

University of New Hampshire  
University of New Hampshire Scholars' Repository

---

Psychology Scholarship

College of Liberal Arts (COLA)

---

Spring 2011

# A New Scale to Measure War Attitudes: Construction and Predictors

Erin C. Dupuis

*University of New Hampshire - Main Campus*

Ellen S. Cohn

*University of New Hampshire - Main Campus, [ellen.cohn@unh.edu](mailto:ellen.cohn@unh.edu)*

Follow this and additional works at: [https://scholars.unh.edu/psych\\_facpub](https://scholars.unh.edu/psych_facpub)

 Part of the [Psychology Commons](#)

---

## Recommended Citation

Dupuis, Erin C. and Cohn, Ellen S., "A New Scale to Measure War Attitudes: Construction and Predictors" (2011). *Journal of Psychological Arts and Sciences*. 14.

[https://scholars.unh.edu/psych\\_facpub/14](https://scholars.unh.edu/psych_facpub/14)

This Article is brought to you for free and open access by the College of Liberal Arts (COLA) at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in Psychology Scholarship by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact [nicole.hentz@unh.edu](mailto:nicole.hentz@unh.edu).

# A New Scale to Measure War Attitudes: Construction and Predictors

Erin C. Dupuis      Loyola University New Orleans  
Ellen S. Cohn      University of New Hampshire

**Abstract—** Attitudes people have toward war in general have been of recent interest due to the war on terrorism and the war in Iraq. The purpose of this research was to develop a scale to measure war attitudes and to investigate factors that may influence these attitudes. In the first study, a scale was developed that measured war attitudes. Three factors emerging from the *War Attitude Scale* were labeled ethics of war, support for war, and affect about war. Patriotism-nationalism, authoritarianism, social criticism, belief in war outcomes, support of the president, and gender were found to be significant predictors of war attitudes. In the second study, the scale was administered to a community sample. A confirmatory factor analysis was conducted with three similar factors emerging. Additionally, the community sample results allowed further generalization of the findings. Implications for the construction of the *War Attitude Scale* and its predictors are discussed.

## INTRODUCTION

The United States is often involved in foreign wars; therefore, developing a new scale that can be used to measure war attitudes is of particular importance. Understanding attitudes toward war is important from both a political and psychological perspective. For example, the government could use such information to understand whether or not the public will be supportive during a war. It is likely that war attitudes are closely related to attitudes on other topics. Psychologists can use such information to predict other attitudes that may or may not be related to war such as attitudes about the death penalty, assisted suicide, and abortion.

Philosophers and theologians have often debated the concept of just war thinking. Conflict and wars that are undertaken in order to ensure the prevalence of charity and human dignity and the destruction of injustice and social evil are considered by many to be ‘just wars’ (Charles, 2005). Just war thinking is based upon *ius ad bellum* (a morality component of just war thinking) (Charles, 2005). There are two main fundamental concerns in the Christian concept of just war thinking; *jus ad bellum* (whether force is justified)

and *ius ad bellum* and *jus in bello* (how to apply force) (Charles, 2005). The current research focused only on *jus ad bellum*. The war attitude scale developed in this research investigated participants’ attitudes about the morality of war. When is war moral? When is it immoral? The development of a war attitude scale that measures the morality of war is, thus, important to tie together the two often disconnected fields of the theology and psychology of war.

## *Public Opinion Polls and War Attitudes Measurement*

Public attitudes are sometimes measured using single-question polls, which are often times inadequate measures of public attitudes. According to Conrad and Sanford (1944), this inadequacy occurs due to the inability to determine whether a response is due to the phrasing or content of the question. Another problem with polls is that they focus on yes or no questions (Henry, 1984). It is therefore important to use an attitudinal measure with carefully constructed statements that can be answered in broader terms than simply “yes” or “no”. Political attitudes guide political behavior (Covell, 1996); thus, the government should be well aware of public attitudes before forming policies regarding war. Furthermore, public opinion often guides politicians in their decisions (Cohr & Moschner, 2002).

There are already scales that have been developed to measure attitudes toward war, but many have various measurement problems. For example, Stagner’s (1938) scale measures war attitudes; however, it is based upon a yes/no scale and does not measure concepts related to war attitudes such as affect and situational variables. Other scales either do not have reliable or consistent subscales or factors (i.e., Lester, 1994), are more aptly used with a younger population such as adolescents or younger individuals (i.e., “there will be war when I grow up”) (i.e., Roscoe et al., 1988), are outdated (i.e., Droba, 1931; Smith, 1933; Stagner, 1938) or deal strictly with militaristic attitudes (i.e., Nelson & Milburn, 2004). Militaristic attitude scales do measure more general attitudes toward war, but they tend to focus on military force and not affective, behavioral or cognitive components of war attitudes. *The War Attitude Scale* developed in the current research reflected the tripartite model of attitudes by investigating the affective, behavioral, and cognitive components of war. The

current research also investigated certain situational variables that may affect war attitudes.

#### *War Attitudes*

In the 1930's and 1940's, there was extensive research about attitudes toward war (Conrad & Sanford, 1944; Droba, 1934; Jones, 1942; Stagner, 1938). Droba (1934) investigated whether war attitudes were related to political party. He found that there was a slight difference in the war attitudes of Republicans and Democrats; Republicans being more favorable toward war than Democrats. Stagner (1938) developed one of the first scales used to measure attitudes toward war. He found that veterans were the most militaristic in their attitudes, whereas, individuals with positive war attitudes were more likely to support offensive and defensive wars. He also found that adult women were more likely to be pacifists than adult men. After studying changes in war attitudes over a period of time, Jones (1942) proposed that attitude toward war was a multidimensional concept.

Researchers have investigated personality, gender, and cultural predictors of war attitudes. In one study, Lester (1994) concluded that personality traits such as hostility were not associated with war attitudes. More recent research by Covell (1996) compared different countries including the United States and Canada. Adolescents (mean age of 13) in the U.S. were found to be more positive about war and about the likelihood of the U.S. winning a war than their Canadian counterparts (Covell, 1996).

