



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Is Gulf War Syndrome a Significant Health Issue the U.S. Government has Tried to Cover Up?

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A study of the Persian Gulf War Syndrome affords an excellent opportunity to create a unit that serves many purposes in the school where I teach Advanced Placement U.S. History. First, it is always useful for my students to perceive the content of a teaching unit in history as being relevant. Whereas a study of the American Revolution or the Civil War requires several intermediate steps, and often a great amount of creativity, to assure that perception, the recent nature of the Persian War guarantees its direct relevance. Indeed, since most of my students were born between 1978 and 1980, the Persian Gulf War of 1991 is the only American conflict with which they have a personal memory. No doubt that memory is highly positive due to the extensive and highly jingoistic nature of the media coverage.

Therefore, my second objective for this unit is to give my students an opportunity to examine pieces of evidence from the war and its subsequent medical effects, along with official governmental comments about these pieces of evidence, and to encourage them to form their own conclusions. They will be encouraged to compare these conclusions with the official governmental line and, through a switch-side debating activity, to defend both sides of the issue. This objective fits nicely with the stated purpose of the Connecticut State Department of Education's guidelines for curriculum in social studies to assist students to achieve high scores in the Interdisciplinary Assessment component of the Connecticut Academic Performance Test (CAPT). ¹ This objective also fits nicely with "The Big Six" steps in assisting students in increasing their information literacy as one of the core components in the nationwide Library Power initiative, which my school will be joining in the coming academic year, as the first district high school site:

1. Task definition (define the problem)
2. Information seeking (evaluate the different possible sources to determine priorities)
3. Location and access (find information within sources)
4. Use of information (extract the information from a source)
5. Synthesis (organize information from multiple sources and present the information)
6. Evaluation (judge the product).

A third objective for my unit is to assist my students in learning the nature of causality as it applies both to the study of history and epidemiology. First I will present causality to my students in a general manner, making use of exercises drawn from "Lesson 7: Cause and Effect" in the workbook *122 Thinking Skill Lessons and Exercises*, where a cause is presented as "something that produces an effect. An effect is something brought about by a cause. Many . . . [students] have difficulty in deciding what events caused or affected other events. For instance, if they bring home a D on a science test, they may say that the cause was a poorly written test. But actually it was their lack of studying for the test that caused the effect, or the D on their paper." ² My next step would be more specific. After presenting my students with thirty pieces of evidence drawn from broad and not necessarily reliable sources. (The unreliability of some of the sources is intentional, since in the debate format my students will use each side is open to cross examination by the other. I want to encourage my students to question the authority of the evidence they examine, not only for this unit but, by extension, in their lives as well.) I will ask them both to determine the relationship, if any, between, cause and effect, and to present their own conclusions both in writing and in a switch-side debate format, with another U.S. History class as judge. This activity will allow students an opportunity to exercise the following skills as outlined by the State Department of Education: "[to] identify an issue, recognize a point of view, identify the arguments of different sides of an issue, identify strong and weak arguments, support an argument with relevant information, [and] transfer oral arguments into writing" ³ and further reflected in the standards of the district: "Interdisciplinary Connections: Students will be able to understand the connections between History [sic] and the evolution of Science [sic]." ⁴

A fourth objective of this unit is interdisciplinary, to work within a team of teachers from the history and mathematics departments at the high school that will be exploring the Gulf War Syndrome, each in its own way, and each one preparing a curriculum unit that both connects with the others and stands on its own. This interdisciplinary unit will in turn will provide the core for a school-wide interdisciplinary exploration of the theme of environmental and occupational health. Specifically, another teacher of U.S. history, Toni Coughlin, will be examining the initial involvement of the United States in the war, while a math teacher, John Crotty, will be guiding his classes in an analysis of statistical data.

At Career High School, a small urban magnet school with a significant minority student population, we are in the forefront of several exciting initiatives. As we prepare to move to a new, larger facility in September 1997 we are rethinking our traditional uses of time, space and people, focusing more on student-centered learning and interdisciplinary curricular offerings.. (Indeed, the impetus for this seminar grew out of that particular intention.) As a regional magnet, we have the charge to increase our suburban student population to one-third of the total enrollment figure. As a model school, for both the Comer Project for Change in Education of the Yale Child Study Center School Development Program and of the Coalition of Essential Schools of the Annenberg Institute for School Reform of Brown University, we have the charge to demonstrate the wisdom and efficacy of creative teaching, including the use of electronic resources like the Internet and human resources like our partners at Yale.

In addition to the broader, school-wide and district-wide objectives just discussed, there are several additional cognitive objectives for this unit. They would include:

- (1) helping students to distinguish fact and opinion; and possibilities, probabilities and certainties (I would again make use of Barrens and Burgdorf's excellent workbook, this time emphasizing Lesson 8, pp. 81-92.)
- (2) guiding students in discussing the believability of what the U.S. government says,

- (3) doing a cost/benefit analysis of the winning of the war, including the listing of liabilities that include the hidden costs in human terms (and, by extension, helping students to generalize how such an analysis might be extended to other decisions that affect the environment or the health of large numbers of people),
- (4) generating a discussion of who actually benefits when the country goes to war.
- (5) engaging in a conversation with the students about the role of the United States in the post Cold War world, and
- (6) allowing students to see that medicine, especially environmental/occupational medicine, is not an exact science but is continuously evolving, and one that requires that type of critical thinking skills similar to those used in historical analysis.

