male dominance. Several hypotheses proposed to explain a possible connection were tested using cross-cultural research methodology and a sample of non-industrialized societies (n=186). The hypothesis that war leads to increased male political participation because of their increased "importance" to a society was only weakly supported, but appeared to have more validity than the notion that male dominance and militarism are related because both flow from a society's level of authoritarianism. The tests for the hypothesis that male participation in warfare leads to their glorification were shown to produce varying results dependent on the aims of the warfare engaged in. No support was found for the hypothesis that aggression against the "enemy" and women vary inversely according to a Freudian "drive-discharge" model, although some support was found for the hypothesis that male absence due to war can sometimes improve women's status. Finally two scenarios of male dominated militarist cultures suggested by the results are presented and discussed.

1. INTRODUCTION AND PAST RESEARCH

This study is an attempt to contribute to our understanding of what predisposes a society toward militaristic behavior. There has already been much correlative research by political scientists and international relations scholars into the causes of war between modern nation-states, but with little success (Holtsi 1991:6-9; Pearson and Rochester 1988:263; Zinnes 1980). An unstudied question, however, is that of the relationship between the balance of power between men and women and a society's level of militarism. Anecdotal observations of soldiers in some societies, at least, suggest that the stereotypical role expectations of an average soldier have many similarities to the "macho" male stereotype often glorified in such cultures (for example, see comments by Dyer 1988:122-124; Farris 1989:98; Keen 1986:129-134; Michalowski 1988). Such observations suggest that men who act in a tough and domineering way toward the "enemy" in another society may also tend to act in a similar way in their relations with women. Is there then a relationship between the level of militarism and male dominance in any given culture? This study examines this question, and speculates on the cause, or causes, of such a link.

There has been much writing in feminist literature on the possibility and nature of a connection between male dominance and militarism. Unfortunately, there is a wide chasm between feminist peace literature and traditional war research, in such fundamental areas as political orientation, methodology, and terminology. While there have been some initial attempts to bridge this gap (Brock-Utne 1989; Reardon 1985), little progress has been made in this direction. There is then no central theory within either feminist peace writings

or traditional war research that can explain why these two things should be connected. This then is a second aim of this study, to contribute to the dialogue between traditional war researchers and feminist peace writers by exploring the gender aspects of militarism.

Part of the explanation for the lack of research into this question by political scientists and international relations scholars may be because of a fundamental methodological problem: because there is arguably little variation in the level of male dominance among contemporary nation-states, testing this question in a correlational study would be hard. A researcher would try to see if sexually egalitarian nations were less warlike than male dominated nations, only to discover that they cannot find any completely egalitarian nations to include in the analysis. One solution to this problem is to use the cross-cultural research methodology of anthropologists to test for this relationship in a sample of non-industrialized cultures where there is a wider variation in the level of male dominance. The Standard Cross-Cultural Sample (SCCS) of Murdock and White (1969) is the sample used in this study. This is a standardized list of 186 cultures designed for use by anthropologists conducting cross-cultural research. This sample was drawn up to make such research both representative, by featuring societies of all cultural types, and easier, by providing an incentive to create comparable data sets.

Another advantage in using this methodology is that cross-cultural researchers, unlike other correlative war researchers, have already examined the possibility of a male dominance/militarism relationship, and this study can build on their efforts. An initial group of studies examining the relationship between war and the existence of "fraternal interest groups" has suggested that war is more frequent among cultures that practice such potentially male-biased customs as patrilocality, patrilineality, polygyny, and bride-price (Otterbein 1980; Otterbein and Otterbein 1965; Ross 1985:552). Fraternal interest group theory aside, other studies have also found relationships between war and various other conceptualizations of male dominance. Divale and Harris (1976) find a relationship between war and female infanticide, while Ross (1986a:848) finds a relationship between war and women's exclusion from the public political sphere. Sanday (1981a:23) finds a significant correlation between warfare frequency and violence, in the form of rape, inflicted on women in the same culture. She also finds a positive correlation between war and a Guttman scale measuring the overall level of male dominance in a society (1981b: 174).[ii] Hayden et al. (1986:459) also create a combined scale of female status and find that this has a significant negative correlation with a variable indicating the number of deaths due to warfare.[iii] On the other hand, a less conclusive result was obtained by Whyte (1978). He formulated nine separate scales of male dominance and correlated them with a variety of variables, including one that measured the frequency of warfare. One of his scales of male dominance was found to have a significant negative correlation with the frequency of war, while another male dominance scale had a significant positive correlation.[iv]

These studies can be interpreted to offer the pessimistic hypothesis that men are naturally violent and will thus always produce a warlike society when they are in charge. What other hypotheses can be used to account for the findings of these studies?

