Ex Europa

During the first half of the 20th Century, warfare swept across Europe causing mass emigration. Emigration, leaving one's country with the intent to settle elsewhere, became the objective for millions, including scientists and intellectuals. This emigration of highly educated and intelligent people is commonly known as a "brain drain."

Ludwig Mies van der Rohe (1886-1969): Design and Chicago

Considered one of the fathers of modern architecture, Mies was the last director of the Bauhaus (at the request of Walter Gropius) before fleeing Nazi Germany in 1938. After immigrating to the United States, he became head of the architecture department at the new Illinois Institute of Technology (IIT).

> "When I left Germany, I had about 3,000 books and I lived in a hotel here when I came to Chicago and when I rented an apartment, I thought I should get some of these books so I made a list of about 300 books and now I must say, I could send them 270 back, but there are very important books I would not like to miss. And these are mostly concerned with civilization and culture.
> Now you could say who moves and advances in civilization? I think it is the effort of men and women in all fields. And it, it is you, you have to build up this civilization. You have to build up the world you want to live in. And nobody else can do it for you. I have one more thing to say: Don't worry about success. I always tell my students, "Success is just the by-product of good, simple and honest work." And this simple and honest work, I think, is the essence of civilization." -Commencement Speech 1958

Examine the three images of Mies' work (Chicago Federal, Crown Hall, and Farnsworth House). Although each building is designed for a different purpose, there are similar themes between the structures. What are the prominent features and materials of the buildings?

Mies does not talk at great length about architecture in his Commencement Speech from 1958. What metaphors or abstract ideas in the excerpt above seem to parallel Mies' architectural style?

Mies left Germany having his work criticized as "not German enough." However, his design ideas work during the 1940s has become known as the foundation of the "Second Chicago School" of architecture. From your observations and what you know, why do you think some criticized Mies' designs?

List three ways these differ from the buildings of the "First Chicago School" of the 19th Century like the Railway Exchange Building?

1.
2.
3.

What different technology might be needed to construct Mies' buildings that would not have been available in the 19th Century?

Next, examine the north and west elevations of the Seagram Building in New York (another Mies project. Click on the image to zoom).
-On a blank piece of paper, sketch your understanding of the footprint of the building.

-How tall is the building at the foot of the 5th floor?

-How tall is each floor of the building?

-How tall is the entire structure?

-Calculate the area of the west elevation façade (as pictured).

Albert Einstein (1879-1955): Science and Holocaust
When Hitler came to power in 1933, Einstein chose to remain in the United States (becoming an American citizen in 1940).

Max Born, another German physicist and mathematician, was long-time friends with Einstein, and their letters show the struggles (both physically and intellectually) of two German scientists grappling with quantum mechanics and the rise of fascism.

> …It is particularly unfortunate that the satiated Jews of the countries which have hitherto been spared cling to the foolish hope that they can safeguard themselves by keeping quiet and making patriotic gestures, just as the German Jews used to do. For the same reason they sabotaged the granting of asylum to German Jews, just as the latter did to Jews from the East. This applies just as much in America as in France and England.
>
> I am greatly interested in your attempt to attack the quantum problem of the field from a new angle, but I am not exactly convinced. I still believe that the probability interpretation does not represent a practicable possibility for the relativistic generalisation, in spite of its great success. Nor has the reasoning for the choice of a Hamiltonian function for the electromagnetic field, by analogy with the special theory of relativity, convinced me. I am afraid that none of us will live to see the solution of these difficult problems.
>
> If at all possible, I am going to fritter away the summer somewhere in America. Why should an old fellow like me not enjoy relative peace and quiet for once? I hope that your position in England is now ensured for some time to come. Conditions are very difficult here, as the universities, which in the main have to live from hand to mouth on a combination of private contribution and diminishing capital, have to struggle for their existence, and for this reason many capable young local people are unemployed.
>
> A. Einstein to M. Born, Princeton, N.J., 3/22/34

Einstein left a tumultuous Germany for [Great Depression] America. How does Einstein seem to portray his place in the world in the above letter?

What is Einstein's tone, just one year after having moved to the United States?

Next, read the letter from Einstein to Eleanor Roosevelt, eight years later (1941).
As an internationally well-known scientist by this time, how does Einstein structure his argument/letter? List two examples to support your claim(s).

As a German-born scientist, what challenges do you think Einstein would have faced immigrating to the United States in the 1940s?

What may have made his transition to American life easier than other immigrants?

Forced Migration

One other facet of the brain drain during the Second World War was poaching intellectual talent. While Einstein and Mies van der Rohe left Nazi Germany to escape persecution, Wernher von Braun, the father of rocket science, was a leading figure in the development of rocket technology for Nazi Germany before being brought to the United States in Operation Paperclip (with 1,600 scientists and their dependents).

Read the following excerpt:

> TO: Members of the Advisory Committee on Human Radiation Experiments
> FROM: Advisory Committee Staff
> DATE: April 5, 1995
> RE: Post-World War II Reccruitment of German Scientists--Project Paperclip
>
> In recent years, it has been alleged that many of these individuals were brought to the United States in violation of American government policy not to permit the entrance of "ardent Nazis" into the country, that many were security risks, and that at least some were implicated in Holocaust-related activities... I should like to make it clear, however, that I see no objection to bringing to the United States such carefully screened physicists as would contribute materially to the welfare of the United States and would remain permanently in the United States as naturalized citizens. I strongly recommend against foreign physicists coming in contact with our atomic energy program in any way. If they are allowed to see or discuss the work of the Project the security of our information would get out of control...
>
> ..."Security investigations conducted by the military have disclosed the fact that the majority of German scientists were members of either the Nazi Party or one or more of its affiliates. These investigations disclose further that with a very few exceptions, such membership was due to exigencies which influenced the lives of every citizen of Germany at that time." [Wev] was critical of over-scrupulous investigations by the Department of Justice and other agencies as reflecting security concerns no longer relevant with the defeat of Germany, and "biased considerations" about the nature of his recruits' fascist allegiances.....To continue to treat Nazi affiliations as significant considerations has been aptly phrased as `beating a dead Nazi horse.'"
>
> ...In light of the situation existing in Europe today, it is conceivable that continued delay and opposition to the immigration of these scientists could result in their eventually falling into the hands of the Russians who would then gain the valuable information and ability possessed by these men. Such an eventuality could have a most serious and adverse affect on the national security of the United States.

Many of the scientists brought to the United States had dubious previous affiliations, and Warner von Braun was known to be a member of the Nazi Party. His work at Peenemunde created the V2 rocket, responsible for great damage on London. Yet, many Americans would not have learned this until much later, after his successes at NASA developing the rocket program. Do you think intellectual “poaching from the enemy” would have treated these scientists better or worse than other immigrants at the time?

Imagine you were in charge of processing/vetting Warner von Braun for naturalization to the United States. With what you know, list at least six criteria you would be sure to include in your process:

Look back at your requirements. How many deal with von Braun as a human/person and how many deal with his value as a commodity to the United States?