Finally, there is the objective of incorporating into this unit the results of recent research on the pedagogical effectiveness of using properly constructed rubrics as proposed by Grant Wiggins and his research at Princeton. ⁵

My general plan of setting up the lessons, therefore, is as follows:

Week one:

Lecture, reading, and assignment : An introduction to the Persian Gulf War and reading of the radio script from Morning Edition, National Public Radio, "Authorities Deny Existence of Gulf War Syndrome" (to be continued as homework) (1 day)

Discussion : Presentation of arguments for the war, based on the article "Why the Gulf War Served the National Interest" ⁶ (1 day)

Discussion : Presentation of arguments against the war, based on the article "Why the Gulf War was Not in the National Interest" ⁷ (1 day)

Structured debate : In-class debate on which side was correct (1 day)

Writing : Writing assignment based on previous-day's debate (1 day)

Week two:

Lecture and activities : An introduction to the relationship of cause and effect (1 day)

Discussion : An introduction to the nature of the Gulf War Syndrome. (1 day)

Discussion and small group work : Creation of rubrics for subsequent in-class activity. (2 days)

Reading assignments individually and in small groups : Class is divided into eight teams of three students

each. Thirty specific pieces of evidence that have been gleaned from a variety of sources, Evidence A-Evidence DD (text of which follows) distributed to all students. (1 day)

Week three:

Reading assignments (homework) : Careful reading/analysis of pieces of evidence (5 days)

Individually and in small groups with teacher guidance : Analysis of these pieces of evidence for their veracity, consistency, possible intentions, and intended audiences (5 days)

Individually and in small groups with teacher guidance, making use of the Yale-New Haven Teacher Institute Center for Staff and Curricular Development : Finding more pieces of evidence on the Internet. (5 days, concurrent with above)

Week four:

Discussion : Why does a government say what it says? How liable is a government for indirect and/or peripheral war injuries its citizens incur? (1 day)

Discussion : Is something true just because someone says so? How you *prove* A causes B? (1 day)

Small group activity with teacher guidance : Four groups of three students each prepare cases in the affirmative, four in the negative on the following proposition: *Resolved, the Gulf War Syndrome Is A Significant Health Issue The United States Government Has Tried To Cover Up* (3 days)

Week five:

Small group activity with teacher guidance : The two halves switch sides and prepare their cases (3 days)

Structured debate : Small groups each debate each side in class. Other students in the class determine the two strongest teams (2 days).

Week six:

Structured debate : The two strongest three-student teams debate switch-side with Toni Coughlin's U.S. History class as judges (1 day)

Discussion : Class debriefing and recapitulation (1 day)

INTRODUCTION TO THE GULF WAR

Although the fighting in the Persian Gulf War ended in 1991, five years later the war is still not over. It drags on in the thousands of Gulf War veterans who believe they have something called Gulf War Syndrome. Do they? And if they do, is it one disease, a series of related diseases, or a collection of various unrelated ailments?

If, in fact, Desert War Syndrome is real, there are many serious questions that need to be addressed. For

example, what caused it? Could it be stress? Some medical authorities seem to think so. According to Ronald R. Blank, DD, the two-star commanding general at Walter Reed Medical Center in Washington, D.C., “there were several months of stress in isolated and austere conditions” with “unprecedented exposure to a variety of conditions. This was no four-day war.” ⁸

This possibility of stress as a cause for many of the symptoms is seconded by Gareth M. Green, MD, professor of environmental health at Harvard School of Public Health., who believes that stress “created perhaps a unique situation that could affect the way illness appears,” and who goes on to cite various immune, endocrine, neurological, and psychiatric effects of stress that can “complicate other medical diseases.” ⁹

There has been no dearth of creative theories among medical specialist to explain the possible causes of this possible disease. Typical of such theories, both to the anonymity of the author and the method of publication, is the recent suggestion by an unnamed immunologist on the Internet of the role vaccine adjuvants played in the illness:

“An immunologist, with experience in the field of epidemiology, toxicology, immunopathology and general pathology, who is currently working in the area of rheumatology and silicone-gel breast implants, presented the theory of ‘human adjuvant disease’ and its possible link to Persian Gulf War Veterans’ illnesses. ¹⁰

Whether caused by stress, by vaccine adjuvants, or by specific physical agents, still thousands of American veterans are suffering from a variety of symptoms. What can cure it? Is the government that sent the troops into the theater of operation responsible? If it is, can and should that responsibility be translated into money, and, if so, how much?