2. HYPOTHESES

The first hypothesis of this study comes from the work of Fromm (1973), French (1985), Reardon (1985), and from the work done by political psychologists in the study of fascism and authoritarianism. This hypothesis postulates that an individual or societal

predisposition toward authoritarianism will cause that individual or society to manifest hostility toward a number of "outgroups (Adorno et al. 1950:228, 232-234)." In this study the "outgroups" are women on one hand and the "enemy" on the other. Therefore, a male dominated society would also tend to be militarist because both syndromes are ultimately caused by that society's authoritarianism. Recent findings by political psychologists suggest that psychometric measures of authoritarianism among people in industrialized cultures can be used to predict their views on both gender issues and militarism. Scores on the Right-Wing Authoritarianism scale (RWA) of Altemeyer (1981, 1988), the most sophisticated and reliable measure of personal authoritarianism in the current psychological literature, have been shown to correlate with such militarism indicators as the tendency to act in a threatening way in war games (Altemeyer 1988:196-197) and the belief that troops should be used against dissidents (McFarland, Ageyev and Abalakina 1991). Other studies have also shown that scores on the RWA correlate significantly with such male dominance indicators as prejudice and hostility toward women (McFarland, Ageyev and Abalakina 1993) and the likelihood of male subjects owning up to rape or other forms of sexually coercive behavior (Walker et al. 1993). However, do these findings apply to people in the wider selection of cultures found in a sample such as the SCCS? This was the question that tests on this first hypothesis sought to answer.

Another idea about why male dominance and militarism should be connected is the notion that male involvement in war makes them more glorified and more important as leaders than women (Divale and Harris 1976; Mayer 1987; Murdock 1949:205). This idea was split into two hypotheses for testing. Therefore the second hypothesis of this study is that male participation in war glorifies them relative to females, while the third hypothesis is that male participation in war makes them dominant in political spheres because of their increased importance to the society.

Two theories of why male dominance and militarism should be inversely related were also tested. The fourth hypothesis is a test of the Freudian "drive-discharge" notion that violence can be redirected against alternative targets (Freud 1939). Thus a society that is warlike may feature low levels of aggression directed against women because the men have already "discharged" their hostility on the "enemy." If this is correct then we should find that there is a negative relationship between war propensity and violence against women within the same society. The other idea about why male dominance and militarism should be inversely related, and our fifth and final hypothesis, will be called the male absence hypothesis. This is the theory that frequent male participation in war will improve the position of women, because female dominated power structures arise in the absence of men (Harris l989:315). The phenomenon of "Rosie the Riveter" in the United States during World War Two is an example of this sort of effect occurring in an industrialized culture.

3. DEFINITIONS AND OPERATIONALIZATIONS

How are the concepts discussed above defined and operationalized in this study? Only pre-coded data was used in this study because of the limited resources available to this researcher. Variables were chosen from the traits coded for the SCCS published in *World Cultures* up to 1990. This limitation was not too restrictive, in any case, as the variables in this collection generally allowed plenty of choice to operationalize most of the concepts in this study. Variables were chosen on the basis of such things as the number of missing cases, relevance to the concept being operationalized, and the tendency of that variable to

correlate with other variables that were attempting to measure a similar thing. Let us now go through each concept in this study detailing their definitions and operationalizations.

Authoritarianism

The pioneering work of Adorno et al. (1950) in the study of the "Authoritarian Personality" identified this personality type as having nine characteristics. More systematic and refined study over the years, however, has cast doubt on such a complicated conceptualization. The next landmark work of Altemeyer (1981) suggested that only three of these characteristics could be considered reliable and consistent components of authoritarianism. The first of these, the component of "Authoritarian Aggression," has been defined as "a general aggressiveness, directed against various persons, which is perceived to be sanctioned by established authorities (148)." The second component in Altemeyer's conceptualization of authoritarianism, "Authoritarian Submission," is defined as "a high degree of submission to the authorities who are perceived to be established and legitimate in the society in which one lives (148)." Finally, Altemeyer also found that a tendency toward "Conventionalism" formed part of the authoritarian personality. The first two components were adopted for use in this study as defining characteristics of authoritarianism, but this third characteristic was seen as problematic because of the difficulty of finding variables with which accurately to measure this concept cross-culturally.

So far then we have two personality characteristics said to denote authoritarianism, but nothing that helps us recognize the existence of authoritarianism in other areas of a society. The aforementioned writers tell us what to look for in the psychological make-up of people in a culture but it is beyond their scope to identify how this personality type manifests itself in the societal structure. Given that this study wanted to take a wider, more sociological, approach, the decision was made to look at authoritarianism's presence in the structure of society also. Returning to the classic works on authoritarianism, a third component was isolated for the purposes of this study. Maslow (1943:403-404) and Reich (1970:342) noted that the authoritarian character has a tendency toward hierarchical ranking, while Fromm (1973:294-295) talks of the "bureaucratic character" and the hierarchical system in which it operates. The authoritarian personality writers also talked of the authoritarian personality as having a "pre-occupation with the dominance-submission, strong-weak, leader-follower dimension (Adorno et al. 1950:228,237-238)." The third feature of authoritarian cultures then, for the purposes of this study, is that they have a hierarchical social structure.

In summary; an authoritarian culture is defined here as one in which the people behave in either aggressive or submissive ways toward various groups depending on those groups' perceived "legitimacy," and one that features a hierarchical social structure. After this screening process, the following variables were selected from the *World Cultures* data set to operationalize these three traits. These are listed below with their *World Cultures* variables numbers and with the reference to the study for which they were originally formulated.