#### *Gender and War Attitudes*

As previously stated, gender has been a significant predictor of war attitudes in past research. Men tend to be more favorable toward war than women (Covell, 1996; Lester, 1994; Putney & Middleton, 1962; Schroeder & Gaier, 1993; Stagner, 1938; Stevenson, Roscoe & Kennedy, 1988). This gender difference has been proposed to occur for several different reasons (Ås, 1982). First, men are often the perpetrators of war. Recruitment for the military is generally aimed at the male population; women must rely on men for defense. Second, the men serving in the military and going to war are the sons or husbands of women (Ås, 1982). One could argue that there are more women in the military today than in the past (women in the past generally served as nurses and pilots); however, women in the United States military are still restricted from ground combat duty.

#### *Authoritarianism and Social Criticism*

In the current research, we will also examine the role of authoritarianism in war attitudes. The authoritarian personality is characterized by obedience to authority, aggression directed at minorities and out-group members, and adherence to the perceived laws and standards of society and authority (Altemeyer, 1988). In the current study, we hypothesized that those subjects high in authoritarianism would have more positive war attitudes. We chose to include authoritarianism as an independent variable due to the fact that it has been related to positive Vietnam War, Gulf War, and Kosovo War attitudes (Cohrs & Moschner, 2002; Doty et al., 1997; Granberg & Corrigan, 1972; Izzett, 1971).

Authoritarianism is defined as “the interaction between

social conformity-autonomy and perceived threat” (Feldman, 2003, p. 52). Feldman stated that people who valued social conformity would believe that punishment was necessary to keep the social order. These people would be strong government supporters and would believe that the government has the right to suppress nonconformity. Those people who value autonomy should reject restrictions of civil liberties (Feldman, 2003).

It seems likely that people who are more socially critical would be less likely to hold authoritarian attitudes because they would be less likely to conform socially. Social criticism involves questioning the government and the foundations of society. Those who are socially critical tend to inquire into the legitimacy of a society's power structure and its institutions (Giri, 1998). The task of social criticism is to investigate the foundations of a society.

#### *Patriotism-nationalism*

Another factor that has been closely related to militaristic attitudes is patriotism-nationalism (Feshbach, 1990). Patriotism refers to a positive emotional attachment toward one's own country, whereas nationalism refers to the need to be superior to other nations (Allport, 1927; Mead, 1929). The “rally ‘round the flag” effect, first described by Mueller (1970), is the idea that an international crisis will bolster patriotism and public approval for a president and his administration. Mueller (1970) hypothesized that the citizens of a nation will rally together due to a fear of hurting the nation's success if the president is opposed. However, there are various factors that will influence the strength of this rally effect such as media coverage, bipartisan support, and the severity of the crisis (Baker & Oneal, 2001). In the current research, patriotism-nationalism was investigated to determine whether it is, in fact, a predictor of war attitudes.

#### *Political Party and War Attitudes*

Several researchers have found a connection between political party affiliation and war attitudes (Droba, 1934; Stevenson, Roscoe & Kennedy, 1988). Droba (1934) concluded that Republicans were more favorable toward war than Democrats. Stevenson, Roscoe and Kennedy (1988) investigated adolescents' views toward conventional war in general and also their views regarding military involvement in Latin America. They found that the Republican adolescents were more accepting of war in general and were also more likely to justify military involvement whereas Democrat and Independent adolescents were more critical.

## STUDY 1

The first purpose of Study 1 was to develop a reliable and valid scale to measure attitudes toward war. The second purpose of the study was to investigate factors predicting attitudes toward war including patriotism-nationalism, authoritarianism, social criticism and belief in war outcomes. In addition, the role of demographic variables was explored. It was expected that patriotism-nationalism, social criticism, authoritarianism, and belief in war outcomes would predict war attitudes. It was further expected that gender and political party would predict war attitudes. We did include religion as

an exploratory item, but did not make any hypotheses about the significance of religion on war attitudes.

#### Method

*Participants.* The participants were 127 female (56%) and 98 male (44%) college students. Subjects earned course credit for their participation. The participants' mean age was 19.28 ( $SD = 1.78$ ) and 92% ( $n = 208$ ) were Caucasian. Additionally, 34% ( $n = 77$ ) were Democrats, 30% ( $n = 68$ ) were Independents, and 24% ( $n = 54$ ) were Republican.

*Materials.* The questionnaire consisted of demographic items including sex, religion, and political party and several attitude scales.

*War attitudes.* General war attitudes were measured using a 27-item *War Attitude Scale* (WAS) developed by the researcher ( $\alpha = .92$ ). This scale was created using a 6-point Likert format (1- "strongly disagree and 6- "strongly agree"). Higher scores on the WAS indicate more accepting war attitudes. Examples of statements on the WAS include, "Even if there is not any hard evidence against another country (i.e. weapons of mass destruction), I would support war" and "I believe that war is necessary to resolve conflicts". A pilot study was conducted using 20 college-aged participants who were asked to answer several open-ended questions pertaining to whether they would support a war. Based upon this qualitative study and Stagner's (1938) *Attitudes Toward War Scale*, items were developed for the *War Attitude Scale*. Conversations with colleagues led to the further reduction of unclear or repetitive questions.

Stagner's (1938) *Attitudes Toward War Scale* ( $\alpha = .65$ ) consists of 14 items (short form) that measure general attitudes toward war (e.g., "The evils of war are greater than any possible benefits"). The scale is a reliable measure of war attitudes. Furthermore, Stagner's scale is quite similar to the *War Attitude Scale* developed in the current research. We determined that it would be best used to assess the convergent validity of the WAS.

*Social criticism.* Jessor and Jessor's (1977) *Social Criticism Scale* ( $\alpha = .72$ ) is a 13-item measure that assesses an individual's criticism of society (e.g., "There is far too much emphasis on success and getting ahead in our society; people are becoming things or objects rather than human beings"). We chose to include the *Social Criticism Scale* because it includes items that are not entirely transparent (i.e., they may not be directly related to war attitudes) such as "women's position in our society is about as equal as could reasonably be expected." As discussed previously, we predicted that war attitudes might be relevant to other attitudes not directly related to war. The social criticism scale was included for this reason. It was hypothesized that subjects low in social criticism would be more positive about war because they would be less likely to question the decisions of the society in which they live.