I need to raise these questions with my students and guide them in a discussion of the following three general questions:

1. Who benefited from the war? (In other words, why did we get into it in the first place?)
2. Was it worth it? (In other words, how much did it *really* cost? Can we as a society put a monetary figure of the suffering of thousands of our citizens?)
3. Was it wrong? (Is there such a thing as a “good war”? Was Iraq’s invasion of Kuwait, for example, substantially different from our own land grab in the Mexican-American War?)

If, in some ways the Persian Gulf War continues in the form of the Gulf War Syndrome, we need then, as a class and as a nation, to look briefly at the history of the situation. We know that the troops in the Desert Shield/Storm operation were exposed to several potentially harmful environmental hazards in the Persian Gulf, the most spectacular of which was no doubt the smoke from 605 oil well fires started by the retreating Iraqi army. In addition to smoke, United State troops were exposed to low levels of several pesticides. Furthermore, numerous petrochemical plants are located on the Northeastern coast of Saudi Arabia where many of our troops entered the theater of operation. Most combat troops passed through these port areas rapidly, but large numbers of support personnel were permanently stationed on the coast, a large percentage of whom were reservists. Can it be possible that exposure to various chemicals in these areas could explain a higher risk of reported illnesses among reservists compared to active duty personnel? On the other hand, there have

been no accounts of increased health problems among local workers or inhabitants of the cities around these petrochemical plants.

Several other factors could explain why it's been the reservists who have so often been the ones identified with unexplained illnesses: Perhaps during a period of military downsizing, where so many active duty personnel are concerned about their careers, there was a bias in the reporting of cases. Another reason could be that reservists tended to be older and possibly less physically resilient compared to active duty troops. And, finally, the stress theory again: Reserve personnel many have suffered increased stress because they had to leave civilian jobs and experienced greater disruption of their personal lives.

Another unique environmental hazard of the Persian Gulf War was exposure to depleted uranium (DU) munitions which are used for their enhanced armor penetrating ability. DU is a heavy metal which is less radioactive than natural uranium and evidently poses very little health hazard when external to the body. However, the impact of DU on armored targets or the presence of DU munitions in fires can result in increased exposure.

Finally, some troops may have been exposed to a number of other potential environmental hazards, including microwaves; chemical-agent-resistant-coating (CARC paint) fumes containing isocyanate; various petroleum products like JP4 fuel used in tent heaters and on the ground to keep the sand from blowing; decontamination solution, which contains propylene glycol, monomethyl ether, and ethylene glycol; and airborne allergens irritants.

RADIO SCRIPT FROM MORNING EDITION, NATIONAL PUBLIC RADIO, JANUARY 19, 1996

BOB EDWARDS [BE]: Five years after the Persian Gulf War scientists and medical authorities still say there is inconclusive evidence supporting the existence of a disease afflicting tens of thousands of military personnel.

This is Morning Edition. I'm Bob Edwards. Fighting in the Persian Gulf War lasted only six weeks, but, for some, the consequences persist. Of the 700,000 American men and women who served in the Gulf, tens of thousands subsequently fell ill. Though it's not surprising to have a certain number of illnesses among a population of that size, some veterans suspect something more is going on, that there is a disease caused by service in the Gulf. But, five years after the war scientists still can't say whether Gulf Syndrome exists. N[ational] P[ublic] R[adio]'s Richard Harris reports.

RICHARD HARRIS [RH]: During the Gulf War Barry Kaplan was an Army captain responsible for keeping helicopters in fighting form. He says his duties took him across searing sand, through Shiite refugee camps, over Republican Guard strongholds and past the rolling smoke plumes from the oil well fires. But his tour of duty came to an abrupt halt when he suddenly got sick on May 8, 1991, two months after the shooting had ended.

BARRY KAPLAN [BK]: I was on an armed convoy taking materials from Safwan Iraq area down into Saudi Arabia when it really manifested itself in some really extreme bizarre pain, stomach pains. I made it into Kinghi Military City where I was shoveled into the ER.

RH: Kaplan says that doctors in Saudi Arabia pumped him full of antibiotics and sent him home to a base in

Frankfurt, Germany, but Kaplan says he got worse, not better.

BK: I started to have excessive gastrointestinal problems. I was getting ringworm-like rashes all over my body, night sweats, profuse, profuse, almost malaria-like night sweats from my knee down.

RH: He says he had chest pains that sent him to the hospital. His gums bled and he lost vision in his left eye for five minutes. Last year doctors concluded Kaplan was 100 percent disabled, so he retired to Southington, Connecticut, after ten years in the Army.

Kaplan has become a symbol of Gulf Syndrome. He has visited the White House and testified before a presidential panel investigating illnesses among Gulf War vets, but Dr. Robert Roswell, executive director of the government Persian Gulf War Coordinating Board, says Gulf War Syndrome, as such, may not in fact exist.

