THE WALL STREET JOURNAL.

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The Secret of Immigrant Genius

Having your world turned upside down sparks creative thinking

ILLUSTRATION: SKIP STERLING

By **ERIC WEINER**

Updated Jan. 15, 2016 7:20 p.m. ET

Scan the roster of history's intellectual and artistic giants, and you quickly notice something remarkable: Many were immigrants or refugees, from Victor Hugo, W.H. Auden and Vladimir Nabokov to Nikolas Tesla, Marie Curie and Sigmund Freud. At the top of this pantheon sits the genius's genius: Einstein. His "miracle year" of 1905, when he published no fewer than four groundbreaking scientific papers, occurred after he had emigrated from Germany to Switzerland.

Lost in today's immigration debate is this unavoidable fact: An awful lot of brilliant minds blossomed in alien soil. That is especially true of the U.S., a nation defined by the creative zeal of the newcomer. Today, foreign-born residents account for only 13% of the U.S. population but hold nearly a third of all patents and a quarter of all Nobel Prizes awarded to Americans.

But why? What is it about the act of relocating to distant shores—voluntarily or not—that sparks creative genius?

When pressed to explain, we usually turn to a tidy narrative: Scruffy but determined immigrant, hungry for success, arrives on distant shores. Immigrant works hard. Immigrant is bolstered by a supportive family, as well as a wider network from the old country. Immigrant succeeds, buys flashy new threads.

It is an inspiring narrative—but it is also misleading. That fierce drive might explain why immigrants and refugees succeed in their chosen fields, but it fails to explain their exceptional creativity. It fails to explain their genius.

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Recent research points to an intriguing explanation. Several studies have shed light on the role of "schema violations" in intellectual development. A schema violation occurs when our world is turned upside-down, when temporal and spatial cues are off-kilter.

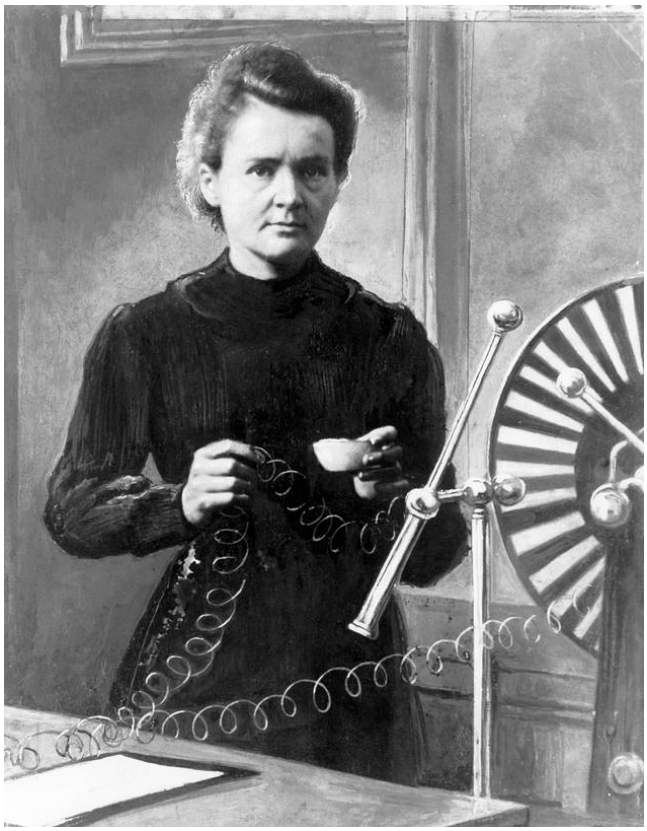
In a 2011 study led by the Dutch psychologist Simone Ritter and published in the Journal of Experimental Social Psychology, researchers asked some subjects to make breakfast in the "wrong" order and others to perform the task in the conventional manner. Those in the first group—the ones engaged in a schema violation—consistently demonstrated more "cognitive flexibility," a prerequisite for creative thinking.

This suggests that it isn't the immigrant's ambition that explains her creativity but her marginality. Many immigrants possess what the psychologist Nigel Barber calls "oblique perspective." Uprooted from the familiar, they see the world at an angle, and this fresh perspective enables them to surpass the merely talented. To paraphrase the philosopher Schopenhauer: Talent hits a target no one else can hit. Genius hits a target no one else can see.

Freud is a classic case. As a little boy, he and his family joined a flood of

immigrants from the fringes of the Austro-Hungarian empire to Vienna, a city where, by 1913, less than half the population was native-born. Freud tried to fit in. He wore lederhosen and played a local card game called tarock, but as a Jew and an immigrant, he was never fully accepted. He was an insider-outsider, residing far enough beyond the mainstream to see the world through fresh eyes yet close enough to propagate his ideas.

Marie Curie, born and raised in Poland, was frustrated by the lack of academic opportunities in her homeland. In 1891, at age 24, she immigrated to Paris. Life was difficult at first; she studied during the day and tutored in the evenings. Two years later, though, she earned a degree in physics, launching a stellar career that culminated with two Nobel prizes.



Exceptionally creative people such as Marie Curie possess many traits, but their 'openness to experience' is the most important. *PHOTO: ULLSTEIN BILD/GETTY IMAGES*

Exceptionally creative people such as Curie and Freud possess many traits, of course, but their "openness to experience" is the most important, says the cognitive psychologist Scott Barry Kaufman of the University of Pennsylvania. That seems to hold for entire societies as well.

Consider a country like Japan, which has historically been among the world's most closed societies. Examining the long stretch of time from 580 to 1939, Dean Simonton of the University of California, writing in

the Journal of Personality and Social Psychology, compared Japan's "extra cultural influx" (from immigration, travel abroad, etc.) in different eras with its output in such fields as medicine, philosophy, painting and literature. Dr. Simonton found a consistent correlation: the greater Japan's openness, the greater its achievements.

It isn't necessarily new ideas from the outside that directly drive innovation, Dr. Simonton argues. It's simply their presence as a goad. Some people start to see the arbitrary nature of many of their own cultural habits and open their minds to new possibilities. Once you recognize that there is another way of doing X or thinking about Y, all sorts of new channels open to you, he says. "The awareness of cultural variety helps set the mind free," he concludes.

History bears this out. In ancient Athens, foreigners known as metics (today we'd call them resident aliens) contributed mightily to the city-state's brilliance. Renaissance Florence recruited the best and brightest from the crumbling Byzantine Empire. Even when the "extra cultural influx" arrives uninvited, as it did in India during the British Raj, creativity sometimes results. The intermingling of cultures sparked the "Bengal Renaissance" of the late 19th century.

In a 2014 study published in the Creativity Research Journal, Dr. Ritter and her colleagues found that people did not need to participate directly in a schema violation in order to boost their own creative thinking. Merely watching an actor perform an "upside-down" task did the trick, provided that the participants identified with the actor. This suggests that even non-immigrants benefit from the otherness of the newcomer.

Not all cultural collisions end happily, of course, and not all immigrants become geniuses. The adversity that spurs some to greatness sends others into despair. But as we wrestle with our own immigration and refugee policies, we would be wise to view the welcome mat not as charity but, rather, as enlightened self-interest. Once creativity is in the air, we all breathe a more stimulating air.

—Mr. Weiner is the author of "The Geography of Genius: A Search for the World's Most Creative Places, From Ancient Athens to Silicon Valley," just published by Simon & Schuster