*Right-wing authoritarianism.* The *Right-Wing Authoritarianism Scale* (Altemeyer, 1981) ( $\alpha = .94$ ) consists of 30 items that measure an individual's authoritarian attitudes (e.g., "Our country will be destroyed someday if we do not smash

the perversions eating away at our moral fiber and traditional beliefs"). Altemeyer's (1981) scale was used to assess authoritarianism due to its high reliability and its prior association with war attitudes.

*Patriotism-nationalism.* Kosterman and Feshbach's (1989) *Patriotism-Nationalism Questionnaire* ( $\alpha = .88$ ) is a 20-item scale that measures an individual's level of patriotism and nationalism (e.g., "I am proud to be an American"). The Kosterman and Feshbach (1989) scale was used in this study due to its previously established reliabilities (Patriotism = .88, Nationalism = .78). Furthermore, it is theoretically plausible that an individual who scores high on the patriotism-nationalism scale would be more likely to support war if the government states that war is necessary, thus scoring higher on the *War Attitude Scale*.

*War outcomes.* The *Belief in War Outcomes Scale* was developed by the researcher and consists of 13 items based on a 6-point Likert response scale ( $\alpha = .73$ ). Participants were asked to indicate the extent to which they agreed or disagreed that an item was an outcome of war (e.g., 'disease', 'sacrificed liberties', and 'poverty'). Higher scores on the outcome section indicated that a participant thought there were more negative than positive outcomes of war. The items in the belief in war outcomes scale were factor analyzed, but the items did not load on any interpretable factors. This scale was included to assess what outcomes of war participants found to be the most salient. We were interested in whether participants were more affected by outcomes such as sacrificed liberties or by outcomes such as civilian casualties. The most important outcome was military casualties ( $M = 5.14$ ) and the least important outcome was disease ( $M = 3.42$ ).

#### Procedure

Participants were recruited from introductory psychology courses and from a lower-level political science course (in order to obtain more male participants). The participants were asked to complete the questionnaire as honestly as possible. Each subject was assured confidentiality and told that there were no right or wrong answers. The questionnaire took approximately 35-40 minutes to complete. After completing the questionnaire, participants were fully debriefed. Each participant received course credit.

#### Results

*Factor analysis.* A Varimax principal components factor analysis (with eigenvalues over 1.0) was conducted on the *War Attitude Scale* items. The factor loadings from the factor analysis are presented in Table 1. Three factors were extracted and labeled. The ethics of war factor ( $\alpha = .86$ ) consists of 11 items that demonstrate either a moral or ethical conflict (e.g., "I feel it is our moral duty to go to war when one country is being attacked by another country"). The second factor labeled support for war ( $\alpha = .89$ ) consists of 11 items that describe various situations that will result in the participant either supporting or not supporting war (e.g., If the United States is attacked first, I would support war). The third factor, the affective factor ( $\alpha = .78$ ), consists of 4 emotional items pertaining to war (e.g., The word "war" makes me feel

TABLE I  
FACTOR ANALYSIS OF *WAR ATTITUDE SCALE*

Item	WAS Factor Loadings		
	Ethics	Support	Affect
If the United States went to war, I would serve my country (i.e., join the military).	.69	-.07	.08
I feel it is our moral duty to go to war when one country is being attacked by another country.	.68	.24	-.03
I believe that young people should be ready to serve their country in times of war.	.66	.13	.15
I believe that war is necessary to resolve conflicts.	.65	.24	.23
Even if there is not any hard evidence against another country, I would support war.	.60	.28	.28
I believe that offensive wars can often be justified.	.60	.35	.20
I feel it is our moral duty to go to war if human rights are being violated in another country.	.59	.20	-.09
War makes me feel safer in my country.	.55	.16	.35
I don't think progress would happen if wars were not fought.	.53	.23	.06
When it comes to war, I believe the negatives greatly outweigh the positives.*	.47	.41	.31
I don't think we should go to war to protect other countries.*	.42	.28	.10
If it were necessary to keep our country safe, I would support war.	.21	.76	-.06
If the United States is attacked first, I will support a war.	.24	.73	-.12
I would demonstrate (i.e., picket) if the United States went to war.*	-.03	.73	.23
I would write letters to the government to protest a war.*	-.01	.66	.35
I would never support a war.*	.36	.64	.23
If American civilians are attacked in another country, I would support a war.	.47	.59	-.13
I believe the U.S. usually has good reasons for war.	.51	.58	.03
If military personnel were attacked in another country, I would support a war.	.54	.57	-.04
I do not agree with war in principle.*	.32	.55	.40
I don't believe that the goals we set out with when going to war will be accomplished.*	.31	.52	.23
I feel that defensive wars can often be justified.	.36	.44	-.05
I become scared or frightened when I think about war.*	.06	-.05	.82
The word "war" makes me feel anxious or nervous.*	-.01	-.01	.79
I get upset when I think about the misery and suffering caused by war.*	.25	.04	.69
The word "war" makes me feel confused.*	-.04	.19	.52
Alpha			
Study 1	.86	.89	.78
Study 2	.83	.86	.84
% Variance	19.22	17.92	11.48

Note: \* indicates that the item is reversed

anxious or nervous). The items on the affective factor were all reverse coded so that a higher score on the affective factor indicates more positive emotions. More descriptive information about the WAS and the factors is presented in Table 2.

*Validity and reliability of War Attitude Scale.* To measure convergent validity of the new WAS, a correlation was performed between Stagner's (1938) *Attitudes Toward War Scale* and the WAS. The WAS scale correlated positively with the Stagner's scale ( $r(205) = .64, p < .01$ ), indicating some validity of the WAS. Thus, if a participant's attitudes were positive toward war using the Stagner (1938) scale, then his or her attitudes would also be positive on the WAS. Stagner's (1938) scale was also correlated with the three WAS factors: the ethics factor ( $r(209) = .59, p < .01$ ), the support for war factor ( $r(1,209) = .61, p < .01$ ) and the affective factor ( $r(209) = .15, p < .05$ ). Stagner's (1938) scale did not include any affective items, thus the correlation between Stagner's

reverse coded so that a higher score on the affective factor indicates more positive emotions. More descriptive information about the WAS and the factors is presented in Table 2.