ROBERT ROSWELL [RR]: There is no strong evidence suggesting a single unique Persian Gulf Syndrome. That's not to say that Persian Gulf veterans are not ill. They, in fact, suffer from a wide variety of medical problems. But, so far to date, we have found nothing suggestive of a unique single cause or syndrome that would explain the illnesses experienced by Persian Gulf veterans.

RH: This point of view is supported by prominent health experts outside the military, including expert committees convened by the National Institutes of Health and the National Academy of Science. Nevertheless, the government has moved quickly to give these veterans the benefit of the doubt. Veterans don't have to wait for government doctors to figure out what's wrong with them before getting compensation. Roswell says they're entitled to benefits if they fell ill within two years of serving in the Gulf War.

RR: New legislation was passed—in fact, landmark legislation—that would allow the Department of Veterans Affairs to provide disability compensation to not only the usual and ordinary types of illnesses and injuries and disabilities associated with military service, and service during a combat situation, but also in response to the unexplained illnesses being reported by Persian Gulf veterans.

RH: Many people expected this legislation would open the door to what appeared to be thousands of veterans who are sick due to unknown exposures in the Gulf, but it hasn't worked out that way. So far, of 7300 applications processed, only about 350 veterans have qualified to receive compensation for undiagnosed illnesses. Again, Robert Roswell.

RR: What we find is that many people who have filed for disability compensation either didn't have the onset of their symptoms within the required two-year period, the illness wasn't of sufficient degree to cause any disability, or the disability was the result of a diagnosed recognizable illness, and in each of those three cases it would then understandably not qualify for disability compensation under the new specific piece of legislation.

RH: Veterans' groups say this experience shows the rules are still too strict, but others see the statistics as a sign that there actually aren't all that many Gulf War veterans out there with unexplained disabilities. Barry Kaplan didn't need the special legislation because he had so many ailments the V.A. had no trouble deciding that he was 100 percent disabled, but, when it came time for the Army to decide what made Kaplan sick, if not Gulf War Syndrome, Kaplan wasn't all that happy with the answer.

BK: Even though I have diagnosis of chronic myocarditis, gastritis, esophageal dysmotility and esophagitis, chemical hepatitis, along with Q-fever, and neurological issues that have never been fully investigated, they

went with a psychiatric diagnosis versus lab results, and that has basically infuriated my wife and I.

RH: Officially, Kaplan has Somatoform Disorder. He's not faking illness, but, according to this diagnosis, there is no physical condition that can fully account for his symptoms. In fact, the Army's survey of 10,000 ill Gulf War veterans found 37 percent had a psychiatric diagnosis. But, to many veterans it's hardly satisfying to explain many cases of Gulf War Syndrome as a psychological reaction to the battlefield, particularly when there are many questions as yet unanswered. The list of what is known isn't all that long. Here again is Persian Gulf Coordinating executive Robert Roswell.

RR: We now know that the overall death rate in Persian Gulf War veterans in the five years that have elapsed since the cessation of hostilities is not increased above what we would expect to see in a military age population. We know, based on very large numbers of studies, that the overall rate of birth defects in children born to Persian Gulf veterans is not increased above what we would expect to see in this military age population. We know that while there are a very large number of individuals who have some type of medical problem, almost 10 percent of those who served in the Persian Gulf, have experienced some type of medical problem, that the overwhelming majority of these medical problems, these illnesses, are the usual and ordinary types of problems of medical illnesses that we would expect to see in this age population.

RH: What Rosewell still can't say five years after the Gulf War is whether Persian Gulf veterans are more likely to have these illnesses than people of comparable age. Roswell can't say whether there's an increase of certain rare birth defects, even though the overall rate in active duty personnel isn't up, and researchers haven't been able to dismiss completely any of the theories about what could have caused excessive disease in the Gulf.

Those theories include reactions to unapproved drugs, delayed reaction to chemical or biological warfare agents, or smoke from the oil well fires. Those studies, and dozens more, are underway right now, but Matt Paglusi, at the American Legion, say the wait for answers is frustrating.

MATT PAGLUSI [MP]: If you're a veteran who has a child with birth defects, whether or not your service in the Gulf was tied to these birth defects won't be scientifically determined perhaps until 1999. In the meantime, you've got a child who's severely disabled, who may not survive until 1999, and the only explanation you have is: 'After service in the Gulf you had a child with a birth defect,' and yet it's taken the government several years to get going with these studies, and that's shameful.

RH: Other organizations have more charitable things to say about the government's ongoing research program. The National Academy of Science's Institute of Medicine has mostly praise for the Army's Gulf War program, and the medically retired Army officer Barry Kaplan says the government has clearly turned over a new leaf since the days of Vietnam.

BK: I think that the Gulf War vets have been taken care of pretty well in timeliness of addressing the issues. Now the issues may be clouded, but things are moving in the right direction.

