Fritz Haber: Lessons from a Tragedy

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How many of you here today, know who Fritz Haber was? He was a man who is singularly responsible for feeding billions of people. Born in Prussia in 1868 to a respected Jewish family, he studied chemistry and in 1891 received a doctorate. Between 1894 and 1911, he worked with chemist Carl Bosch and developed the Haber-Bosch process. It was a groundbreaking invention that synthesized ammonia from hydrogen in water and nitrogen from the air.

Ammonia’s main use is as a compound in fertilizer. Before Fritz Haber there was no easy or cheap way to create ammonia. The problem with food production one hundred years ago was not one of distribution as it is today. The problem in Haber’s time was the limitation of agriculture to produce enough food to feed a growing world population. Haber’s process made it feasible to create huge amounts of fertilizer, which in turn would increase the land’s yield and thereby feed more people. Haber’s invention of fertilizer made it possible to increase agricultural yields and prevented billions of people from starvation.

Today, half of the world’s food production relies on the Haber process for their fertilizer. It’s been estimated that two out of five humans on the planet are kept alive thanks to Fritz Haber’s discovery. So, in 1918, Haber won the Nobel Prize in chemistry. Wonderful, right? But his life was not so simple.

You see, Haber’s life takes a sharp turn during WWI. As a result of his work, he would become known as the “father of chemical warfare.”

After World War I broke out, Haber became the head of the Chemistry Section for Germany’s Ministry of War. At this time he had also already converted from Judaism to Lutheranism. His reasons for converting aren’t entirely clear, but anti-Semitism had already begun to spread and there’s been speculation that he did it to get a better academic position. However, he was also a patriotic German.

He was deeply concerned during the stalemate of trench warfare and that Germany could lose the war. So he led a team in developing chlorine gas to be used in enemy trenches, along with other deadly gases, like Mustard Gas. With mathematical and scientific certainty he calculated how long it would take for mustard gas to kill a British or Canadian soldier. His wife begged him not to engage in the introduction of poison gas warfare, but he refused, citing his German patriotism. His wife opposed his work and committed suicide after he personally oversaw the first use of chlorine in Ypres, Belgium (eepres). He continued his use in gas and in the 1920 developed a cyanide gas formulation, which was used as an insecticide, especially as a fumigant in grain stores. More about that later.

Facing increased anti-Semitism in the early 1930s, Haber quit his position and left for Britain in 1933 with the help of British chemists from the opposing side of World War I. He died of heart failure at 65 years old in exile.

If the story ended here, it would have been enough, but it takes a horrible turn
at the start of WWII. Carl Bosch picked up Haber’s patents on insecticide and converted it to the German War effort. By this time, Bosch was now head of the Nazi chemical projects company, IGFarben, which manufactured out of Haber’s patents, Zyklon B. This poison, as I’m sure you know, was used in the Death Camps to murder millions of Jews, including Haber’s friends and family.

So who was Fritz Haber? Was he a genius who stopped the world from starvation or an evil scientist who introduced deadly chemical warfare that killed and blinded tens of thousands of WWI soldiers and was indirectly responsible for the gassing of his own people during WWII?

Which statement is true? Billions of people eat today, because of Fritz Haber. Millions of our people died because of the technology invented by Fritz Haber.

Do I have your attention? I am reminded of the statement in the Talmud, “The difference between heaven and hell is a hands breath.” Our work, which we easily think is good, can be used for evil. On the other hand, our work that is selfish can readily be transformed for the good.

The difference between heaven and hell is a hands breath. We have many examples of this contradiction. Look no further than the use of a gun. It can protect and, it can kill. The automobile; it takes us to work and play, but it is choking the very air we breathe. Plastics; ubiquitous and utterly useful, but poisoning the ocean and killing wildlife. We think by our honesty and frank candor with our friends that we are helping people to improve themselves and in the end we might be driving them into despair and desperation. The distance between heaven and hell is a hands breath.

Most of us do not live on the levels of Fritz Haber who saved billions and killed millions, but we do, to some degree simultaneously confront our righteousness and our sins. We are wonderful and we are flawed. We are noble and we are debased. We lift others up and we drag them down. We empower and we infantilize. That is our starting point. We are all Fritz Haber. It is why we confess publicly, all together. We want to be emotionally and spiritually cleansed and to acknowledge that none of our hands are clean and without blemish. But we know that we are sinful. Sin is universal and part of us all.

Over and over again the machzor reminds us, “We should not be so arrogant as to think that we are righteous and have not sinned, for we have sinned.” This is our ticket of admission: not just an acknowledgement that we are imperfect, but it is the recognition that our imperfection binds us together as human beings and as a community. It is the secret sauce or, more precisely, the magical elixir that makes Yom Kippur possible, by which the door for introspection and atonement is pried open. We dare not, we cannot hide behind the pretense of our own perfection.

Today, we drop the charade that we possess superior moral standing. We never know what the effects of our actions today will be tomorrow. We may think of ourselves as geniuses, but we may also be making grievous missteps.

This past spring I felt that tension. I attended a gathering at the North Penn Mosque in which we along with other members of the WFCA presented a painting expressing a Jewish yearning for peace and respect, made by our own Natalie Eisen, following the massacre at the mosque in New Zealand. Many of the faith leaders came to stand shoulder to shoulder with our Muslim brothers and sisters following the brutal nationalist assault on the mosque. I was the only Yarmulke wearing Jew in the Mosque. I was proud to be there, for I worry deeply about the rise of the radical right, which is becoming increasingly violent against minorities, especially Jews. What made it difficult was that I was there just a few days after a video was made public of children in a North Philadelphia Mosque singing about killing Jews and liberating Jerusalem. I was not sure, if my attendance was laudable for standing up against hate,
or despicable for coming to a mosque that is albeit, indirectly aligned with another Muslim place of worship that is openly hostile to Jews. Heaven and Hell are a handbreadth away.

