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Information for contributors appears on pages 35–37 of the 4 January 1991 issue. Editorial correspondence, including requests for permission to reprint and reprint orders, should be sent to 1333 H Street, NW, Washington, DC 20005. Telephone: 202-326-6500. **Advertising correspondence** should be sent to Tenth Floor, 1515 Broadway, New York, NY 10036. Telephone 212-730-1050 or WU Telex 968082 SCHERAGO, or FAX 212-382-3725. **Subscription/Member Benefits Questions:** 202-326-6417. **Science:** 202-326-6500. **Other AAAS Programs:** 202-326-6400.

Science and Peace

The Gulf War is largely over, and science and technology played a major role in its speedy conclusion. The very one-sidedness of the conflict saved lives, not only among the coalition forces, but also among the enemy forces and the civilian population. Any war is a tragedy, and it is worth considering now how science can contribute to peace.

One of the first contributions can be the scientific method. In science, we go from theory to experiment to theory to experiment, realizing always that the experimental result correctly interpreted is the ultimate decider. In this war, the body bags were miraculously few, but the ego bags, containing the contents of the smashed reputations of some former military experts, columnists, and politicians, dotted the landscape in horrifying numbers. In science, progress is built by using new facts to advance new thinking without excessive time being spent in defending old theories or reliving past errors. Thus, science could contribute its methodology, in which new theories are based on current experimental facts.

Two overwhelming experimental conclusions emerged from the Gulf War: (i) scientific and technological superiority are vital and (ii) a relatively small nation can purchase the technology to make itself an overpowering bully to other small nations. Iraq, with approximately one tenth the population and one one-hundredth the gross national product of the United States, spent 42% of its gross national product on the military (compared to 6.7% here). In fact, if one superpower had not had the technology and the will to oppose it, Iraq probably would by now have annexed both Kuwait and Saudi Arabia and thus dominated the oil supplies of the world. Mobility of armaments, and the experts to assemble them, allow a relatively small nation to sustain a war machine without an enormous infrastructure. Iraq is tamed for the moment, but others, easily named, could take its place in the future.

Some critics of the war implied that the effort would be wasted if a plan did not emerge in which all participants in the Middle East ended up loving each other and living in peace, but we cannot wait until all the peoples of the world are friendly toward or even respect each other. It is racism of the worst kind for Westerners to assume that one person can speak for all Arabs, any more than one individual speaks for all Caucasians or all Asians. Middle East wars are not different from European wars, Asian wars, and North American wars. Certainly, attempts to provide a more just world and close the gap between rich and poor will remove some of the inflammatory sources of nationalism and demagoguery. But our weapons are too terrible to allow us to wait until educational and economic progress eliminate international strife.

One step that needs to be taken quickly is to face the unpleasant fact that pouring arms into volatile regions is an invitation to disaster. Today's friends have been yesterday's adversaries and may be tomorrow's enemies. Therefore, developed nations must realize that the urge to make money selling arms is counterproductive in the long run. Unilateral abstention by any one country has little value. Regional arms restraints will have to be agreed upon in concert and carried out with self-sacrifice by all.

Regional controls would have more chance of success if they were coupled with a mechanism to make weapon purchases less attractive. In that, science can be helpful. Many modern weapons fall in categories that can reveal the intentions of the purchasers, that is, those for police action at home versus those for aggression abroad. Thus, the world community could be warned well in advance if a nation started to stockpile the weapons for expansionist war. Moreover, satellites can detect mobilization of forces. What is needed, therefore, is the will of significant numbers of developed nations to declare that they will resist aggression. Knowledge that a future coalition would act as it did in the case of Iraq might expose the futility of arms purchases and serve as a deterrent.

There are many conclusions of a technological sort that will come from the weapons evaluations and detailed analysis of this war. But the overwhelming scientific fact of the Gulf War is clear: a similar action by a successor to Iraq 10 years from now will be far more threatening to the entire globe. This may be a strategic moment of history, in which the threat is obvious to all, and the means to contain it are available. Giving up the temptation to make money by selling arms, and being willing to commit to a future concerted action, may be painful today, but it would save much money and many lives in the future.

—DANIEL E. KOSHLAND, JR.