   1. *Authoritarian Aggression*: Variable created by averaging Barry et al.'s (1977) scores for corporal punishment inflicted on children (variables 453-456).

2. *Authoritarian Submission*: Variable created by averaging Barry et al.'s (1976) scores for obedience inculcation in children (variables 322-325).

3. *Hierarchical Social Structure*: Social stratification scores from Murdock and Provost (1971, variable 158).

The four variables that measured the use of corporal punishment on children were combined to make up the authoritarian aggression measure. Codings were made for both sexes at two stages of development and a mean of these four variables was then taken by this researcher to produce an overall measure. What is the justification for calling this a measure of authoritarian aggression? Of course, we cannot give members of the SCCS cultures a psychometric test that measures authoritarian aggression, so we have to infer the presence of this tendency by noting how it manifests itself in behavior. It is proposed here that the use of corporal punishment can be seen as one of these manifestations against a weaker and less conventional member of society.[v] To measure authoritarian submission, a mean was taken of four similar childhood obedience inculcation variables to obtain an overall obedience inculcation in children variable. The use of this variable to measure authoritarian submission can be justified in a similar way to the selection of the authoritarianism aggression variable; the variable can be seen as the manifestation of the ideal that people should submit to their perceived superiors, in this case their parents.[vi] Finally, variable 158 from Murdock and Provost (1971) is a clear measure of hierarchy in a culture's social structure.

A final step was to correlate these three variables to see if they do form one unified "complex" that can be termed "authoritarianism." All three correlations were significant at $p=0.005$ or less and were all in the direction expected.[vii] This suggested that they were measuring the same underlying tendency. This also suggests that assuming that the psychological and structural components of authoritarianism tend to occur together is correct.

Male Dominance

As Ember and Ember (1988:300) note, there are probably as many definitions of female status as there are interested researchers. Defining male dominance presents similar problems. An additional complication is that each of the five hypotheses discussed above requires a different definition of male dominance. What is each definition?

First, the definition of male dominance for the authoritarianism hypothesis needs to be one that identifies how authoritarianism in a society supposedly influences the balance of power between women and men. According to this hypothesis we would expect it to do so in at least three specific ways that correspond to the three components that make up our definition of this concept. Therefore the defining characteristics of a male dominated society for this hypothesis would be the presence of violence by men against women (authoritarian aggression), customs of female submission to men (authoritarian submission), and a predominance of men in political spheres (hierarchical social structure).

The following variables were chosen from *World Cultures* to operationalize these three defining characteristics:

1. *Violence by Men Against Women*: Wife-beating scores from Broude and Greene (1983, variable 754).

2. *Customs of Female Submission*: Guttman scale of wife to husband institutionalized deference from Whyte (1978, variable 615).

3. *Predominance of Men in Political Spheres*: Female political participation scores (including informal influence, from Sanday 1981b, variable 661).

The wife-beating variable was from a study into husband-wife relations, while the wife to husband institutionalized deference scale records the presence of customs that reflect increasing levels of deference by a woman to her husband. The final variable is considered an indicator of women's absence or presence in the political structure. This variable is a little imprecise, due to the inclusion of both formal and informal political spheres, but its low number of missing cases makes up for this.[viii]

A second definition of male dominance is necessary to test the next hypothesis that male involvement in war leads to their glorification. In the original study of Divale and Harris (1976) female infanticide was used as an indicator of male glorification. Harris notes elsewhere, however, the occurrence of infanticide is notoriously difficult to detect or separate from infant death due to other forms of deliberate neglect (1989:212). Fortunately Whyte (1978) includes a variable for a stated preference for either male or female children (variable 616). This variable has some correlation with another variable in his study that attempts to measure the presence of female infanticide (t=.33, p=.00, n=70). Given Harris's warning about detecting infanticide it would probably be better to use the stated preference variable, rather than the infanticide variable, as a measure of male glorification. Beyond this, a second variable from Whyte's data set can be used as another perhaps more exact indicator of male glorification. This variable indicates the presence or absence of a specific cultural belief that women are inferior to males (variable 626), and it has a moderate relationship with our stated preference for male children variable (t=.23, p=.00, n=92). These two variables are therefore the measures of male glorification used for the second hypothesis.

A third definition of male dominance that operationalizes the way that men might monopolize positions in the political structure is needed for the male political importance hypothesis. A decision was made to use the variable of female political participation (variable 661). This variable was also used to operationalize the definition of male dominance required for the male absence hypothesis as this hypothesis speculates about the female dominated power structures that may arise in the absence of males.

Finally, the Freudian drive-discharge theory requires a definition of male dominance that concentrates on violence that men may be inflicting on women. Consequently the wife-beating variable (variable 754) is used to operationalize male dominance for the purposes of testing this hypothesis.