TABLE 2  
STUDY 1 CORRELATIONS BETWEEN WAS FACTORS AND ALL PREDICTORS

Factor	Ethics	Support	Affect
Patriotism	.57**	.54**	.06
Authoritarianism	.41**	.32**	.06
Social Criticism	.51**	-.62**	-.21**
Outcomes	-.41**	-.39**	-.26**
Gender	.20**	.16**	.30**
Support President	.54**	.71**	.09
Religion	-.15**	.71**	.09
Total WAS Score	.89**	.90**	.47**

Note: \*\* indicates correlation is significant at the 0.01 level

*Validity and reliability of War Attitude Scale.* To measure convergent validity of the new WAS, a correlation was performed between Stagner's (1938) *Attitudes Toward War Scale* and the WAS. The WAS scale correlated positively with the Stagner's scale ( $r(205) = .64, p < .01$ ), indicating some validity of the WAS. Thus, if a participant's attitudes were positive toward war using the Stagner (1938) scale, then his or her attitudes would also be positive on the WAS. Stagner's (1938) scale was also correlated with the three WAS factors: the ethics factor ( $r(209) = .59, p < .01$ ), the support for war factor ( $r(1,209) = .61, p < .01$ ) and the affective factor ( $r(209) = .15, p < .05$ ). Stagner's (1938) scale did not include any affective items, thus the correlation between Stagner's scale and the affective factor does not indicate a lack of convergent validity for the overall War Attitude Scale.

A reliability analysis was conducted on the overall *War Attitude Scale* ( $\alpha = .92$ ). These Cronbach's alphas indicated that the overall *War Attitude Scale* was reliable and that the factors were also internally reliable. See Table 1 for reliabilities.

Test/retest reliability of the *War Attitude Scale* was conducted in order to assess score consistency using a separate sample of participants. The participants were 38 female and 29 male college students with a mean age of 19.45. Participants were tested once using the *War Attitude Scale*. The same participants were then retested after a period of one month. A reliability analysis was conducted on the overall *War Attitude Scale* at time 1 ( $\alpha = .94$ ) and at time 2 ( $\alpha = .95$ ). The WAS scale at time 1 correlated positively with the WAS scale at time 2 ( $r(59) = .93, p < .01$ ). The results of the test/retest indicated that the *War Attitude Scale* was reliable.

*Other predictors of the War Attitude Scale.* A matrix of the correlations between the WAS, WAS factors, patriotism-nationalism, social criticism, authoritarianism, belief in war outcomes, political party, gender, religion, and support for the president (George W. Bush) is presented in Table 2. Age was not included in the analyses because the majority of participants were first year college students. A standard multiple regression using all of the predictor variables was conducted.<sup>1</sup> The results of the regression can be found in Table 3. Significant predictors of the WAS ( $F(8,142) = 37.43, p < .001, R^2 = .68, adj. R^2 = .66$ ) were gender, support for the president, social criticism, and patriotism-nationalism. Significant predictors of the ethics factor ( $F(8,146) = 22.58, p < .001, R^2 = .55, adj. R^2 = .53$ ) included gender, support for the president, patriotism-nationalism, authoritarianism, social criticism, and religion. Men scored higher on the ethics factor than women. Participants who supported the president and participants who scored high in patriotism-nationalism and/or authoritarianism also scored higher on the ethics factor. On the other hand, participants who scored high in social criticism scored lower on the ethics factor. Participants who identified

TABLE 3  
STUDY 1: RESULTS OF STANDARD MULTIPLE REGRESSION USING ALL PREDICTORS

Scale	Predictor	B	$\beta$	Sr <sup>2</sup> unique	Adj R <sup>2</sup>
WAS					.66
	Patriotism	.29***	.31	.07	
	Authoritarianism	-.00	-.01	.00	
	Social Criticism	-.56***	-.28	.05	
	Gender	4.82***	.21	.04	
	Support President	3.00***	.36	.07	
	Outcome Scale	-.07	-.06	.00	
	Religion	-.81	-.06	.00	
Ethics	Political Party	.54	.04	.00	
					.53
	Patriotism	.44***	.42	.13	
	Authoritarianism	.13*	.14	.02	
	Social Criticism	-.49***	-.21	.03	
	Gender	3.68***	.14	.02	
	Support President	1.45***	.15	.01	
	Outcome Scale	-.10	-.07	.00	
Support	Religion	-2.25*	-.14	.02	
	Political Party	.69	.04	.00	
					.64
	Patriotism	.24***	.20	.03	
	Authoritarianism	-.09	-.08	.00	
	Social Criticism	-.77***	-.29	.05	
	Gender	3.58*	.12	.01	
	Support President	5.74***	.53	.15	
Affect	Outcome Scale	.03	.02	.00	
	Religion	.22	.01	.00	
	Political Party	.57	.03	.00	
					.14
	Patriotism	-.03	-.02	.00	
	Authoritarianism	-.06	-.05	.00	
	Social Criticism	-.24	-.09	.00	
	Gender	10.18***	.31	.09	
Support President	.31	.03	.00		
Outcome Scale	-.34*	-.21	.03		
Religion	1.37	.07	.00		
Political Party	-.85	-.04	.00		

Note:  $p < .05$  \*,  $p < .01$  \*\*,  $p < .001$  \*\*\*

as Catholic scored higher on the ethics factor than those who identified as Christian/Protestant.

Significant predictors of the support for war factor ( $F(8,145) = 35.64, p < .001, R^2 = .66, adj. R^2 = .64$ ) included gender, support for the president, patriotism, and social criticism. Men scored higher on the support factor than women. Participants who were high in patriotism-nationalism and participants who supported the president also scored higher on the support factor. Participants who scored high in social criticism scored lower on the support factor, which indicated that they were less likely to support war.