Could my attendance be interpreted as tacit support for the anti-Zionism and anti-Semitism? Or was my attendance a bold statement of solidarity against the hate and violence? Like with Haber, perhaps both statements are true.

Please consider three truths on this sacred night. Haber is a lesson on 1) hubris, 2) the boundaries of our vision and the need for atonement and finally the limitations of nationalism.

Each of us must keep our pride in check. Haber wrongly believed in science and his own knowledge, but that alone without moral checks led him down a dark path. His calculations on the short-term exposure of high doses of lethal gas was ultimately applied to the gassing of his own people. Just because we can do something, doesn't mean that we should.

The late, Rabbi Daniel Jeremy Silver wrote, “Pride destroys love and compassion, and ultimately destroys man himself. For what is life? Is life a broad highway, smooth and easy? No. Life is a dangerous path along a narrow precipice. Yawning on both sides of the path is death, disease, suffering, financial reverses and loss. In life we need support. We need to be tied by many a rope to family and friends so that if we slip others will shore us up and pull us to safety. The man of pride walks alone. One by one he cuts the ropes which bind him to his fellow men, and when an ill wind blows and he trips there is no one to pick him up.” Haber died alone. His wife left him. His country left him. The starving masses of the world left him. And he is today largely unknown, A man full of himself, has no statue, no plaque, no monument. Full of himself, he was lost.

Second, none of us know the exact consequences of our actions. We hope they will be for the good, but we can never be certain. All we can do is be true to our core values and be mindful of the limitations of our vision and seek forgiveness for the unintended hurts and wrongs.

Do you know why Jews mark the life of a person on the date of their death and not on the date of their birth? In secular culture a person’s life is commemorated on the birthday. President’s day celebrates the birthdays of Lincoln and Washington. In Jewish tradition, on the other hand, we commemorate a person on their yarzheit. Why? The Talmud teaches that when a person is born, we do not know what will come of their lives. But on the date of their death, we know what their mark is. A birthday is full of questions. What will become of this child? Will they be a blessing or God forbid, not? But on a yarzheit, we know of their works and we can recognize them for their deeds. I think this is a wonderful lesson.

Sadly, when we realize that a person was not a blessing, we need to forgive their imperfections. We have all entered this room carrying wounds – devastating and minor – from the year gone by and perhaps even from well meaning actions from loved ones. In this room, at this very moment, there are siblings who no longer speak to one another, parents and children estranged from one another, lifelong friends and colleagues no longer on speaking terms. We have all been wronged in one way or another; none of us are alone in our hurt or estrangement. It is easy to nurse our righteous indignation; it feels good to drink from that bitter cup. But today is not the day to do so. Today is the day where we make a courageous leap to ask ourselves the questions that we avoid year-round but dare not avoid today: Am I really going to let a twenty-five-year friendship fall to the wayside because of something that frankly nobody will ever fully understand or untangle? Am I really going to let that relationship unravel over who did or didn’t show up, who was or wasn’t invited, whether we were or weren’t included in the gift, who did or didn’t call, and who said or didn’t say they were sorry? Is my ego so brittle that I am really going to push away the
person who nursed me through infancy, toddlerhood, and adolescence, guiding me as best they could into adulthood? Is it really worth losing all that shared laughter and struggle? Am I really unable and unwilling to sit down and try, try as best as I can, to work it through?

Freud famously coined the expression the “narcissism of minor differences” to explain the manner by which our delicate egos tend to focus on our differences at the expense of the totality of the relationship hanging in the balance. The trick of memory is that when left unchecked, it can become an act of self-justification as the wrongs committed against us are blown out of proportion. It’s like my side view mirror, which reminds me, “Objects in the mirror appear larger than they actually are.” We need to see our hurts and disappointments in their proper size in relationship to the bigger picture.

Third, Haber failed to question his nationalistic assumptions. He never, at least as I understand him, doubted his path. He once asked in his writings, “What does it matter how a soldier die? (Death is death.) But it does matter. All is not fair in love and war. The determination of what is right or wrong is not solely based on what our country is doing. Patriotism or nationalism without a moral compass, led to his destruction and the demise of his country. Today, Patriotism cannot be judged by the degree to which we are following our leaders. It is not defined by our loyalty to our homeland, but rather by our allegiance to the formative values of our country, like justice, truth and the rule of law. Blind nationalism was bad for Germany then, and it is terrible for America today. Utility cannot be the sole criteria for determining what is good. Morality, our principles, our heritage must be factored in. Sadly, in the case of chemical warfare, Haber did what worked, and what was efficient, but not what was right. His wife could not abide that thinking. She took her own life, unwilling to tolerate his blind obedience to the Kaiser. Her decision to end her own life was tragic, but was also a refusal to abandon moral accountability.

When we see injustice, we cannot remain silent. We all know it when we see it. I have along thought that the whole history of the Jewish people is one long narrative of our people saying “no,” when others said yes. Even our name, “Hebrew” is a reflection of Abraham’s willingness to reject polytheism in a pagan world. Abraham was an “Irvi” or Hebrew, which means “one who stands outside.” He refused to be compliant. He courageously stood out and walked the lonely road of faith in the face of injustice.

Walking through the Mutter Museum a few months ago, I saw a terrifying display of WWI Gas masks. These were strangulating masks that rarely worked and left soldiers who survived permanently disfigured and blind. Gas masks in my mind, overshadow fertilizers. May we think long and hard before we speak. May we think long and hard before we act. May we think long and hard about the consequences of our actions today and their impact on tomorrow. May we think long and hard before we love and hate, for the distance between heaven and hell is a hands breath. The distance between good and evil is in our hands.