Militarism

As with our definitions of male dominance, we face the complication of different hypotheses that each speculates about the association of male dominance to differing aspects of militarism. Most of the hypotheses make predictions about the general level of

warfare in a society, an exception being the authoritarianism hypothesis that makes predictions about other aspects of a culture's military practices. Again, let us look at each definition selected:

The definition of militarism required for testing the authoritarianism hypothesis needs to be one that identifies what happens when the three aforementioned tendencies of authoritarianism manifest themselves in relations with outside groups. First, in accordance with the tendency toward authoritarian aggression, there is unnecessary violence and pain infliction on members of a perceived enemy. Of course it could be said that war by its very nature involves unnecessary violence and pain infliction, although to leave it at this would lead to the tautological conclusion that war is always the result of authoritarianism. Instead, to be certain that an act of violence in war is a manifestation of authoritarian aggression, we have to measure the presence or absence of particularly "unnecessary" and sadistic violence such as torture or sacrifice of prisoners. The second element of authoritarianism, that of authoritarian submission, seems a little more complicated. It would appear at first glance that submission plays no part in the life of soldiers, their lives being oriented toward domination of the "enemy." Soldiers are, however, expected to submit to their commanding officer, and this is seen in this study as the way in which authoritarian submission manifests itself in militarism. Thirdly, in accordance with the authoritarian tendency toward hierarchical structures, such cultures will go to war with the aim of subjugating and then establishing a position of dominance and leadership over the people of another society. This differentiates such cultures from those that go to war to defend themselves, or those that take part in brief raids for prestige or plunder.

A militaristic culture for the purposes of the first hypothesis would have the defining characteristics of unnecessary and sadistic violence against the enemy, submission of soldiers to commanding officers, and the presence of a desire for the complete subjugation of other societies. The three variables chosen to operationalize these defining characteristics were:

1. *Unnecessary/Sadistic Violence Against Enemy*: Scores on the taking of trophies, honors, and captives for sacrifice as a goal in war, from Wheeler (1974, variable 913).

2. *Submission to Military Superiors*: Scores on leadership during battle, from Wheeler (1974, variable 902).

3. *Subjugating Warfare Aims*: Scores on subjugation of territory or people as a goal in war, from Wheeler (1974, variable 909).

Variable number 913 from Wheeler's (1974) study of war looks to be the best measure of unnecessary and sadistic violence against the enemy, although it also includes elements of body mutilation. Another variable from the same study, number 902, is a clear measure of subordination to military superiors. This was Wheeler's code on leadership during battle and warlike cultures in the sample were ranked on one of three levels. On the first level are cultures in which soldiers were ordered about by an official who could use force to back up his orders, while on the second level are cultures in which fighting males obeyed an informal leader out of respect. On the third level are cultures in which fighting is disorganized and every soldier is fighting for himself. Finally, variable 909 was used to measure the extent to which a society tries to engage in the political subjugation of other peoples. This, like the sadistic war practice variable, was one of several variables coded by

Wheeler in an attempt to assess the motivations that the SCCS cultures had for going to war.[ix]

A definition of militarism for the testing of hypotheses two, three, and four needs to be one that concentrates on the general frequency of warlike behavior regardless of the aims or customs involved. Although several researchers code the SCCS for this, Sanday's (1981b, variable 679) score was used because it had the fewest missing cases.

Other Variables

A variable of male absence is needed for hypothesis five. Whyte (1978) measures systemic male absence due to military service, laboring elsewhere, and extended trade expeditions (variable 715). A complication is found, however, when this variable is correlated with Sanday's war variable (variable 679). The male absence variable's correlation with the war variable is negative and marginally significant ($t=-.17$, $p=.08$, $n=65$), suggesting that frequent war leads to less, not more, male absence. Perhaps fighting wars means that men cannot spend time on the two other practices coded for in this variable. There is no other variable in the *World Cultures* data set that specifically measures male absence, so we have no choice but to use this one. The solution to this difficulty was to use the male absence variable with the general frequency of warfare variable to create two new variables that measure male absence both due to war and due to other causes.

Finally, it is necessary to mention another variable used whenever a test involving a militarism indicator was performed. Fifteen of the cultures in the SCCS had been pacified by external forces by the time they were described by anthropologists, a fact recorded by variable number 1118 coded by White (1989a,b).[x] How should a researcher code pacified cultures for militarism? Should they be coded as warlike because they want to fight, or as peaceful because they do not engage in any fighting? It was decided that the best way of dealing with this potential difficulty was simply to drop these 15 cultures from the sample whenever a test involving a warfare variable was run.

Summary of Hypotheses

I now briefly review the correlations performed to test the hypotheses of this study. There are six relationships implicated in the first hypothesis. The authoritarianism measure of corporal punishment of children is correlated with both the male dominance variable wife-beating and the militarism variable of going to war to take trophies, etc. Inculcation of obedience as a measure of authoritarianism is correlated with the male dominance measure of wife deference and the militarism measure of leadership in battle. Finally, the male dominance measure of female political participation and the militarism measure of subjugation as a goal of war are each correlated with the authoritarianism measure of social stratification. For the sake of completeness in the testing of this hypothesis we can also directly correlate the three male dominance variables with their counterparts among the militarism variables (e.g., 754 with 913, 615 with 902, and 661 with 909). The authoritarianism theory would predict that these relationships would be of a lower magnitude than those of the direct associations between authoritarianism and male dominance or authoritarianism and militarism.