RH: And as long as they keep heading that way, scientists should have many more definitive answers in the next few years. This is Richard Harris in Washington. ¹¹

RUBRIC AND EVIDENCE FOR DEBATE ACTIVITY

What follows for the next several pages is a listing of the thirty pieces of evidence I will present to my students for them to sift through and use as a basis for preparing their arguments for the switch-side debate. To guide them through this activity, and to assist Toni Coughlin’s class in its judging of the debate, I have designed the following five-level rubric based on the California Assessment Program Scoring Guide for History and Social Science, keeping in mind that the goal of such a rubric is designed not only for evaluation—especially students’ self-evaluation—but also understanding. After all, “the absence for a criterion for an outcome, set in advance, makes understanding doubtful and evaluation impossible.”¹²

Rubric and Judging Guide for Debate Activity

Level One: Minimal Achievement

Students simply repeat one or two fact without being accurate. Students deal only briefly and vaguely, if at all, with the concepts of cause of effect. Students show little or no historical knowledge of the Persian Gulf War. Students rely entirely on the information that has been provided.

Level Two: Rudimentary Achievement

Students provide only basic facts with only some degree of accuracy. Students show some understanding of the concept of cause and effect. Students show a limited historical knowledge of the Persian Gulf War. Students rely primarily on the information that has been provided.

Level Three: Commendable Achievement

Students relate only the major facts under discussion with a fair degree of accuracy. Students show a good understanding of the concept of cause and effect.. Students show an adequate historical knowledge of the Persian Gulf War. Students make use of previous historical knowledge with a far degree of accuracy.

Level Four: Superior Achievement

Students offer accurate analysis of the documents provided. Students show an excellent understanding of the concept of cause and effect. Students show a thorough historical knowledge of the Persian Gulf War. Students make use of previous historical knowledge with a strong degree of accuracy.

Level Five: Exceptional Achievement

Students offer accurate analysis of the document provided and others they have found on their own. (Note: Toni Coughlin’s class, which will be sitting as judges in this debate, will have been provided ahead of time with the thirty pieces of evidence.) Students show an excellent understand of the concept of cause and effect both in history and in epidemiology. Students show a thorough knowledge of both the Persian Gulf War and relate that knowledge to other historical events. Students extensively use previous historical knowledge to provide an in-depth understanding of the issue being discussed and possible future situations.

Evidence

EVIDENCE A: “Specialist First Class Dean Lundholm, of the National Guard’s 649th Military Police Company,

was assigned to guard duty at the Hafar Al Batin POW camp near the Iraq-Kuwait border. He was in the shower when a Scud landed. Amid the wail of activated chemical warfare alarms, he dashed naked, holding his breath, through the open air to where his protective gear was stored. Soon after, he fell into a three-day coma. Now he is diagnosed as having Gulf War Syndrome.”¹³

EVIDENCE B: “The veterans we interviewed talked about alarms sounding continuously during war, and in fact some units had complained about the alarms sounding so much that they received instructions to take the batteries out or to disable them.”¹⁴

EVIDENCE C: “These Department of Defense explanations are inconsistent with the facts as related by the soldiers who were present, and with official government documents prepared by those who were present and with experts who have examined the facts. . . .To my mind, there is no more serious crime than an official military cover-up of facts that could prevent more effective diagnosis and treatment of sick U.S. veterans.”¹⁵

EVIDENCE D: “Brigadier General Ronald R. Blanck, M.C., U.S.A., commander of the Walter Reed Army Medical Center, Washington, D.C. . . .discounts Reigle’s report as ‘almost entirely based on interviews. It has absolutely no basis in any science whatsoever . . . adding that scientists and clinicians ‘trying to look for causes have not found it of very much use.’ “¹⁶

EVIDENCE E: “Charles Jackson, M.D., Environmental Physician at the VA Hospital in Tuskegee, Alabama, described one patient with classic Gulf War Syndrome symptoms and noted that he was a member of Construction Battalion 24 which was stationed at Al Jubayl in the Gulf: “We have given him the diagnosis of Gulf War Syndrome and Chemical-Biological warfare exposure. He had none of these symptoms prior to the Gulf.’ “¹⁷

EVIDENCE F: “Corporal Richard Turnbull [an 18-year veteran] had been based in Dhahran, Saudi Arabia, during the Gulf War, and was present on January 20, 1991, during an Iraqi Scud missile attack. ‘Within seconds of the warhead landing, every chemical-agent monitoring device in the area was blasting the alarm,’ he said. “We were put into the highest alert for twenty minutes, and then we were told it was a false alarm caused by the fuel from aircraft taking off.’ “¹⁸

EVIDENCE G: “By the time of the invasion of Kuwait, the Pentagon knew Iraq had developed CBW [chemical and biological warfare] weapons and that its biological warfare program was the most advanced in the Arab world. Large-scale production of these agents began in 1989 at four facilities near Baghdad, and Iraq had developed delivery systems, including aerial bombs, artillery, rockets, and surface-to-surface missiles.”¹⁹

EVIDENCE H: “Documents released to the Gulf War Veterans of New England [as part of the Freedom of Information Act, twenty of which I will use with the students] this week confirmed dozens of chemical exposure incidents in the Persian Gulf War.”²⁰

