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Europe's Dearth of Innovation:
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Man is by nature restless, St. Augustine began his *Confessions*: “God, you have made us for yourself, and we are restless until we come to you.”

Goethe thought the opposite: In the prologue to his *Faust*, God tells Mephistopheles that left to their own devices men seek unconditional rest. Faust declared the last conclusion of wisdom to be: “Nur der verdient sich Freiheit wie das Leben/Der Täglich sie erobern muss.” (“Only he deserves freedom as well as life who must daily reconquer each day.”)

I do not know whether restlessness is the natural human condition, but it surely is not universal. De Tocqueville thought restlessness the salient American character trait, but Goethe's dictum appears to apply in other countries. Consider the 24 employees of France Telecom who committed suicide in 2009 and 2010 after reassignment to new jobs. An employee in Marseilles left a suicide note saying, “Overwork, stress, absence of training and total disorganization in the company. I'm a wreck, it's better to end it all.”

The French once were a paradigm of ambition; Napoleon said that every private soldier carried a field-marshal's baton in his rucksack. Today, French entrepreneurs move to the US, the UK, Canada or Israel. A [2014 New York Times feature](#) entitled “Au Revoir, Entrepreneurs,” quoted a French transplant to London who heads a Google enterprise saying that in the UK, “it's not considered bad if you have failed,” Mr. Vidra said. “You learn from failure in order to maximize success. Things are different in

¹ Read on Day 1 of a conference *The Future of Europe*, Oxford Martin School, 27 April 2016.

France. There is a fear of failure. If you fail, it's like the ultimate shame. In London, there's this can-do attitude, and a sense that anything's possible. If you make an error, you can get up again."

Aversion to what Frank Knight dubbed uninsurable risk is inimical to dynamic economies. Of course, risk-friendly entrepreneurs do not always contribute to growth. The two most recent waves of entrepreneurial effort in the United States, namely the dot.com bubble of the 1990s and the derivatives boom of the 2000s, are evidence of that. But we know of no way to get long-term productivity growth other than innovation.

Governmental incentives and disincentives to entrepreneurship surely influence the willingness of individuals to take on what Knight dubbed uninsurable risk, for example taxation of corporate income and capital gains, bankruptcy laws, patent protection, and the cost of regulation. There is a vast literature on these matters. It is also fair to ask whether there also a cultural propensity for risk-aversion and risk-friendliness? If so, where does it come from and what informs it?

If venture capital investments and startups are a gauge of risk-friendliness, Israel is a unique case: according to [KPMG](#), \$3.4 billion was raised by 688 Israeli companies during 2014. That's about \$425 per capita, compared to about \$160 per capita in the US and only \$20 per capita in Europe. It is noteworthy that Israel's bureaucracy is among the world's most stifling, the legacy of its socialist founders. Israel ranks number 53 on the World Bank's index of ease of doing business (vs. 6 for the UK, 7 for the US, and 7 and 9 for Norway and Sweden respectively). Nonetheless risk-friendly entrepreneurs flourish despite an apparently hostile

environment. It is a reasonable conjecture that cultural factors are responsible.

Several years ago a Jewish magazine asked me to report on the success of Israeli classical musicians, whose disproportionate success compares to that of Israeli entrepreneurs. I interviewed many performers, and observed that they threw themselves into their music with the same sense of risk that they must live with in everyday life. All the virtuosos I met had served in the Israeli Army and took their service seriously. At scholarship auditions, it is common to see young musicians performing in uniform. In America and Europe, we tell our most promising students that to have a career they must win a competition, and the way to win competitions is to make the fewest mistakes. In short, we train them to be risk-averse, which is alien to the spirit of their art.

It is no longer fashionable to say this, but there is a strong affinity between art and war. Thomas Mann wrote during the First World War: “Reliability, exactitude, discretion; boldness, steadfastness in confronting trials and defeat in contention with the resistance of the material; contempt for that which is called ‘security’ in bourgeois life: All of this is in fact at once military and artistic.” The European experience with risk-taking was bound up with wars, which in the past century had less than satisfactory outcomes. There is no risk less insurable than that of war-fighting.

Israelis may be reluctant warriors, but war for the most part has brought them success. An April 2016 [survey](#) found that two-thirds of Israeli 11th- and 12th year students agreed with the statement, “It’s good to die for our country,” surely a far higher proportion than we might find in Europe or the United States. When mobilized, more than 100 percent of the members of

Israeli reserve units report for today—that is, some older than the age of service report as well.