The two tests for the second hypothesis of male glorification are the correlation of the general frequency of war with both female inferiority and the stated preference for child

sex. To test the male importance hypothesis general warfare frequency will be correlated with female political participation. To test the Freudian drive-discharge hypothesis we will look for the existence of an inverse relationship between wife-beating and general warfare frequency. Finally, to test the male absence hypothesis, the two new variables that measure male absence due to war or due to other causes will be correlated with female political participation.

A final consideration in the testing of these hypotheses is the need to investigate if any of the statistical relationships that may be found to have been artificially inflated by the effect of cultural diffusion. This is the tendency of two traits to correlate simply because they diffused together when new societies split. This difficulty is known in cross-cultural research as Galton's problem. Fortunately several statistical techniques can estimate how much of a correlation is due to the existence of an "actual" association and how much to diffusion. The method known as spatial autocorrelation analysis has been developed for use with the SCCS by researchers (see White, Burton and Dow 1981) and is the method used in this study.[xi]

4. RESULTS

Analyses were done using SPSSX. Correlations were considered significant if they had a p-value of 0.05 or less. Kendall's Tau was used as the statistic for most of the tests. The expected sign of each correlation varied depending on the way that the relevant variables are coded.

Hypothesis One: Authoritarianism as the Common Factor

Correlating the authoritarianism variables with the relevant male dominance variables produced weak but significant correlations for two out of the three relationships. If a culture practices corporal punishment then there is a somewhat greater chance that it will feature violence against women (t=0.21, p=0.02, n=63), and if the culture features an emphasis on obedience in childhood then there is also a likelihood that women will be expected to defer to their husbands (t=0.19, p=0.01, n=76).[xii] The results for the third relationship were, however, unexpected. There is no significant relationship between the level of social stratification in a society and the level of female political participation (t=0.09, p=0.10, n=145). Furthermore the coefficient is positive, which is the opposite direction than expected. Finally, the two significant results were tested for the effect of cultural diffusion. The strengths of both relationships remain unchanged after controlling for spatial autocorrelation.[xiii]

The three correlations between the authoritarianism and relevant militarism variables were significant, ranging from weak to moderately strong. Corporal punishment was associated with the taking of trophies, honors, and captives as a goal in war (t=-0.17, p=0.01, n=124), obedience inculcation with leadership in battle (t=-0.24, p=0.00, n=117), and social stratification with subjugation of people or territory as a goal of war (t=-0.44, p=0.00, n=153). Control for spatial autocorrelation tests produced no changes in these results.[xiv]

Correlations between male dominance variables and militarism variables produced little evidence for a strong male dominance/militarism connection. Unnecessary/sadistic war violence (variable 913) did have a marginally significant correlation with the wife-beating

(t=-0.19, p=0.07, n=55). Likewise, the submission to military superiors variable did correlate as expected with the customs of female submission, but this result was even more marginally significant (t=-0.13, p=0.11, n=61). Finally, there was no relationship between subjugating warfare aims and the predominance of men in political spheres (t=0.03, p=0.33, n=122). Because these relationships were so weak and are not considered causative they were not tested for Galton's problem.

In summary, the tests on this first hypothesis showed that authoritarianism correlated significantly and in the manner expected with the militarism variables, showing that authoritarianism is a consistent predictor of both the psychology and conduct of war. Authoritarianism also correlated more weakly and less consistently with the male dominance variables and was unable to explain why men would predominate in the political sphere.

Hypothesis Two: The Effect of Male Glorification

The results of these tests were in complete contrast to what was expected. There is no relationship between the frequency of warfare and the presence of a belief that women are inferior (t=0.03, p=0.38, n=60). The other test suggests that preference for male children is moderately associated with a low frequency of war (t=0.25, p=0.02, n=60). This last result stands after spatial autocorrelation is taken into account.[xv]

Additional tests were run in an attempt to validate these unexpected results using other warfare frequency variables from the *World Cultures* data set, namely Whyte's (1978) warfare code and Ross's (1983) external war frequency code. The use of these codes produced essentially similar results. An exception, however, was the interesting result produced when Wheeler's (1974) subjugating warfare codes (variable 909) of was substituted. Only when this code is used do we find significant and positive relationships between a militarism variable and a belief in female inferiority (t=0.30, p=0.00, n=77) and between a militarism variable and a stated preference for male children (t=0.27, p=0.00, n=77). These results were tested for spatial autocorrelation and did not change significantly.[xvi] At this point note that the presence of a desire for complete subjugation, as measured by variable 909, and the actual frequency of war, as measured by variable 679, are not significantly related (t=0.00, p=0.48, n=112). This makes it possible for male glorification to have differing relationships with these different militarism variables.

In summary, warfare frequency does not appear to lead to an increased glorification of males; if anything it appears to have the opposite effect. Only when males have the explicit aim of subjugating the enemy do we find an accompanying tendency toward male glorification. The results of these tests do not replicate the findings of Divale and Harris (1976) on this hypothesis, although the discrepancy is understandable. Harris (1984:111-112) notes that the Divale and Harris theory is applicable only to band and village cultures characterized by a low density of population, fraternal interest groups, virilocality, and short distance raiding.