The significant predictors of the affective factor ( $F(8,144) = 4.11, p < .001, R^2 = .19, adj. R^2 = .14$ ) were gender and war outcomes. Women had lower scores on the affective factor, which indicated that they had more negative emotion about war. Additionally, participants who scored higher on the outcome scale were more likely to score lower on the affective factor.

<sup>1</sup>Correlations, regressions, and ANOVAs were conducted separately for the social/personality predictors and exploratory predictors. These lengthy analyses and tables were removed from this manuscript. All analyses, as well as the full scale, can be obtained from the author.

### Discussion

The major purpose of the present study was to develop a reliable scale that measured attitudes toward war. A secondary purpose was to investigate predictors of war attitudes. The WAS has been shown to be both reliable and to have some convergent validity. This scale is an adequate and more contemporary method of measuring attitudes toward war. Three factors, or subscales, emerged from the WAS: ethics of war, support for war, and affective feelings of war. War attitudes using the WAS could, thus, be broken down into whether the individual believed that war was ethical and moral, whether the individual supported war depending on different scenarios and variables, and whether the individual reported negative affect about war.

It is not surprising that variables such as patriotism-nationalism, authoritarianism, social criticism, and support for the president predicted war attitudes. Correlations between war attitudes and these predictor variables might point to a general attitudinal syndrome. War attitudes are probably closely tied to other attitudes such as abortion and the death penalty.

Gender, religion, support for the president, patriotism-nationalism, authoritarianism, social criticism, and beliefs in negative outcomes were predictors of war attitudes. Men were more likely to believe that war was ethical and were more likely to support war. Participants who scored higher on the aforementioned scales were more likely to believe that war was ethical and were more likely to support war; however, participants who scored higher in social criticism were more likely to believe that war was not ethical and were less likely to support war. Additionally, participants had more positive emotions about war if they were men and Catholics were more likely to believe that war was ethical than Christian/Protestants.

### STUDY 2

In order to address the limitations of Study 1 (limited college sample, majority Caucasian, majority from New England), Study 2 used a more diverse community sample. Additionally, this study used a more developed (items removed based upon item overlap, item splitting, and low reliabilities) *War Attitude Scale* based on the results of the factor analyses and the reliability analyses of Study 1. The survey was administered using a web-based survey. The inclusion of this study is an important extension to this research. We expected that the *War Attitude Scale* and the three factors would be reliable. Based on the results of Study 1, we also hypothesized that the patriotism-nationalism, authoritarianism, and social criticism scales would predict war attitudes. Additionally we expected that men would have more positive war attitudes than women.

### Method

*Participants.* The participants were 113 women (58%) and 82 men (42%) who took the survey on the Internet. Participants were recruited by emailing web discussion groups with an invitation to take the survey and be entered into a drawing to win a prize. The participants' mean age was 31.52

( $SD = 14.60$ ) and ranged from 18 to 87 years of age. Of these participants 169 (87%) were Caucasian. Additionally, 74 (38%) were Democrats, 47 (24%) were Independents, and 47 (24%) were Republican. Furthermore, incomes were distributed such that 37.9% had an income lower than the national median household income of \$43,318 (U.S. Census Bureau, 2004), 44.2% had an income between \$40,000 and \$99,999, and 16.4% had an income above \$100,000. The geographic location of participants (i.e., Northeast, South, Midwest, and West) was equally distributed. Participants were also asked about their occupation; 70 (41%) were students (although they tended to be non-traditional students who were older and also held jobs), 42 (25%) were in a managerial or professional position, 18 (11%) had technical or sales careers, and 40 (23%) had some other occupation (e.g., sales, military, or service).

*Materials.* With several exceptions, the materials included the same scales used and described in Study 1. The questionnaire consisted of demographic items including religion, political party, and income, Stagner's (1938) *Attitudes Toward War Scale*, Jessor and Jessor's (1977) *Social Criticism Scale*, The *Right-Wing Authoritarianism Scale* (Altemeyer, 1981), and Kosterman and Feshbach's (1989) *Patriotism-Nationalism Questionnaire*. As previously stated, the *War Attitude Scale* (see Appendix A) was changed from Study 1 to Study 2 (see results section below for more information). The *Belief in War Outcomes Scale* (see Appendix B) was also changed based upon item overlap and low item reliabilities (13 items were used in Study 2). As opposed to Study 1, in the community sample (mostly adult participants) the most highly rated war outcome was increased taxes ( $M = 5.33$ ) and the least important outcome was increased military presence ( $M = 3.19$ ).

The study was conducted on the web. There are many advantages to using a web survey including the low cost and that the data can be directly loaded into a statistical package (Schmidt, 1997). Directly loading the data into a database will ensure that the data is free from manual input errors. There might be differences between the reliability and response rates of a web site administered survey compared to a paper-and-pencil survey; however, past research has found that these differences are minimal (Ballard & Prine, 2002; Buchanan, 2000; Epstein, Klinkenberg, Wiley, & McKinley, 2001; Meyerson & Tryon, 2003; Salgado & Moscoso, 2003; Truell, Bartlett, & Alexander, 2002).

*Procedure.* Different web groups were chosen randomly from different host sites such as Google and Yahoo. The list owner of each group was asked to forward the invitation to his or her group. Participants completed the survey voluntarily. They were entered into a drawing to win one of two fifty-dollar gift certificates. After reading an informed consent form, each participant was asked to complete the survey honestly and accurately. Clicking on the link to enter the survey was indicated as consent to participate. After completion of the survey, each participant was sent to another page with a debriefing form and thanked for their participation. To ensure anonymity, participants emailed the

TABLE 4  
FIT STATISTICS FOR CONFIRMATORY FACTOR ANALYTIC MODELS

Model	$\chi^2$	df	$p$	$\chi^2/df$	Tucker-Lewis	CFI	RMSEA	$p$ for test of close fit
Two-factor model	177.44	125	.001	1.42	.967	.973	.047	.63
Second-order factor model	222.68	131	<.001	1.70	.945	.953	.060	.11

Note: All models were estimated with all factor correlations freely estimated; RMSEA = root mean square error of approximation.

researcher if they wanted to be included in the drawing; no identifying information was attached to the surveys.