EVIDENCE I: “Never has a public been so well served in terms of information.”²¹

EVIDENCE J: “. . . according to the Gospel and Catholic social teaching, attempts to resolve the Persian Gulf crisis militarily are immoral. We especially condemn the decision by the United States to launch air attacks against military targets in Baghdad and other civilian areas, and we remind the U.S. government that putting civilians at risk cannot be tolerated. . . . We have unleashed forces for destruction and hatred which we cannot begin to imagine. . . . This war is an affront to all humanity, especially the poor. It is an assault on the created

order and cries to God for justice.”²²

EVIDENCE K: [CNN News reporter Peter] Arnett was “helpful to the government of Iraq and harmful to the United States. He reported hearsay evidence . . . and did little to investigate Iraqi claims.”²³

EVIDENCE L: “Why did a majority of the people living in the central part of North America think it in their interest to send half a million soldiers 6,000 miles away to the Persian Gulf? The simplest answer is one word: oil. To quote one of the better placards at a peace march, “If Kuwait exported broccoli [which President George Bush said publicly he hated], we wouldn’t be there now.”²⁴

EVIDENCE M: “The Gulf crisis showed that the declinists underestimated U.S. strength in both hard military and soft coalition-building power resources.”²⁵

EVIDENCE N: “. . . unclassified satellite imagery confirms that smoke from coalition bombings drifted directly over U.S. troops. It also says that troops were sometimes told by commanders to ignore frequent chemical alarms, and so failed to take proper precautions, occasionally even turning alarms off.”²⁶

EVIDENCE O: “Most Persian Gulf veterans who have complained of health problems after service have been successfully diagnosed at their local VA medical centre.”²⁷

EVIDENCE P: “We consider it quite likely that many of the Desert Storm veterans suffering from the symptoms described in the [National Institutes of Health Technology Assessment Workshop] report may have been infected with a microorganism, possibly an aggressive pathogenic mycoplasma. This type of infection can produce chronic symptoms long after exposure.”²⁸

EVIDENCE Q: “An 18-member IOM [Institute of Medicine] committee says that the lack of coordination and oversight that they found was understandable early in the study of possible health effects.

“Following briefings on Gulf War operations and military documents about chemical and biological warfare (and, for one member, a classified briefing on Iraqi chemical warfare capabilities and plans), the committee expressed the belief that ‘the illnesses that have been reported are not the result of chemical, biological, or toxin warfare, or accidental exposures to stored weapons or research material.’ ”²⁹

EVIDENCE R: “In fact, the National Defense Medical Centre in Ottawa refuses to recognize Gulf War syndrome as an illness.

“Fred Mifflin, parliamentary secretary to Defence Minister David Collenette, responded that the veterans had been defence department doctors and now had ‘no difficulty whatsoever.’ ”³⁰

EVIDENCE S: “In fact, theories abound as to the precise cause of the veterans’ problems. Some experts says that they could have been caused by the smoke from burning oil fields in Kuwait; exposure to depleted uranium used in Iraq. But the fact that those claiming ailments were based in different countries spread over a wide area has led many veterans to single out the distribution of anti-paralysis drug, known as pyridostigmine bromide, to Gulf War troops. The drug, which was used as a safeguard against the possible Iraqi use of chemical weapons, had not been approved for that purpose before the war. Earlier this year the U.S. Senate veteran-affairs committee denounced the military’s use of the drug. Observed committee chairman Jay Rockefeller; ‘Soldiers were made sick by a drug they were forced to keep taking.’ ”³¹

EVIDENCE T: "There were 35 soldiers in vehicles struck by depleted uranium [which is used for its enhanced armor penetrating ability] during friendly fire incidents (22 who may retain DU [depleted uranium] fragments). Approximately 32 other soldiers potentially were exposed to DU while fighting a fire in a munitions storage area and from servicing vehicles hit by DU munitions; but, these troops when tested have not had elevated urine uranium levels. Troops directly exposed to DU munitions are being closely followed by VA [the Veterans Administration] and DoD [the Department of Defense] and have not had problems with unexplained illnesses."

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EVIDENCE U: "No cases of acute pesticide poisoning are known to have occurred during Operations Desert Shield/Storm." 33

EVIDENCE V: "At 3 A.M. on January 19, 1991, Petty Officer Sterling Symms of the Naval Reserve Construction Battalion in Saudi Arabia awakened to a "real bad explosion" overhead. Alarms went off and everybody started running toward their bunkers, Symms said. A strong smell of ammonia pervaded the air. Symms said his eyes burned and his skin was stinging before he could don protective gear. Since that time, he has experience fatigue, sore joints, running nose, a chronic severe rash, open sores, and strep infections." 34

EVIDENCE W: Former U.S. Army Sergeant Randall L. Vallee served in the Persian Gulf as an advanced scout. . . . 'I was in numerous Scud missile attacks when I was in Dhahran . . . It seemed like every time I was back there we'd come under fire.'