Hypothesis Three: The Effect of Male Importance

The test for this hypothesis showed a weak but significant relationship (t=-0.15, p=0.05, n=111) between the general frequency of war and the lack of female political participation, thus offering some support for the hypothesis. An ordinary least squares calculation,

performed on this relationship as the first part of spatial autocorrelation testing, confirmed weak nature of the association. The control of spatial autocorrelation did not, however, eliminate the association.[xvii] These findings weakly support those of Ross (1986a:848).

Hypothesis Four: The Drive-Discharge Hypothesis

The result of testing this hypothesis showed that a small positive relationship exists between the general warfare frequency and wife-beating (t=0.19, p=0.08, n=52). While this relationship is only very marginally significant, the sign of this correlation suggests that frequent violence against the enemy is associated with slightly more, not less, violence against women. Spatial autocorrelation calculations do nothing to change this result.[xviii] This result is almost a rebuttal of the drive-discharge notion and supports Sanday's discovery (1981a) of the relationship between war and rape among SCCS cultures.

Hypothesis Five: The Effect of Male Absence

By combining the male absence and general warfare frequency variables and cross-tabulating it with the female political participation variable, we get the results in table one.[xix]

Female Political	War Rare		War Common	
Participation	No Absence	Absence	No Absence	Absence
Low	4 (100%)	2 (18.2%)	10 (58.8%)	8 (42.1%)
High	0 (0%)	9 (81.8%)	7 (41.2%)	11 (57.9%)
Total	4	11	17	19

Table One: Female Political Participation, Male Absence, and Frequency of War

As can be seen this table is composed of two sub-tables, one in which war is rare and one in which war is common. Both sub-tables show that women have higher political participation when males are absent. Statistical tests, however, reveal differences in the strength of this relationship between these two sub-tables. The relationship between male absence and female political participation is very strong and significant when war is infrequent (t=0.73, p=0.00, n=15), but weak and insignificant when war is common (t=0.16, p=0.16, n=36). It appears that when male absence is due to war the increase in female political participation is not as marked as it is when the male absence is due to other causes. Unfortunately there are too few cases in either of these two sub-tables for meaningful spatial autocorrelation tests.

5. DISCUSSION AND FURTHER TESTS

The results of the authoritarianism hypothesis tests suggest that although authoritarianism cannot account for women's political subordination to men, it can help explain the psychology of male dominance on the part of both men (i.e., their aggression) and women (i.e., their submission). We must ask, however, if these findings help us at all, when we

consider that the third set of tests for this hypothesis did not demonstrate a significant correlation between male dominance and militarism. In summary, authoritarianism theory partially accounts for the slight tendency of some militarism indicators to correlate with some indicators of male dominance. Although the correlations in these tests were not strong, these results show that the authoritarianism theory is still perhaps a plausible explanation of why some male dominated cultures are also militarist. With regards to the overall collection of cultures in the SCCS, however, it can explain little.

The tests on the male importance hypothesis had the only success in demonstrating a relationship between some aspect of male dominance and a variable measuring actual participation in war. Additionally, in contrast to the authoritarianism hypothesis, it also appears to have more success in showing that warfare can decrease women's political involvement. While the presence of subjugating warfare cannot explain women's exclusion from the political sphere, the general frequency of war can. This correlation was, though, of very low strength, as was the correlation between male absence due to war and female political participation. It is entirely possible that these two effects are "interfering" with each other and partially canceling each other out. War then generally leads to low female political participation, but the effect of male absence may be able sometimes to offset this. A final question about the validity of the male importance result emerges when we consider the results of hypothesis four, where we saw that high warfare frequency is also related slightly (although not significantly) to wife-beating. Perhaps men in such situations dominate politically not because they are seen as important but because they intimidate their way into power? The answer to this question, however, appears to be negative, since no correlation was found between female political participation and wife-beating.[xx]

Although there have been some interesting results, one may be left with the impression that these tests have resulted in begging more questions than they have answered. Specifically, one major disparity emerged from these tests and I can best illustrate it by describing two scenarios suggested by our results. In the first scenario are cultures that have a high general frequency of war. These cultures have a greater than average chance of having low female political participation (results of hypothesis three), a slightly higher chance of featuring wife-beating (results of hypothesis four), and a higher level of rape (Sanday 1981a:23). On the other hand, they exhibit a low level of male glorification (results of hypothesis two).

In the second scenario we find cultures that go to war with the purpose of politically subordinating the enemy. We have seen above that this does not necessarily have any overlap with the first scenario because such war goals do not have any relationship to the actual frequency of war. In any case, women in this scenario are not excluded from politics (hypothesis one), and further tests show that these cultures do not feature higher rates of wife-beating or rape.[xxi] In this scenario, however, women were shown to face a situation of male glorification (results of hypothesis two). How can we resolve the disparity in male glorification between the two scenarios? Three explanations can be proposed.