### Results

**WAS development.** Based upon the results of Study 1, certain items were removed from each factor (based upon item overlap and interpretability). The new ethics factor consisted of 8 items, the new support factor 7 items, and the new affect factor 3 items. Cronbach's alpha reliability analyses were conducted on the three factors: ethics ( $\alpha = .83$ ), support ( $\alpha = .86$ ), and affect ( $\alpha = .84$ ). Changing the number of items did not greatly affect the reliabilities of the ethics and support factor, but did make the reliability of the affect factor higher. The high reliabilities on the three factors revealed that the WAS had internal reliability.

A confirmatory factor analysis was conducted using a three-factor model and a second-order model (see Table 4). All missing scores were replaced with means in order to run the confirmatory analysis. The three-factor model and second order model were both theoretically plausible; therefore, both models were tested and compared in regard to relative fit. Chi-square differences were found to be significant ( $p = .001$ ); however, according to Byrne (2001) such results are not unexpected based upon sample size and the fact that hypothesized models can never actually fit real world data perfectly. Therefore, model fit was assessed using other accepted fit indicators (Byrne, 2001) and interpretability of the final solutions. Various fit indices revealed that the first-order model was a good fit to the theoretical construct (for example,  $RMSEA = .05$ ,  $Tucker-Lewis = .97$ , see Table 4 for more indices). Based upon fit, we selected the first-order model as our final model.

To assess convergent validity, correlations were conducted using the three factors and Stagner's (1938) *Attitudes Toward War* scale. There was a positive correlation with the ethics factor ( $r(179) = .82, p < .01$ ), with the support factor ( $r(179) = .86, p < .01$ ) and with the affective factor ( $r(179) = .82, p < .01$ ). This indicates that the more positive a participant's attitudes were on the Stagner (1938) scale, the more positive they were on the three factors. Thus, the scale was determined to have convergent validity.

**Other predictors of the War Attitude Scale.** A matrix of the correlations between the WAS factors, patriotism-

nationalism, social criticism, authoritarianism, belief in war outcomes, age, religion, political party and gender is presented in Table 5. A standard multiple regression using the predictor variables was conducted. The results of the regression are presented in Table 6. Significant predictors of the ethics factor ( $F(8, 93) = 17.71, p < .001, R^2 = .60, adj. R^2 = .57$ ) were gender, social criticism, and the war outcome score. Participants who believed that war was ethical were more likely to be men. Participants who scored higher on the social criticism scale and/or the war outcome scale were less likely to believe that war was ethical. Significant predictors of the support factor ( $F(8, 93) = 24.67, p < .001, R^2 = .68, adj. R^2 = .65$ ) were patriotism-nationalism, social criticism and the war outcome score. Participants who scored higher on the social criticism scale and/or higher on the war outcome scale were less likely to support war. Finally, the significant predictors of the affective factor ( $F(8, 93) = 22.12, p < .001, R^2 = .66, adj. R^2 = .63$ ) included the war outcome score and patriotism-nationalism. There was a trend toward social criticism ( $p = .08$ ). Participants who did not believe that the outcomes of war were negative and/or scored higher on the patriotism-nationalism scale had positive emotions about war.

TABLE 5  
STUDY 2 CORRELATIONS BETWEEN WAS FACTORS AND ALL PREDICTORS

Factor	Ethics	Support	Affect
Patriotism	.66**	.75**	.76**
Authoritarianism	.50**	.64**	.54**
Social Criticism	-.69**	-.74**	-.72**
Outcomes	-.67**	-.72**	-.67**
Gender	.29**	.16**	.08
Age	-.03	-.09	-.06
Religion	-.30**	-.39**	-.35**
Political Party	.03	-.08	-.11

Note: \*\* indicates correlation is significant at the 0.01 level

## GENERAL DISCUSSION

### Factors

The findings from Study 1 and Study 2 indicated that there are at least three factors that make up war attitudes: ethics of



TABLE 6

STUDY 1: RESULTS OF STANDARD MULTIPLE REGRESSION USING ALL PREDICTORS

Scale	Predictor	B	$\beta$	Sr <sup>2</sup> unique	Adj R <sup>2</sup>
Ethics					.57
	Patriotism	.18	.18	.01	
	Authoritarianism	.02	.02	.00	
	Social Criticism	-.28*	-.28	.02	
	Gender	6.76***	.23	.05	
	Religion	-.14	-.04	.00	
	Age	-.01	-.01	.00	
	Outcome Scale	-.35***	-.31	.04	
Support	Political Party	.28	.04	.00	
					.65
	Patriotism	.23*	.22	.01	
	Authoritarianism	.15	.13	.01	
	Social Criticism	-.26*	-.23	.02	
	Gender	3.27	.10	.01	
	Religion	-.26	-.07	.00	
	Age	-.03	-.03	.00	
Affect	Outcome Scale	-.39***	-.32	.04	
	Political Party	-.09	-.01	.00	
					.63
	Patriotism	.61***	.45	.06	
	Authoritarianism	-.03	-.02	.00	
	Social Criticism	-.28	-.19	.01	
	Gender	2.20	.05	.00	
	Religion	-.31	-.06	.00	
Age	-.01	-.01	.00		
Outcome Scale	-.43**	-.27	.03		
Political Party	.01	.00	.00		

Note: p&lt;.05 \*, p&lt;.01 \*\*, p&lt;.001 \*\*\*

war, support for war, and affect about war. Participants based their attitudes on whether war was ethically and morally acceptable (i.e., violation of human rights in another country), on certain events that would affect whether they supported war (i.e., if the United States is attacked first), and on the emotions associated with war such as fear, anxiety, and confusion. The emergence of an ethics/morality factor seems consistent with the concept of just war thinking (Charles, 2005). If the use of force does not seem justified due to morality concerns, then participants may be less likely to support war.

#### Reliability and Validity

The results of both studies indicated that the *War Attitude Scale* was reliable. The significant predictors of war attitudes in a college sample and in a community sample included patriotism-nationalism, authoritarianism, social criticism, gender, and a belief in war outcomes. The correlation between Time 1 and Time 2 in the test/retest sample was high, which also indicated the reliability of the *War Attitude Scale*.

