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Structural Causes of the Gender Gap in Nuclear Security: An Overview

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Abstract

This article elaborates on the discussion from the International Atomic Energy Agency (IAEA) International Conference on Nuclear Security (ICONS) 2020 conference and discusses the reasons for the gender gap between professionals working in nuclear security. It puts forward the structural causes for women's choice of field and the formation of gender biases from the perspective of Political Science. It emphasizes the importance of having role-models for women working in the field and provides recommendations to increase the number of women working in nuclear security.

I. Article

"Why are there less women than men in the field of nuclear security? Why are women disadvantaged in security-related issues, what is the basis of the problem?" Attendees asked these questions and more during the ICONS 2020 conference sessions on women and the role of women in nuclear security. The IAEA officers and participants work in mostly technical disciplines and field work; there were few scholars who were specifically working on gender and security. The broader question to their questions is why there are so few women working in academic and professional fields, which are male dominated? More specifically, nuclear professions are seen as male-dominated because they include and require inherently masculine features, like decision-making, war engagement, policy making, strategizing, threat assessment, and response. Security studies have been a male-dominated field, despite attempts to increase the number and visibility of women in international security, with initiatives such as the Women in International Security (WIIS) group.

I attended the 2003 WIIS symposium, in Washington D.C. for five days. We had a female-only meeting with young women and female speakers who are working on international security. On the sixth day, our group was invited to a luncheon at the Carnegie Endowment. Before the luncheon, we were waiting in the lobby, and I noticed a gentleman walking up the stairs, on his way to the dining hall. Although this was a perfectly normal occasion, my first reaction to the gentleman's presence was surprise; I was really surprised to see a man in our female community. This was an interesting reaction, that I also thought was

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odd, but it was real! For me, this was a real-life, unintended experiment where I was both the object and subject of observation. I learned that group and identity formation may take place without an intention to exclude a group or create an "other," but the result is typically the creation of identities and eventually a gendered approach (WIIS welcomes men as well as women to its community). Considering that men have been dominating the nuclear security field for centuries, and women are newcomers, it is normal to experience gender biases and discouragement for women, along with lack of role-models for women to follow when pursuing a career in security, including nuclear security.

Participants emphasized the topic of role-models for women in nuclear security during ICONS 2020; in fact, the lack of role-models would be my answer to the question as to why there are fewer women in the field compared to men. Similar questions asked from within the framework of gender issues were how specific genders are socially constructed to appear more advantageous, privileged, skilled, or endowed than the others based on their physiological characteristics. This does not have to be solely based on gender, it could be race, ethnicity, or religion and during one of the panels, a member stated that they observed an "unconscious bias" against women. Social science explains this "bias" through the term "structure" which is an outcome of power relations. Power produces and reproduces knowledge, meaning, and identities by practice and discourse, benefiting those who established the structure. Its parts are not independent and can be understood in relation to the structure itself **[*1*–*3*]**. According to *The History of Sexuality I: The Will to Knowledge* by Michel Foucault, power relations are extensive within a society. Power is not necessarily peculiar to the government or the state; it is exerted in a web that covers all the strata of the society **[*4*]**. Discourse constructs social realities through systems of significance, produces and reproduce things within discourse by creating a "regime of truth", and maintaining the discourse through play of practice **[*5*]**. Power produces meanings, subject identities, and their relationships **[*6*]**.

Women face negative stereotypes to their social identity **[*7*]** in science and engineering fields **[*8*]** which are often male dominated, creating an imbalance and additional stress, which in turn, impair their performance **[*9*]**. The numerical minority status of women, in traditionally masculine fields, creates a structural barrier that triggers gender stereotypes and a social identity threat. Some women react to this issue by thinking they are not skilled and do not belong in the work setting in question **[*10*]**. The unconscious bias or the "glass ceiling" for women may result in unconscious self-undervaluation, preventing an overturn and change in the structure. Successful women reduce the experience of social identity threats by increasing their sense of belonging in the field. They achieve this success by receiving fair treatment, looking up to female role-models, and getting social support such as encouragement from family **[*10*]**.

When we frame the question why are there less role-models for women pursuing a career in nuclear security, the answer lies in the broader context of how the economic system and patriarchal society are organized **[*11, 12*]**. Their critique was done by Marxism, feminism **[*13*]**, and Marxist feminism. Within this system, women's role is to be a wife and mother. Marriage is an institution, where she provides unpaid labor **[*13, 14*]**, in return for a good life. Otherwise, she does not belong to the capitalist class, and when she joins the labor force, she will be serving as proletariat. Therefore, a good life for women has been seen as one that centralizes marriage and sexuality as admired methods to meeting a socially acceptable man, usually romanticizing the "ideology" of true love.