First, this difference may exist because wars that have political subjugation as a goal cause longer periods of male absence than wars that result from other causes. This increased male absence works to free women from physical abuse and makes it necessary for them to occupy positions of power. However, the rewards of such wars would still lead to a glorification of males when they returned. This sounds like a good explanation but does not appear to fit the data. The political subjugation variable was correlated with the male absence variable and the correlation was controlled for the cases in which war was present

according to the general warfare frequency variable. This test showed that war for subjugation has no association with male absence due to war (t=-0.14, p=0.19, n=37).

A second explanation is suggested when we compare the position of women in the second scenario to the syndrome of "mythical male dominance" first discussed by Rogers (1975). Women in cultures that have this syndrome retain a reasonable degree of power though men are meant, in theory at least, to be dominant and more important. We see the same thing in the second scenario, suggesting that the presence or absence of subjugating war expectations may be part of this syndrome. Sanday (1981b) attempted to code the SCCS cultures for their overall levels of male dominance and the presence or absence of mythical male dominance (variable 670). Without taking time either to criticize or to defend her attempt at coding this syndrome, this variable was correlated with the subjugation warfare variable to see if such expectations could be said to form part of the "mythical male dominance" syndrome. This test, however, suggested no relationship at least using Sanday's code. In a situation of mythical male dominance, subjugation warfare is slightly less likely to be present (17.4% of cases) than in cultures that Sanday rates as either having sexual equality (18.9%) or as completely male dominated (25.7%), and the overall value of these results was insignificant ($?^2$=0.89, d.f.=2, p=0.64).

A third explanation is more impressionistic and less testable. The first two scenarios differ in that in one the violence is real and in the other it is not. In the first scenario, what could be called the "violent male bully" scenario, men fight wars and physically abuse women. They may therefore be seen as bullies and not glorified.[xxii] Women may even become a valuable "commodity" in such a climate, leading to the increased desire for female children. Men in this scenario also become the political leaders because of the male importance effect. Such an explanation is compatible with authoritarianism theory given that this explanation still leaves unexplained the psychological motivation of men to commit aggression against these various groups. In the second scenario, what could be called the "bluff" scenario, there is a higher expectation of war in which subjugation is the aim, but as we saw above there is not necessarily any more actual fighting. The men then are just bluffing when they talk of having ambitious war expectations involving the subjugation of their enemies and there is no male "bullying" resulting in violence against women and no male political domination caused by warfare increasing their perceived importance. However, their bluffs regarding the enemy are associated with their glorification in the culture. This explanation is compatible with the mythical male dominance theory, even if the particular test above failed to demonstrate its validity.

A detailed examination of ethnographic literature on cultures that typify each of these two scenarios may be the only way to decide between the situations. Examples of cultures in the first scenario are the Ronga subtribe of the Thonga in 1895 (SCCS number 3) or the inhabitants of Lesu Village of New Ireland in 1930 (SCCS number 97).[xxiii] Two cultures in the sample also typified those in the second scenario. These are the Wolof of upper and lower Salum in Gambia in 1950 (SCCS number 21) and the Amhara of Gondar district in 1953 (SCCS number 37). Unfortunately it is beyond the scope of this paper to engage in such detailed examinations.

6. CONCLUSIONS

In general male dominance is associated with militarism, although the tests reveal some complicated relationships. The association between male dominance and militarism is not as strong as might be expected given the research findings on authoritarianism described

above. Western societies may be unique in exhibiting such a strong connection between these variables. One can argue that our culture is unusual in that it does not fit clearly into either of the two scenarios of male dominated and militarist cultures presented above.

Although this study did not attempt to ascertain if males are inevitably violent, the variation on many variables and the results of the drive-discharge hypothesis suggests that they are not. Another question that this study did not attempt to answer was why men, and not women, became warlike and dominating. Perhaps it was because success in warfare required males᾽ greater physical strength. Regardless of the answer to such questions, the results of this study suggest that the elimination of war and militarism and the emancipation of women are two different parts of the same struggle. They also suggest that the interaction between these two problems will be a fertile area of study for both political scientists and feminist peace researchers.

7. NOTES

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i. This article is based on an M.A. thesis completed while a student in Political Science at the University of Canterbury in New Zealand.

ii. A note of caution is required with Sanday's study because she appears to use a variable indicating warfare, the taking of wives from hostile groups, in the formulation of her overall male dominance measure. This means that it is technically invalid to run this measure against another variable that measures warfare.

iii. This correlation was originally reported as having a value of ∅=.63 (p<.004), although personal correspondence with Brian Hayden (07/11/91) indicated that this was a mistake. The true value of this correlation is ∅=.53 (p<.05).

iv. Again a note of caution is required, because Whyte appears to make the same mistake as Sanday in the running of his tests. A warfare variable, women's participation in warfare, was used in the making up of one of his scales of male dominance (the "joint participation scale"). Perhaps not surprisingly there is a correlation between this scale and the frequency of war.

v. Item 30 in Altemeyer's (1988) RWA scale reads: "One reason we have so many troublemakers in our society nowadays is that parents and other authorities have forgotten that good old-fashioned physical punishment is still one of the best ways to make people behave properly." The fact that this item correlates with other items in the scale demonstrates that a tendency to use corporal punishment does indeed suggest the presence of authoritarianism.

