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**Living with Radiation: The History of Radiation Protection and the International Atomic Energy Agency**

This project addresses the *central question* of how the International Atomic Energy Agency, a diplomatic and political international organization, came to dominate scientific institutions with a long tradition in radiation protection. Despite the importance of international organizations for the development of postwar science there is no work on the history of radiation protection in relation to the development of the IAEA. The project addresses this lacuna in a *groundbreaking way*: it analyses what is usually treated as a strictly techno-scientific issue—how best to protect us from ionized radiation—using methods from history, philosophy, and sociology of science, and in the context of international history. The *main hypothesis* is that scientific knowledge about radiation protection has been shaped by diplomatic, social, economic, and political concerns. This approach casts new light on important aspects of postwar history of science, combining attention to state actors, science diplomacy, and the roles played by international organizations. Given the enormous interest in radiation protection the time is ripe for providing a comprehensive social, historical, and political study of the role of the IAEA in the field.

The *main objectives* of the project are:

* to *retrace the international history of radiation protection* after World War II, focusing especially on the "Technical Assistance Programs" of the IAEA;
* *to investigate the role of the IAEA in sponsoring knowledge production* in the field of radiation protection in competition with other regulatory agencies; and
* to *analyze the standardization* of instruments, objects, procedures, and technical vocabulary as the main strategy used by the IAEA for guiding radiation protection worldwide.

The project advocates a "diplomatic turn": diplomacy becomes analytical category in history of science. Highly *interdisciplinary*, it brings together expertise from several disciplines, promising a significant advancement across them.

**Research team:**

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**The Introduction of Radiation Protection Rules in Postwar Greece as Part of IAEA’s Collective Expertise**

After World War II, the expansion of the use of radioisotopes indicated the need for a series of regulations for their safe use by citizens, hospitals and laboratories. International Atomic Energy Agency (IAEA) took advantage of this need to consolidate its position and lead in the field of international radiation protection. Its main vehicle to this end was a system that, from the one hand, provided the Technical Assistance through the visits of IAEA experts to the Member States of the Agency and from the other hand, offered Fellowship programs allowing young scientists from different Member States to get trained in major nuclear laboratories in other countries. Ι argue that through this Technical Assistance – Fellowship system the IAEA transferred and founded in each Member State its culture on radiation protection. Through their visit in an “advanced” laboratory, the fellows came in touch with a specific laboratorial equipment, they became familiar with its use and then they would transfer it to their original countries. Respectively, the visits of the experts in different member-states of IAEA implied the modernization of the laboratory equipment of the host-states according to the IAEA standards. My project focuses on the Greek case as a representative example of what IAEA considered as "small countries" which through the implementation of the Agency Technical Assistance - Fellowship system managed to participate in what the IAEA named "Collective Expertise".

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**The Eastern Bloc Countries and the International Atomic Energy Agency: Knowledge Transfer and Radiation Protection**

This research focuses on the role of the International Atomic Energy Agency in knowledge production in the field of radiation protection in the countries-participants to the Council for Mutual Economic Assistance. The CMEA members used IAEA safety and health measures to develop their own standards already in the 1960s. In the late 1960s, the IAEA started a series of discussions with the CMEA concerning the closer cooperation on information exchange, and eventually they signed a formal agreement in September 1975. This project investigates the development of radiation safety measures, standardization of instruments, radiation protection terminology and technical vocabulary that took place at the CMEA countries. Through the analysis of the early connections and activities that existed between the IAEA and the CMEA members including scientific-technical cooperation in radiation protection and transfer of knowledge and experts, one unfolds the story that led to their agreement on cooperation and to more open exchanges in the 1970s. The project takes a closer look at the actors from both sides of the Iron Curtain – technical experts, engineers, nuclear scientists, diplomats and others who were involved in the circulation of knowledge and practices, and explores the levels of freedom for actors in these countries vis-a-vis the USSR in dealing with the IAEA.

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**Communication with (Extra)Terrestrial Intelligence: Science Diplomacy during the Cold War (1960-1976)**

The project behind this thesis investigates science diplomacy activities related to extraterrestrial intelligence during the Cold War. The time frame considered is 1955 - until early 1990s, with a focus on the 1960-1976 period, identified by historians as the Golden Age of Radio Astronomy. In 1959 physicists Phillip Morrison and Giuseppe Cocconi grounded science’s search for extraterrestrial intelligence through the means of radio astronomy. Scientists started to work on identifying extraterrestrial intelligent signals, as well as on theorizing the probability of extraterrestrial intelligence’s existence in the universe. Preliminary findings indicate that the Soviet Union dominated the quest for extraterrestrial intelligence, as well as the international cooperation in this area during the 1960s, by initiating “Communication with Extraterrestrial Intelligence” (CETI) which predates the current Search for Extraterrestrial Intelligence (SETI) paradigm. The working hypothesis of the project attempts to understand the potential roots of the issue over “messaging extraterrestrial intelligence” (METI) which emerged in the late 1990s and continues up till the present, dividing Russia and the West. I investigate how science, law and diplomacy intertwined in the international pursuit of extraterrestrial intelligence during the Cold War, with a focus on the Soviet contributions. I explore the manifestation of the Soviet Union domination, followed by the changing of the balance in the later period in favor of the West (the US), by focusing on the program Communication with Extraterrestrial Intelligence (CETI) and on its gradual replacement through the Search for Extraterrestrial Intelligence (SETI) - with a full substitution in place in 1976.