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AEF Writing Contest

**Raymond Damadian and the MRI**

Armenians as a nation have been through oppression, genocide, and a ceaseless denial of justice. Regardless of these relentless obstacles, our people have persevered through the hardships and come out the other side stronger than ever. Despite the world's disregard of Armenian inventors, our people have made an immense impact on the development and advancements that have affected people from all over the world. Although many different people from different backgrounds have contributed to some of the world's most famous innovations, Armenian people specifically have made a huge impact on world innovation and technological advancements because of their number of profound contributions. An example of only one of the many important Armenian inventors is Raymond Damadian. He is an Armenian medical practitioner, who invented the first Magnetic Resonance Imaging Scanning Machine, or MRI, which is widely used in hospitals all over the world today.

Magnetic resonance imaging machines have become a common piece of technology used in hospitals today. The MRI is a “medical imaging technique that uses a magnetic field and computer-generated radio waves to create detailed images of the organs and tissues in your body” (Mayo Clinic). MRI machines are rather large (large enough to fit entire humans inside) tube-shaped magnets. When someone enters an MRI machine, radio waves are used to create cross-sectional images. Damadian completed his first MRI scanner in 1977 with the help of his graduate assistants. They named it *Indomitable*, meaning impossible to subdue or defeat, because they worked on it for seven years before perfecting their project. Damadian obtained a patent for

the MRI in 1974. The first man to use the machine was Larry Minkoff on July 2, 1977. The first commercial MRI scanner was introduced in 1980.

MRI machines have had major impacts on society and modern medicine. The reason that MRI machines are so commonly used in clinical practice and medical research is because of its clear image resolution, its ability to characterize tissue, and its “functional assessment of various organs and systems” (Chang). Not only is Damadian’s version of MRI useful, but modern scientists and doctors have been able to improve and build upon the original model. For example, the Functional MRI, or fMRI, is a newer tool that is used to evaluate physiological functioning. So, the applications of MRI are constantly expanding.

I am personally affected by Raymond Damadian’s invention because it has helped diagnose many of my family members. Although I have not personally ever been in an MRI machine, I know that my sister, mother, and grandmother each have. Without this medical invention, they would have been a lot farther from figuring out what condition they were in and whether or not they were healthy. My sister had to use it when she was very little because of problems involving her achilles heel. The doctors used the MRI machine to determine if the problem was because of her spine. Thankfully, the machine helped the doctors pinpoint the problem and get a clearer understanding of her situation. Without the usage of these machines, it is a possibility that doctors would not have been able to find out what was wrong with my family members with such ease. And so, I am very thankful for Damadian and his team for creating these innovations such as the MRI because they truly do make a difference in the medical field and in the lives of all the patients who are benefited by it.

I am inspired by the MRI machine because it has played such a crucial role in medical advancements all over the world. And the fact that an Armenian person was the one to create it is

especially motivating because I come from the same culture. It proves that anyone can do anything that they put their mind to. It does not matter where one comes from; if what one creates works, it will become a major success. While researching Armenian inventors for this essay, I was in awe of how many Armenians made such important discoveries and inventions that we use in our everyday lives. For instance, Michel Ter-Pogossian invented the PET scan, Hovannes Adamian designed and produced the world's first color television, Luther George Simjian invented the ATM, colored x-ray, and self-focusing cameras, Varazdat Kazanjian created and normalized standard procedures of plastic surgery, etc. The list goes on and on. It is quite clear to see that many, very important inventions are around *because* of Armenian people.

Looking at the bigger picture, there are many implications of Armenian-founded innovations on Armenians, as a people. Because so many revolutionary products have been founded by Armenian people, others are bound to know or find out about our race. There have been so many instances where I have been asked what nationality I come from. When I give them the answer, the response is always mixed with hints of confusion. Most people have never even heard the word "Armenian". And if they have, it is always followed by, "Oh, like the Kardashians?" Although the Kardashian family is technically half-Armenian, they do not shed the best light on our nationality. So, it most definitely helps that these important and useful innovations have been gifted to the world by Armenian people because it makes people understand that Armenians can, and do, serve a better purpose than just entertainment on a reality television show. Circling back to Raymond Damadian, his invention of the MRI machine has helped shape modern medicine and the tools that doctors use every day to assist in diagnosing their patients.

The more people that know about how much Armenians have contributed to the world, the more we can raise awareness about problems in our homeland. If people are not even aware that we exist as a human race, we cannot expect them to lend a helping hand when we are in need. For as long as Armenia has been a country, it has been fighting for the right to be independent. The least that we can do, as the diaspora, is help spread awareness so that we can send as much help as we can. Armenians have contributed so much to the world, it is time for the world to give back to Armenia now.

Moreover, many Armenians have made profound contributions to the world through innovation. Whether it was through massive pieces of technology used in medicine such as the MRI and PET scans, or something as simple, yet enjoyable, as the waffle ice-cream cone, Armenians have been there for it all.

## Works Cited

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