Convergent validity was measured using the *War Attitude Scale* developed in the current research and the *Attitudes Toward War* scale developed by Stagner (1938). The two scales were significantly moderately correlated, as were Stagner's scale and the three WAS factors, which did indicate validity of the WAS.

#### Gender Differences

The results of the present study are in line with results of previous studies in regards to gender (Covell, 1996; Lester, 1994; Putney & Middleton, 1962; Schroeder & Gaier, 1993; Stagner, 1938; Stevenson, Roscoe & Kennedy, 1988); men were more likely than women to have positive war attitudes. The current studies have expanded upon past research on gender differences in war attitudes by finding factors that may explain these gender differences. What exactly is different about how men view war as opposed to how women view war? Men scored higher on the ethics (Study 1 and 2) and support factor (Study 2) than women. To reiterate, men were more likely to believe that war was ethical and were more likely to support war than women were. Additionally, men had more positive emotions about war than did women.

It is possible that women looked at war in terms of casualties and emotional consequences. Bendyna and Finucane (1996) found that sympathy for those suffering in war was a partial explanation for gender differences in war attitudes. Different stress models could also be an explanation for the gender differences found in this study. Aggression as a stress response is much more common for men than for women (Taylor et al., 2002). War might be a male defense strategy and not a female defense strategy.

#### Patriotism-nationalism and Authoritarianism

Patriotism-nationalism (Study 1 and 2) and authoritarianism (Study 1) were significant predictors of war attitudes. The relation between patriotism and positive war outcomes in creating positive war attitudes was seen after the events of September 11<sup>th</sup>. According to polls conducted by CBS news and USA Today, approval ratings for President Bush were at a high of 90% during the time period directly after September 11, 2001. As previously stated, an international crisis can strengthen patriotic attitudes and public approval for a president (Mueller, 1970). Participants who were more patriotic and nationalistic were more likely to have positive war attitudes. It is possible that participants who scored high in patriotism-nationalism believed that supporting the president, and therefore supporting war, was patriotic. Participants who scored high in authoritarianism might have believed that disobeying authority (in this case the government) is unacceptable and were, thus, more likely to have positive war attitudes. Another possible explanation is that participants who scored higher in authoritarianism were more likely to have positive war attitudes because war is a way of directing aggression toward out-group members.

#### Social Criticism

In contrast to participants who scored high in patriotism-nationalism and authoritarianism, those who were socially critical were more likely to question the government's choices and were less positive about war. Feldman (2003) theorized that individuals who are socially critical would reject the government's restriction of civil liberties unless they believed that a particular group was a threat to their lives or social freedoms. It would be interesting to investigate war attitudes in relation to prejudice toward out-group members,

authoritarianism and social criticism.

#### *Limitations and Future Directions*

This research has definite contributions to the field of war research. Further analyses should be conducted to assess the discriminant validity of the *War Attitude Scale*. The current research has found reliability and convergent validity of the WAS, but did not determine discriminant validity.

A further limitation to the current study was the fact that political party did not emerge as a significant predictor of war attitudes. It is our hypothesis that individuals completing the study were not fully aware of the party differences. It is also possible that participants identifying as Republicans might have had attitudes more similar to conservative Democrats and visa versa. Furthermore, individuals may have labeled themselves as Independent if they did not identify with either the Republican or Democratic Party without fully understanding what the Independent Party stands for. Future studies should utilize a more sophisticated measure of political party preference.

To be able to further generalize beyond the confines of the United States and war attitudes within the country, a possible future direction would be to conduct a cross-national study. It is possible that citizens in countries closer to the threat of war (i.e., countries in the Middle East) will have vastly different war attitudes than citizens further from the threat of war (i.e., Switzerland, and New Zealand). The Middle East has been a hotbed of war and internal turmoil. It is possible that the war attitudes of Middle Eastern people will be vastly different from those of, for example, New Zealand people who are geographically removed from and tend not to become involved in foreign wars. It is possible that a cross-cultural study would reveal different levels of war attitudes and possibly different predictor variables. We do not expect that the general structure of war attitudes would change cross-culturally.

The investigation of the war attitudes of special interest groups would also be an important future direction. Random samples of college populations or Internet users usually do not reflect the attitudes of people who may hold extreme positions. It is fairly obvious that members of military groups will hold opposing views when compared to peace activists. What is not obvious is the structure of these attitudes. It would be important to investigate whether the same war factors found in random samples will hold true for special interest groups.

It is clear that understanding attitudes toward war is extremely important for both the government and for those who object to the government's policies and agendas. Past scales that measure attitudes toward war are either outdated (Stagner, 1938) or are more suitable for a younger population (Roscoe, Stevenson, & Yacobazzi, 1988). The *War Attitude Scale* developed in these studies is an important study to allow the government or political research institutions to be able to fully understand the dimensions of citizens' war attitudes. War policy should not be implemented without the understanding of the desires and wishes of the people. The WAS is a first step in understanding citizens' political attitudes and

behaviors. This information could potentially be used to change attitudes. Perhaps, one of the most important implications of this research is the potential for future studies to use the *War Attitude Scale* to explore the various factors that coalesce to form war attitudes.