vi. Item 12 in the RWA scale reads: "Obedience is the most important virtue children should learn." Again, the fact that this variable correlates with other items in the scale suggests that authoritarians do indeed tend to favor submissiveness in children.

vii. These correlations were: t=.26 (p=.000, n=139) between corporal punishment and obedience inculcation, t=.23 (p=.000, n=165) between obedience inculcation and social hierarchy, and t=.16 (p=.005, n=148) between social hierarchy and corporal punishment.

viii. As was the case of the authoritarianism variables, these variables were correlated with each other to see if they formed a unified "syndrome" of male dominance. However, only one of the three correlations, that between dominance of men in political life and female submission to males, was strong, significant, and in the direction expected (t=-.47, p=.00, n=68). Apart from this, the wife-beating variable has no relationship with the female politics variable (t=-.04, p=.37, n=61), or the wife to husband deference measure (t=-.04, p=.39, n=37). Perhaps it is only a Western expectation that a social structure biased in favor of men would always be associated with violence against women. It was felt necessary to press on regardless using these variables, despite this low level of correspondence, and not amend their selection in a post-hoc manner.

ix. Like the male dominance variables, these three militarism variables were correlated with each other to see how unified a "syndrome" they are. Again, however, the level of intercorrelation was not good. While there was a strong and significant relationship between the submission to military superiors variable and the subjugating warfare aims variable (t=.45, p=.00, n=130), these two variables did not have the expected relationship to the variable measuring unnecessary/sadistic violence against the enemy. There was an insignificant relationship between this variable and the submission to military superiors variable (t=.04, p=.31, n=130) and what almost amounted to a significant relationship in the opposite direction to that expected between the variable measuring unnecessary violence against the enemy and the warfare aim of complete subjugation (t=-.11, p=.08, n=153). This result suggests that unnecessary and sadistic violence is slightly more likely to occur when the subjugation of the other side is not the aim of fighting. These results are unexpected according to theories of authoritarianism. However, as with the male dominance variables, a decision was made to still use these particular variables rather than revise them in a post-hoc manner.

x. This study contained codes of a provisional nature. The codes are used with permission from Douglas White (personal correspondence, 25/05/92). These codes were later withdrawn from *World Cultures* (Editors).

xi. Thank you to J.P. Gray of the University of Wisconsin-Milwaukee for performing these tests using a program of his own design.

xii. Additional tests had to be performed here to ensure that the correlations had not been "contaminated" by the makeup of the corporal punishment and obedience inculcation variables. This is because parts of these two variables are themselves made up of measures of violence against female children and measures of submission inculcation in female children. To get around this, these additional tests were performed after producing reformulated versions of the variables that included only the measures of corporal punishment and obedience inculcation for male children. There were virtually no differences between the correlations using the overall corporal punishment variable and this male corporal punishment variable (t=.22, p=.02, n=63), suggesting that there is no "contamination" in this variable. Likewise, the value of the obedience variable correlation was not significantly altered when the reformulated male version of this variable was used (t=.20, p=.01, n=75).

xiii. Before the effects of spatial autocorrelation were taken into account an ordinary least-squares regression done on the corporal punishment-wife beating relationship prouced a t-value of 1.82 (p=.06) which changed to a z-value of 1.80 (p=.07) after controlling for spatial autocorrelation. The obedience inculcation-wife deference relationship went from t-value 2.15 (p=.03) to z-value 2.16 (p=.03).

xiv. The t-value for the relationship between corporal punishment and trophy taking went from -2.36 (p=.01) to a z-value of -2.38 (p=.01). The obedience-leadership relationship went from t-value -2.99 (p=.00) to z-value -2.86 (p=.00). The stratification-subjugation relationship went from t-value -7.77 (p=.00) to z-value -7.96 (p=.00).

xv. The t-value of 2.09 (p=.04) went to z-value 3.21 (p=.00).

xvi. The relationship between variables 909 and 626 went from t-value 2.77 (p=0.00) to z-value 2.76 (p=0.00). That between variables 909 and 616 went from t-value 2.56 (p=0.01) to z-value 2.22 (p=0.02).

xvii. The t-value of -1.62 (p=.10) converted to a z-value of -1.62 (p=.10) after the spatial autocorrelation correction.

xviii. The t-value of 1.41 (p=0.16) increased to a z-value of 1.43 (p=0.14).

xix. The few cases scored as "male absence within memory were excluded for the sake of simplicity.

xx. See the results in footnote 9.

xxi. The correlation between wife-beating and subjugative war is t=-0.05, (p=0.33, n=55), while the relationship between subjugative warfare and Sanday's rape scores (variable 667) is t=-0.10 (p=0.17, n=79).

xxii. Whyte (1978) does not make it clear in his codebook which sex holds the female inferiority views and which sex prefers male or female children. Presumably his codes are an average for both males and females of that society.

xxiii. Other examples of such cultures are the Trukese of Romonum Island in 1947 (SCCS number 109), the Archie division of the Papago in 1910 (SCCS number 151), the Goajiro tribe in 1947 (SCCS number 159), the Tupinamba of the Rio de Janeiro hinterland in 1550 (SCCS number 177), and the equestrian Tehuelche in 1870 (SCCS number 185).