Traditional gender roles see a woman having a career as complementary to her life, not as a central goal. This theme is produced and re-produced in well-known fairy tales, tv series, movies, and advertisements. Young girls grow up influenced by fairy tales like Snow White and Seven Dwarfs, Cindrella, and Sleeping Beauty, which imply a theme of victory of good over evil, but at the same time, use the fear of death to build the perception that a woman's survival depends on a strong man, whom they can attract with their beauty **[*15*]**. In the tale Snow White, based on the 1812 German fairy tale version by the Brothers Grimm **[*16*]**, the fear of death is associated with the task of not only being beautiful, but the most

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beautiful. This story can derive at least two relevant perceptions. First, it creates the unconscious bias that women lack courage, initiative, and foresight to respond to a threat with integrity and assertiveness. Relative to modern perception, this implies women are not sufficient to independently respond to issues about war, diplomacy, and policymaking. Second, these tales create a false expectation that girls and women must compete with each other to attract a savior or a strong man, in turn, creating an environment where women compete and alienate each other rather than contributing to each other's success and promotion **[*17*–*19*]**.

Merve Gezen, a film director who works on gender and social issues once stated, "When you say nuclear, it sounds like this is a man's job !" **[*20*]**. She says that because women are inherent nurturers because of the instinct to keep their offspring alive, they are more skilled in protection. But since males do not give birth, they lack the inherent nurturing capabilities, and are more predisposed to destroy and harm, than to survive. The overall perception of nuclear is about nuclear safety and is driven by an inherent desire to survive. She also derives that superhero movies where the hero is a male and women are helpless and need to be saved by the heroes, achieve the same patriarchal perception as the fairy tales. Advertisements often portray sexually attractive females to sell, instead of what women are achieving in their social and business lives **[*20*]**. Being strong, emotionally aware, ambitious, and technically competent are often seen as male attributes **[*21*, *22*]**. Whereas being emotional, sensitive, and caring are considered female strengths **[*22*–*24*]**. In this vein, assessing a risk or threat, foreseeing danger, planning, and fighting align with masculine features.

Security is the most sensitive area where states would have their physical and psychological barriers align. I chose to work in international security during the first year of my master's degree studies, about 20 years ago. I was passionate about understanding the causes of international problems and developing policy options. I studied at the Monterey Institute of International Studies (now known as the Middlebury Institute of International Studies at Monterey), at the International Policy Studies MA Program, and we would write policy memoranda to higher-ups-which was exactly what I wanted to do.

It is essential for those who work in military-strategic studies to have a technical background on war studies or have military training. However, it was not hard to overcome this gap with an International Relations (IR) background, as nuclear weapons sit at the core of the mainstream IR theory of Realism. I took advantage of studying at the Monterey Institute, which is the prominent institution for studying and working on non-proliferation of weapons of mass destruction (WMD). After graduation, I started working as a research associate at the Center for Nonproliferation Studies (CNS) in February 2002, which coincided with the aftermath of 9/11 attacks in the United States of America, the Afghanistan operation, and the debate on Iraq's WMD and proliferation tendencies. When I was still working at the CNS, the Turkish parliament's refusal of the passage of US troops from Turkey to Iraq in March 2003 caused a crisis in Turkish-American relations. In July 2003, I was teaching non-proliferation to Turkish army officers, and there was another incident in Iraq that came as a blow to Turkish-American relations. In both instances, I was explaining the behavior of one to the other, as I could relate to the political and security cultures of both countries. This was when I developed interest in understanding foreign policy behavior by looking at understudied factors, like politico-psychological and socio-cultural, particularly in how the understanding of security for different countries took shape, and then translated into foreign policy.

Upon returning to my home country May 2003, I decided to teach about WMD proliferation, international regimes, and current problems in the Turkish military. I also taught a class during the summer term, at the Turkish Military Academy. I was a young woman, teaching an understudied issue related to weapons and weapon systems to military officers, who were older than me. This boosted my self-confidence, both as an academic and as a woman; I did not feel an unconscious bias against women working in security-related issues. This may also be because the first Turkish academician to work on security issues in the International Relations field, was a woman, Prof.Dr. Duygu Bazoglu Sezer, who instructed the male

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professors who were my academic supervisors at Bilkent University. Our country had a role-model, and her example always stood in front of me, to be a strong and determined women in the security field, and that all people had a lot to contribute by using their inherent physiological advantages.

My institution of affiliation, Hacettepe University, became a member of International Nuclear Security Education Network (INSEN) of the IAEA in 2012, and I attended my first INSEN meeting in 2013. Since then, women in our network, coming from different countries who have led students and professionals in nuclear studies, have always inspired me.

The underlying issue in learning how to attract more women to the security field seems to be understanding the conscious or unconscious "bias" about fitness for the task. Nuclear security by itself could appeal to women with its emphasis on prevention, detection, and response, as women can excel in crisis prevention and management because of their inherent nurturing skills. Therefore, the remaining issue is not about sufficiency or job vacancies; there are several programs, fellowships, and job opportunities where women are given priority. The main issue, I believe, is the shortage of promotion of being a woman in the nuclear security field. First, because the field is a rising one and second it is categorized as belonging to natural sciences rather than social science. But by expanding to social science, it opens the door for advanced specified roles within the nuclear security sector. The IAEA and other institutions can hold conferences, and especially online conferences during the pandemic, to make nuclear security more visible, its importance and urgency for practitioners of crisis management and response, international relations, terrorism studies, psychology, and sociology where there is a considerable population of women who need mentors to help them connect the dots and find their niche in the nuclear security community.

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