#### REFERENCES

- Allport, F.H. (1927, August). The psychology of nationalism: The nationalistic fallacy as a cause of war. *Harper's Monthly*, 291-301.
- Altemeyer, B. (1981). *Right-wing authoritarianism*. Winnipeg: University of Manitoba Press.
- Altemeyer, B. (1988). *Enemies of freedom: Understanding right-wing authoritarianism*. San Francisco: Jossey-Bass.
- Ås, Berit (1982). A materialistic view of men's and women's attitudes toward war. *Women's Studies Int.*, 5(3/4), 355-364.
- Baker, W.D., & Oneal, J.R. (2001). Patriotism or opinion leadership? The nature and origins of the "rally 'round the flag" effect. *Journal of Conflict Resolution*, 45(5), 661-687.
- Ballard, C., & Prine, R. (2002). Citizen perceptions of community policing: Comparing Internet and mail survey responses. *Social Science Computer Review*, 20, 485-493.
- Bendyna, M.E., & Finucane, T. (1996). Gender differences in public attitudes toward the Gulf War: A test of competing hypotheses. *Social Science Journal*, 33(1), 1-22.
- Buchanan, T. (2000). Online assessment: Desirable or dangerous? *Professional Psychology: Research and Practice*, 33, 148-154.
- Byrne, B.M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications and programming*. Mahwah, NJ: Lawrence Erlbaum Assoc.
- Charles, D.J. (2005). Presumption against war or presumption against injustice?: The just war tradition reconsidered. *Journal of Church and State*, 47(2), 335-369.
- Cohrs, J.C., & Moschner, B. (2002). Antiwar knowledge and generalized political attitudes as determinants of attitude toward the Kosovo War. *Peace and Conflict: Journal of Peace Psychology*, 8(2), 139-155.
- Conrad, H.S., & Sanford, R.N. (1944). Some specific war attitudes of college students. *The Journal of Psychology*, 17, 153-186.
- Covell, K. (1996). National and gender differences in adolescents' war attitudes. *International Journal of Behavioral Development*, 19 (4), 871-883.
- Doty, R.M., Winter, D.G., Peterson, B.E., & Kemmelmeyer, M. (1997). Authoritarianism and American students' attitudes about the Gulf War, 1990-1996. *Personality and Social Psychology Bulletin*, 23(11), 1133-1143.
- Droba, D.D. (1931). A scale of militarism-pacifism. *Journal of Educational Psychology*, 22, 96-111.
- Droba, D.D. (1934). Political parties and war attitudes. *Journal of Applied Social Psychology*, 28, 468-472.
- Epstein, J., Klinkenberg, W. D., Wiley, D., & McKinley, L. (2001). Insuring sample equivalence across Internet and paper-and-pencil assessments. *Computers in Human Behavior*, 17, 339-346.
- Feldman, S. (2003). Enforcing social conformity: A theory of authoritarianism. *Political Psychology*, 24(1), 41-74.
- Feshbach, S. (1990). Psychology, human violence, and the search for peace: Issues in science and social values. *Journal of Social Issues*, 46(1), 183-198.
- Giri, A.K. (1998). Social criticism, cultural creativity and the contemporary dialectics of transformations. *Dialectical Anthropology*, 23, 215-246.
- Granberg, D., & Corrigan, G. (1972). Authoritarianism, dogmatism and orientations toward the Vietnam War. *Sociometry*, 35(3), 468-476.
- Henry, J.D. (1984). Syndicated public opinion polls: Some thoughts for consideration. *Journal of Advertising Research*, 24(5), 1-5.
- Izzett, R.R. (1971). Authoritarianism and attitudes toward the Vietnam War as reflected in behavioral and self-report measures. *Journal of Personality and Social Psychology*, 17(2), 145-148.
- Jessor, R., & Jessor, S. (1991). Social criticism scale. In J.P. Robinson, P.R. Shaver, & L.S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (Vol. 1). Boston: Academic Press. (Original scale published 1977).
- Jones, V. (1942). The nature of changes in attitudes of college students toward war over an eleven-year period. *Journal of Educational Psychology*, 33(4), 481-494.

- Kosterman, R., & Feshbach, S. (1991). Patriotism-nationalism questionnaire. In J.P. Robinson, P.R. Shaver & L.S. Wrightsman. (Eds.), *Measures of political attitudes*. (pp.548-552). Boston: Academic Press. (Original scale published 1989)
- Lester, D. (1994). Factors affecting student attitudes toward war. *Journal of Social Psychology*, 134(4), 541- 543.
- Mead, G.H. (1929). National-mindedness and international mindedness. *International Journal of Ethics*, 39, 386-407.
- Mueller, J.E. (1970). Presidential popularity from Truman to Johnson. *American Political Science Review*, 64, 18-33.
- Meyerson, P., & Tryon, W.W. (2003). Validating Internet research: A test of the psychometric equivalence of Internet and in-person samples. *Behavior Research Methods, Instruments & Computers*, 35(4), 614-620.
- Nelson, L.L., & Milburn, T.W. (1999). Relationships between problem-solving competencies and militaristic attitudes: Implications for peace education. *Peace and Conflict: Journal of Peace Psychology*, 5, 149-168.
- Putney, S., & Middleton, R. (1962). Some factors associated with student acceptance or rejection of war. *American Sociological Review*, 27(5), 655-667.
- Roscoe, B., Stevenson, B., & Yacobozzi, B. (1988). Conventional warfare and the United States military involvement in Latin America: Early adolescents' views. *Adolescence*, 23, 357-372.
- Salgado, J.F., & Moscoso, S. (2003). Internet-based personality testing: Equivalence of measures and assessee's perceptions and reactions. *International Journal of Selection & Assessment*, 11, 194-205.
- Schmidt, W.C. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. *Behavioral Research Methods, Instruments, and Computer*, 29, 274-279.
- Schroeder, D.F., & Gaier, E.L. (1993). Middle adolescents' view of war and American military involvement in the Persian Gulf. *Adolescence*, 28(112), 950- 963.
- Smith, J.J. (1933). What one college thinks concerning war and peace. *Journal of Applied Psychology*, 17, 17-28.
- Stagner, R. (1938). Some factors related to attitude toward war. *Journal of Social Psychology*, 16, 131-142.
- Stevenson, B., Roscoe, B. & Kennedy, D. (1988). Perceptions of conventional war: Late adolescents' views. *Adolescence*, 23(91), 613-627.
- Taylor, S.E., Gruenewald, T.L., Updegraff, J.A., Lewis, B.P., Gurung, R.A.R., & Kellin, L.C. (2002). Sex differences in biobehavioral responses to threat: Reply to Geary and Flinn (2002). *Psychological Review*, 109(4), 751-753.
- Truell, A., Bartlett, J. E., & Alexander, M. W. (2002). Response rate, speed, and completeness: A comparison of Internet-based and mail surveys. *Behavior Research Methods, Instruments, and Computers*, 34(1), 46-49.