Atlanta, Georgia, then traveled throughout Europe with progressive Christian organizations.[2] In March 1962, Harvey, Knopp, Naeve, and Scott King traveled to Geneva, Switzerland, for a nuclear disarmament conference. After the conference, Harvey drew Naeve and Knopp to her Civil Rights work in Jackson, Mississippi. In 1964, Harvey's Womanpower Unlimited became an honorary sponsor of Reynolds' World Peace Study Mission (Morris 2015, 109), and the WPSM's southern team traveled to Spelman College and other Black churches and schools.

These relationships led WPSM coordinators Knopp, Naeve, and Swann to Yuri Kochiyama. During WWII, Kochiyama was interned for "five months in the horse stables of the Santa Anita 'assembly center'" and incarcerated in Jerome, Arkansas (Fujino 2005, 59). In 1946, she moved to New York City where her Midtown apartment became the center of a vibrant, interracial community of Japanese Americans, Chinese, Black, Indian, Filipino, and white families (Kochiyama 2004, 43). In 1955, Kochiyama interpreted for the ideologically fraught "Hiroshima Maidens Project," which provided reconstructive surgery to young female Hiroshima *hibakusha* (Kochiyama 2004, 41–42; Miyamoto 2015). There she encountered CNVA member Albert Bigelow, whose family hosted one of the women (Naeve 1964, 131). In 1961, Kochiyama invited James Peck to speak at her Harlem apartment (Kochiyama 2004, 48). Peck, a CNVA Golden Rule crew member, was arrested with Bigelow in 1958 and joined Bigelow in 1961 as a Freedom Rider. Through Peck, Kochiyama learned of the Harlem Congress of Racial Equality, where she became friends with Malcom X in 1963. (Kochiyama 2004, 49). Aware of Kochiyama's connection to Malcolm X, Knopp contacted her with the *hibakushas'* request to meet.

Kochiyama would later view Malcolm X's June 1964 meeting with Hamai and Mitsui as evidence of his turn to a revolutionary internationalism (Griffith and Quan 2010). Yet, looking beyond the meeting to recover accounts of women's social and cultural labor—such as those of Harvey, Kochiyama, Scott King, and their white counterparts, Knopp, Naeve, Reynolds and Swann—during the Civil Rights and early antinuclear movements (Considine 2023) can also point scholars and activists toward a more just, caring, and transformative nuclear abolition movement.[3]

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NOTES

1. Following Japanese convention, Japanese names are written last name first.
2. Box 1, "Mrs. Harvey, Original Transcript," in Robert Penn Warren's *Who Speaks for the Negro? An Archival Collection*. Robert Penn Warren Center for the Humanities, Vanderbilt University. https://whospeaks.library.vanderbilt.edu/interview/clarie-collins-harvey.
3. A future project will examine their thought in addition to practice.

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EXPANDING YOUTH EDUCATION ON NUCLEAR WEAPONS

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Following Russia's 2022 invasion of Ukraine, United Nations Secretary-General António Guterres issued a dire warning that the world has entered "a time of nuclear danger…not seen since the height of the Cold War." Despite the increased danger posed by nuclear weapons, the public—especially young people—are largely unaware of the risks. The problem is not apathy but rather a lack of education (Smeltz, Kafura, and Weiner 2023). Political scientists have a crucial role in educating people about nuclear security. Through intentional efforts aimed at young people, we can increase both public awareness and the diversity of voices working in this field.

Why Nuclear-Security Education for Young People?

Since 2023, the "Doomsday Clock" representing the threat of global destruction by nuclear weapons has been at 90 seconds to midnight, the closest to catastrophe since the clock was created in 1947. This has been driven in large part by Russia's veiled threats of nuclear war and an unraveling of the disarmament and nonproliferation regimes.

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Nevertheless, a majority of young Americans report not knowing much (or anything) about issues such as the costs of nuclear weapons and US nuclear-weapons policy (Smeltz, Kafura, and Weiner 2023). This is particularly worrisome because the more than 5,000 US nuclear warheads account for almost half of the global total. Younger people differ from older generations in that they perceive nuclear weapons as making the United States less safe; a majority, however, would like to learn more about these weapons (Smeltz, Kafura, and Weiner 2023). Given the gravity of nuclear-security threats, it is crucial to expand the breadth and depth of nuclear-security education. Increasing knowledge around these issues will lead to a better informed public and will prepare students for careers in national security.