"Vallee has been afflicted by at least a half dozen serious medical conditions that started shortly after the Scud attacks. He had been in 'perfect health' before his Gulf War service." 35

EVIDENCE X: "'Within seconds of the warhead landing on January 20 [1991], every chemical-agent monitoring device in the area was blasting the alarm. We were out into the highest alert for twenty minutes,' says [British Gulf War veteran Richard] Turnball, 'and we were told it was a false alarm caused by the fuel from aircraft taking off.'

"Before he went to war, Turnball said, he was in top condition, worked out every day, and was an avid scuba diver. Since his return, he has had twenty-four separate chest infections, and he has been forced to give up scuba diving because he 'can't take the pressure below a few feet.' Turnball can no longer run or swim or even take long walks. He said he has been put on steroids and uses two inhalers to help ease serious respiratory complications." 36

EVIDENCE Y: "Dr. Vivian Lane has never been to the Persian Gulf and is not a wife or mother of a Gulf War vet. The forty-three-year-old former squadron leader and former chief medical officer at the Royal Air Force base in Stafford, England, said she became seriously ill after treating a half dozen 'very sick' British soldiers upon their return from the Persian Gulf. Dr. Lane says she was forced to move in with her elderly parents after she could no longer care for herself. Her parents, now in their eighties, are sick and suffering from lesions 'very similar' to the ones she is suffering from, she says. 'Nobody in this country can tell us why or what they are.'

"From December 1990 through June 1991 Dr. Lane treated at least six veterans who had the syndrome. Since that time, the aviation medical specialist, a former athlete, has been in great pain. She remembers waking up at four o'clock in the morning 'with a terrific, excruciating crushing type of chest pain and abdominal pain. When I got to the toilet, I didn't know whether to sit on it or stand over it. It just got worse from there. I managed somehow to get myself down to the medical center on base. All I remember was the excruciating

chest pains. Next thing I know, I'm in intensive care. My parents had been brought to my bedside because everyone thought I was going to die. They didn't know what was wrong with me.' " 37

EVIDENCE Z

"I think it would be foolish to concentrate only on trying to find a single syndrome or unique illness. We need to look more broadly at whether there are any other medical illnesses that might be occurring at an unexpectedly high frequency. So far we have not identified that 38

EVIDENCE AA

"Senator Donald Riegle, a Michigan Democrat, suggested the mystery illness was caused by accidental bombing of Baghdad chemical war weapon sites during the allied war that began five years ago.

Riegle said traces of chemical war agents released by the allied bombing might have drifted over U.D. troops, causing the Gulf War syndrome. The Pentagon discounted the theory, saying an explosion of chemical war agents at Baghdad powerful enough to drift more than 500 miles over U.S. troops would have killed thousands of Baghdad residents. 39

EVIDENCE BB

"The new Institute of Medicine report released this month [January 1996] suggested combat stress might have caused some of the illnesses. It said 37 percent of the first 10,200 soldiers examined had some psychiatric condition, most commonly depression or post-traumatic distress syndrome." 40

EVIDENCE CC

"This independent Advisory Committee will help ensure that we are doing everything possible to determine the caused of the illnesses being reported by Gulf War veterans and to provide effective medical care to those who are well." 41

EVIDENCE DD

"After five years of examining more than 62,000 Gulf War veterans, U.S. officials say there is no clinical evidence the 1991 conflict caused a mysterious new medical syndrome. 42

CONCLUSION

In conclusion, then, we have seen how a study of the Persian Gulf War syndrome has afforded an excellent opportunity to create a unit that serves many purposes: It has been an opportunity for students to study a war (and its aftermath) that is relevant to them because of its recent nature. It has given students an opportunity to examine pieces of evidence from the war and its subsequent medical effect, along with comments from government officials and critics, in order to encourage them to form their own conclusions. Furthermore, the process of preparing for and engaging in a debate has enabled my students to communicate their findings persuasively, in front of an audience of peers. Finally, they themselves served as peer evaluators by serving as a jury for a mock trial presented by another history class.