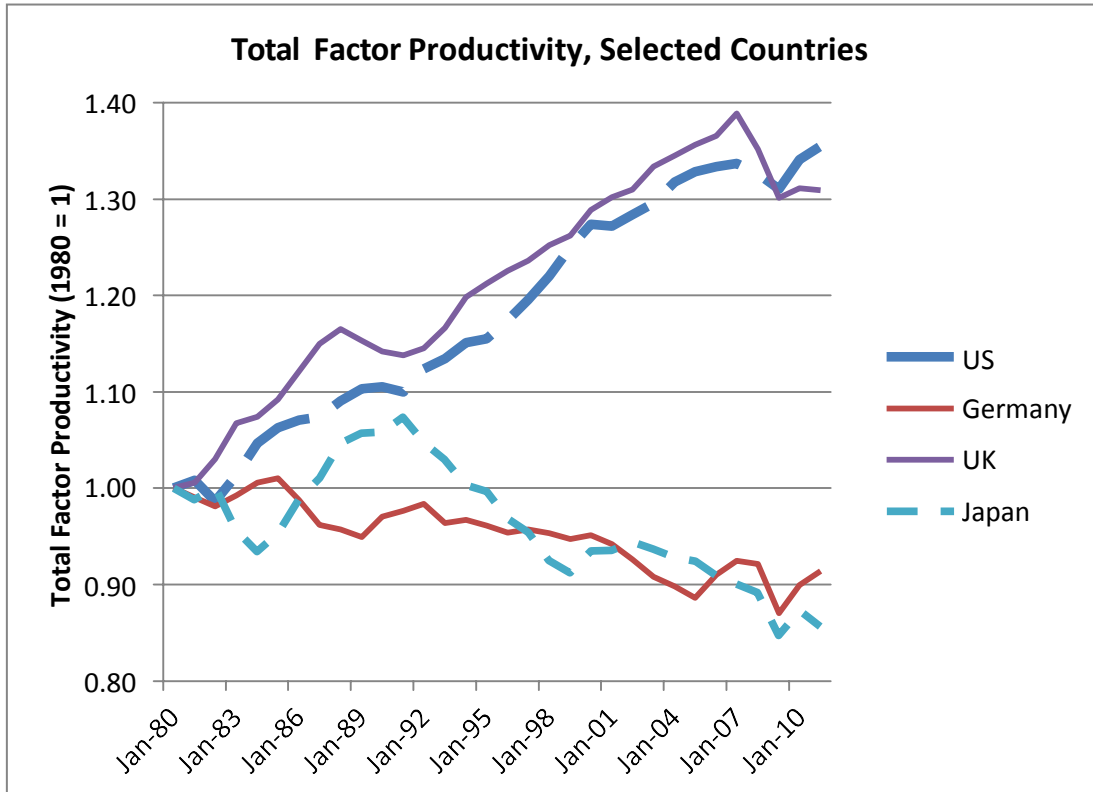
Willingness to take uninsurable risk pervades all facets of Israeli society, and doubtless contributes to this small country's outperformance in business and technology as well as in art and war. In this respect Israel is of particular interest because it perpetuates an aspect of European culture that contributed so much to the continent's inventiveness during the 19th century. Wartime emigration brought many of Central Europe's best teachers to Israel, and a part of Europe's musical culture was frozen in amber as it were.

Edmund Phelps observes in his book *Mass Flourishing* that music, the art form that most embodied individual expression, became a middle-class occupation during the 19th century. If the modern economy is an *imaginarium*, as Professor Phelps suggests, classical music is the imagination at play. In 1800 the largest English piano manufacturer, Broadwood, made only 400 instruments a year. By 1850, world piano production reached 50,000 a year, and by 1890 it reached 230,000 a year. Many of Beethoven's piano works were first performed by aristocratic Viennese ladies. By the middle of the century they were heard in millions of middle-class households in Europe and America, along with Chopin, Schubert, Schumann and other composers who espoused an impassioned individualism embodied in musical forms that posed problems and came to resolutions.

In 2008, only 3.1 percent of Americans reported playing classical music in the preceding 12 months. By contrast, there are about [35 million piano students in China](#). In 2012 China produced or imported more than 400,000

pianos, not counting digital pianos which are an adequate substitute for elementary students. Perhaps that foretells where the center of gravity of innovation will be during the next generation.