Political scientists have a crucial role in educating people about nuclear security. Through intentional efforts aimed at young people, we can increase both public awareness and the diversity of voices working in this field.

Policy makers have taken steps to address the lack of diverse perspectives and representation in the nuclear field through hiring practices and encouragement of mentorship programs. These efforts fall short, however, because they are aimed at a homogeneous pool of professionals. One key group that should be engaged more directly are young people, particularly undergraduate and high school students.

Youth Engagement on Nuclear Security

The United Nations Office for Disarmament Affairs has long recognized the need for increasing youth engagement. In 2000, the UN General Assembly created a committee of experts to study disarmament and nonproliferation education. The committee's report listed 34 recommendations for states, intergovernmental organizations, and civil society organizations to improve nonproliferation education, requiring a biennial evaluation of their implementation. In response, many states have adopted policies with the particular goal of increasing the number of women in science, technology, engineering, and mathematics (STEM) fields. Although education and recruitment efforts that are focused on STEM disciplines are laudable, political scientists should be training students on the political context and policy implications of nuclear security.

Despite a growing recognition of the need to provide accessible educational opportunities, there is one glaring problem: a significant lack of courses at most undergraduate institutions. In a 2019 study of nuclear-related courses taught at 75 US universities, Bidgood (2019) found that relatively few were taught in the social sciences; overwhelmingly, these courses were in engineering and physics. Moreover, nuclear-related courses were disproportionately taught at private rather than public institutions. This trend likely reinforces existing underrepresentation in the field because students at private institutions are less likely to be African American, first-generation, and/or from lower socioeconomic backgrounds.

Expanding Youth Engagement Through Universities

Although there are many different paths to expanding youth engagement, the first and most pressing need is to increase the availability of courses at the college level, particularly within political science and public policy. Specialized programs are needed to train the next generation of nuclear-security professionals.

Benson-Bertsch Center for International Trade and Security (BB-CITS) at the University of Georgia (where both authors work) has invested significant resources in providing such opportunities at the undergraduate and graduate levels. For 20 years, BB-CITS has been training students for careers in nuclear nonproliferation through the Richard B. Russell Security Leadership Program (SLP). SLP students develop policy-writing, analysis, and oral-briefing skills while learning about nuclear-security issues ranging from the nonproliferation regime and export controls to modernization of nuclear weapons and peaceful nuclear energy. They apply these skills and knowledge through various activities, including developing a policy brief that anticipates a weapons of mass destruction attack with recommendations to address the vulnerabilities and a two-week simulation of the US National Security Council. Students typically go on to security-focused graduate programs and careers in diplomacy, strategic trade management, and the intelligence community.

Not all universities have the resources and capacity to offer specialized programs or courses on nuclear security. Introductory international relations (IR) courses offer multiple entry points for nuclear-security discussions, from the nonproliferation regime and civil society around disarmament when discussing international organizations to export controls during a section on political economy; nuclear issues are relevant to all aspects of IR. Although young people are far removed from the horrors of World War II, scholars can increase the emotional engagement of students when they are teaching about the human-security implications of nuclear issues through multimedia resources, simulations, and debates (Asal, Conrad, and Sin 2020).

It is important to note that nuclear issues can and should be woven into political science courses across the discipline because they are crucial to domestic politics as well as global security. Whether teaching about nuclear regulation in a public administration course, the impacts of nuclear testing on indigenous communities in a section on civil rights in American politics, uranium mining in environmental politics, or the 1991 Nunn–Lugar Act in a legislative politics course—the opportunities abound.

Expanding Youth Engagement Through Civil Society

Although there is great potential for increasing youth engagement in nuclear-security issues, undergraduate and graduate programs struggle with the reality that they can be only as diverse as our universities. To increase representation, we must engage students earlier to foster awareness of and interest in nuclear security.