NOTES

1. Connecticut State Department of Education, "Connecticut Mastery Test Statewide Test Program," May 15, 1996, p.46.
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3. Connecticut State Department of Education, *op. cit.* , p. 46
4. Diane Garber, "New Haven Public Schools Curriculum Framework Document: Vision Statements and Standards," April 1996, p. 18.
5. The Center on Learning, Assessment, and School Structure, 546 The Great Road, Princeton, New Jersey 08540.
- 6.. Joseph S. Nye, Jr., "Why the Gulf War Served the National Interest" in *The Atlantic Monthly* , July 1991.
7. Christopher Lane, "Why the Gulf War Was Not in the National Interest" in *The Atlantic Monthly* , July 1991.
8. Paul Cotton, "Medical News and Perspectives" in *The Journal of the American Association* , May 25, 1994, p. 1558.
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10. "Report of Information" in the *Persian Gulf War Veterans' Illnesses Investigation Team* , March 1996, p. 1, <http://www.dtic.dla.mil/gulflink/finalrpt.thmi>.
11. Barbara Bradley, Joyce Davis, and Robb Stein, editors, Morning Edition, National Public Radio, January 19. 1996
12. *A Course in Miracles* , 2nd edition, Mill Valley, CA: Foundation for Inner Peace, 1993, Text, p. 366.
13. Dennis Bernstein, "Gulf War Syndrome Covered Up: Chemical and Biological Agents Exposed," "Covert Action Quarterly," April 3, 1996, p.1, <http://mediafilter.org/MFF/CAQ/caq53.gws.htm>.
14. James J. Tuite III, investigator for the Senate Banking Committee.
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16. Paul Cotton, "Medical News and Perspectives" in *The Journal of the American Medical Association* , August 3, 1994, p. 341.
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18. Bernstein, *op cit.* , pp. 4-5.
19. Bernstein, *op cit.* , p. 7.
20. "New Documents Prove Chemical Exposures in Kuwait" in *The Gulf Vet: The Newsletter of the Gulf War Veterans of New England*, vol.2, no. 5, May 25, 1995, p. 1 .
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22. Pax Christi [a Catholic peace organization] in the Wilkes-Barre (PA) *Times-Leader* .
23. Sen. Alan Simpson (Rep., CA) Letter to the editor *The New York Times* , as quoted in Henry Smith, ed., *The Media and the Gulf War* (Washington: Foreign Policy Institute of the School of Advanced International Studies, Johns Hopkins University/Seven Locks Press, 1992), p. 346.
24. Nye, p. 54.
25. Nye, p.64.

26. Cotton, p. 341.
27. Kenneth W. Kizer, "The Health of Persian Gulf Veterans" in *The Journal of the American Medical Association* , June 21, 1995, p. 1817.
28. Garth L. Nicholson, Nancy L. Rosenberg-Nicholson and Gareth M. Green, *The Journal of the American Medical Association* , February 22, 1995, p. 618.
29. Paul Gunby, "Medical News and perspectives" in *The Journal of the American Medical Association* , February 8, 1995, p. 444.
30. Luke Fisher, "Sick Soldiers: Canadian Gulf War Veterans Demand Action" in *MacLean's* , October 10, 1994, p. 14.
31. Fisher, p. 15.
32. "Environmental Hazards," in *Desert Storm Veterans: A Search for Causes, Treatment, and Cooperation* , May 17, 1996.
33. *Ibid.*
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35. Bernstein and Kelley, pp. 30-1.
36. Bernstein and Kelley, p. 31.
37. Bernstein and Kelley, p. 32.
38. Dr. Frances Murphy, Director of the Department of Veterans Affairs' Persian Gulf Clinical Program, interviewed by Reuter News Service, January 8, 1996.
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BIBLIOGRAPHY FOR TEACHERS

1. Donald L. Barnes and Arlene Burgdorf, *122 Thinking Skill Lessons and Exercises*, Portland, Me.: J. Weston Walch, 1987, pp. 70-81.

Highly readily, written for teachers of high school students of all ability levels. Thoughtful exercises, for the most part, with good explanatory introductions to each chapter.

2. Dennis Bernstein, "Gulf War Syndrome Covered Up: Chemical and Biological Agents Exposed," *Covert Action Quarterly*, April 3, 1996, p.1, <http://mediafilter.org/MFF/CAQ/caq53.gws.htm>.

Written in an easy, popular style. Takes only one viewpoint, but supports it fully.

3. Barbara Bradley, Joyce Davis, and Robb Stein, editors, Morning Edition, National Public Radio, January 19, 1996.

A radio transcript, word-for-word. A good exercise for students to see the script of something they would only otherwise hear. A study of this script might well lead to other lessons involving scripts, perhaps of TV news, documentary, or even dramatic shows. Helps students see the process behind a familiar product.

4. The Center on Learning, Assessment, and School Structure, 546 The Great Road, Princeton, New Jersey 08540.

An excellent resource for teachers interested in the creation of rubrics.

5. Connecticut State Department of Education, "Connecticut Mastery Test Statewide Test Program," May 15, 1996, p.46.

A must reading for all educators in Connecticut who care about their students' performance on the statewide standardized tests.

6. Christopher Lane, "Why the Gulf War Was Not in the National Interest" in *The Atlantic Monthly*, July 1991.

7. Joseph S. Nye, Jr., "Why the Gulf War Served the National Interest" in *The Atlantic Monthly*, July 1991.

A companion piece to the selection above. Excellent for preparing students for switch-side debating or analysis of equally-plausible, but opposed viewpoints.

READING LIST FOR STUDENTS

1. Dennis Bernstein, "Gulf War Syndrome Covered Up: Chemical and Biological Agents Exposed," "Covert Action Quarterly," April 3, 1996, p.1, <http://mediafilter.org/MFF/CAQ/caq53.gws.htm>.

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MATERIALS FOR STUDENTS USE

Access to the Internet, to be able to do the research necessary to support this unit.

<https://teachersinstitute.yale.edu>

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