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Civil society organizations are in a unique position to build connections with high school educators and students; however, few organizations are engaged in direct outreach at that level. The James Martin Center for Nonproliferation Studies (CNS) Critical Issues Forum, for example, is an annual conference on nuclear-security issues that engages high school students from around the world. Other organizations, such as the Nuclear Threat Initiative (NTI), provide free educational videos online; however, educators may be unaware of these resources. The Council on Foreign Relations recently began an Education Ambassador Program to equip high school and university educators with tools to teach about IR, including online resources and virtual meetings. Organizations such as the NTI, Arms Control Association, and Center for Arms Control and Nonproliferation would be ideally suited for offering similar programs for educators, as well as summer training workshops and nuclear-specific curricula.

Civil society also has been instrumental in direct outreach to young people outside of the classroom. For instance, at the Tenth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, held in 2022, young professionals hosted a series of meetings to promote youth involvement in non-proliferation and disarmament work. Various organizations, including the CNS, US Women in Nuclear, and the International Campaign to Abolish Nuclear Weapons, provide excellent mentorship and internship programs to students interested in the field.

Nuclear Education Beyond Nukes

Nuclear security and nonproliferation relate to many key policy issues beyond weapons, from energy policy to climate policy and international trade. The expansion of civilian nuclear-energy facilities, for instance, and the public's ability to distinguish between nuclear weapons and nuclear energy for peaceful purposes will be critical for the development of clean-energy policy.

Improved nuclear-security education not only raises awareness about these related issues but also can create job opportunities for young people. Advancements in energy technology, coupled with the wave of expected retirements in the energy and nuclear-security fields, offer promising career paths.

Conclusion

Apathy is not the reason for the unawareness of younger generations about nuclear issues; rather, it is education. There are workforce-development benefits from increasing diversity and representation among young people interested in nuclear issues; however, the primary benefit will accrue to our society as a more widely informed populace understands the challenges and opportunities. With the success of the recent film *Oppenheimer*, nuclear security is back in the public consciousness, and there is no better time to pursue these efforts. Increasing knowledge on the subject requires a truly interdisciplinary approach. Although the focus has long been on STEM education, we also must ensure that the next generation of international-security leaders understands the political and policy implications of nuclear (in)security.

CONFLICTS OF INTEREST

The authors declare that there are no ethical issues or conflicts of interest in this research ■

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EMERGING TECHNOLOGIES AND NEW VOICES IN NUCLEAR DEBATES

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In response to anthropogenic climate change, new policies and investments in alternative clean energy sources are being pursued globally, including emerging technologies for nuclear energy and fusion (White House 2023a). The largely unexplored intersections with nuclear nonproliferation and effects on international security are the subject of an ongoing research project (Kosal and Whitlark n.d.). The relationships among nuclear nonproliferation, climate change, and emerging technologies are interconnected. The emerging nexus between renewed interest in nuclear power for clean energy and responding to nonproliferation challenges is a new space that will both benefit from new voices but may also offer opportunities that more traditional disciplinary domains and narrow policy endeavors may not (Kosal 2024). This is a gap that new voices can address and illuminate with novel solutions. This spotlight essay focuses on new voices in emerging technologies related to nuclear energy and nonproliferation policy.

Analyses from the Intergovernmental Panel on Climate Change, the International Atomic Energy Agency (IAEA), and the International Energy Agency (IEA) show that nuclear energy plays a major role in achieving global net-zero goals (IAEA 2021; IEA 2022). At COP28, the United States announced initiatives to triple nuclear energy capacity globally by accelerating deployments of advanced reactors, including small modular reactors (SMR) globally; securing the nuclear fuel supply chain; and fusion energy research and development (White House 2023b).

Emerging technologies at this nexus that are often cited include "advanced reactors," which is a term used to describe non-light water reactor designs using technologies that differ from those of existing operating reactors, such as passive safety features, or incorporate different fuel or coolants, such as molten salt reactor technologies. Fusion-based reactors are another example of truly nascent technology. Fundamental issues involving advanced reactors range from the appropriate role of federal governments in developing and deploying advanced nuclear power technologies to international regimes and safeguards. New voices leading in this area at the intersection of engineering and nonproliferation include Brenda Garcia-Diaz, who leads Savannah River National Laboratory's Fusion Fuel Cycle Research and Development efforts, which seek to address the technical challenges of developing fusion-based energy and new proliferation challenges of the emerging technology (SRNL n.d.).

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