The disciplined artistic imagination, the embrace of risk at the expense of security, and the assertion of individual expression were 19th-century European character traits. They contributed to the economic transformation of the European nations, and also to their ill-fated aggressiveness. Perhaps the US and the UK, the victors in the last two World Wars, evince a higher degree of risk-friendliness than the countries of the Continent for just this reason. There is a marked difference between the sustained rise since 1980 of total factor productivity in the US and UK on one hand, and the erratic TFP in Germany, Japan and France on the other. Some part of this surely is due to Anglo-Saxon risk-friendliness.



War is associated with entrepreneurship in one obvious way: It creates an urgent demand for new technologies and trains large numbers of practitioners who bring their skills into the private sector. Veterans of Israel's [signal intelligence unit](#) for example have founded numerous important technology firms.

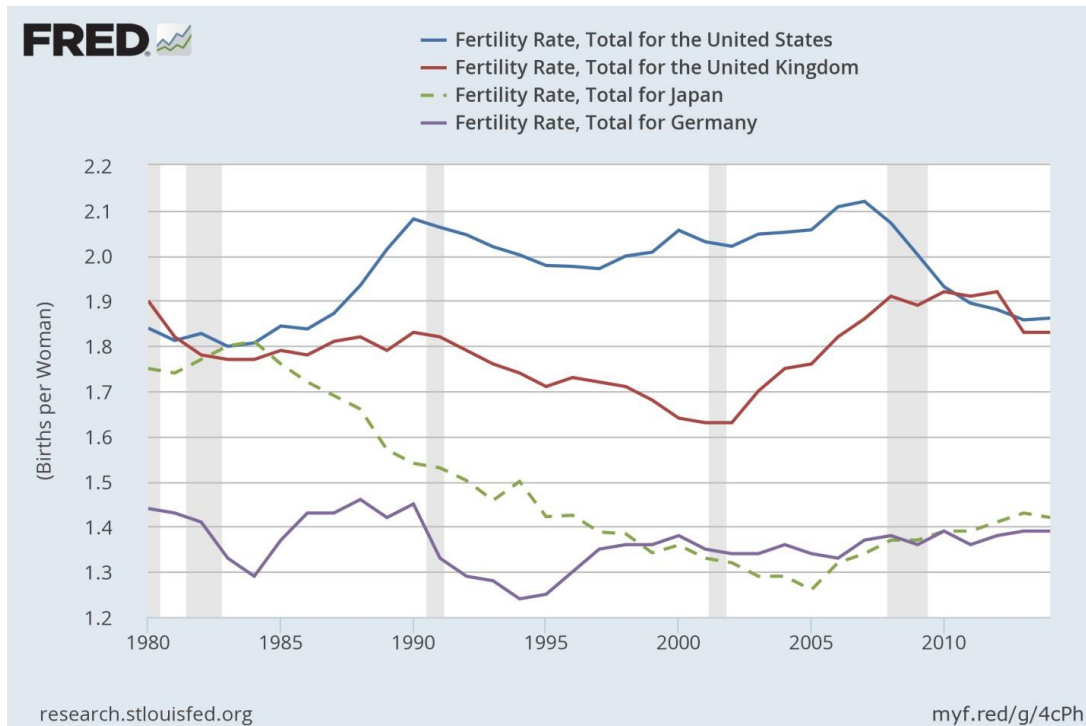
More broadly, a number of studies, starting with a [1976 evaluation](#) of NASA R&D spending, claim to show that military R&D has beneficial effects on civilian productivity. I produced one such study for the U.S. National Security Council in 1984. The econometric methods employed in such exercises are imperfect, to be sure. But the anecdotal evidence for the impact of military and aerospace R&D is compelling. Many inventions central to the economic expansion of the 1980s and 1990s, such as CMOS chip manufacturing, the semiconductor laser, synthetic materials and the Internet itself [began](#) as Pentagon-funded research products. Military spending, to be sure, does not necessarily promote inventions; the high-tech emphasis during the Cold War was quite different than the comparatively low-tech spending for occupation forces in Iraq and Afghanistan. But the exigencies of the Cold War and the space race forced the discovery of the productivity-enhancing technologies. More than technology is involved: a sense of grand national purpose, as in the American Moon landing program of the 1960s, inspires young people to attempt the previously unimaginable.

Again, it is unfashionable to draw the connection between preparations for war and productivity growth. We are more inclined today to believe that entrepreneurship promotes world peace and understanding. Accepting an award for entrepreneurship from Springer Verlag this April, [Mark Zuckerberg](#) said, "Facebook's mission, and what we really focus on giving everyone, is the power to share all of the things that they care about, what

they're thinking about, what they're experiencing on a day-to-day basis," he said. "And the idea is that if everyone has the power to share those things, then that makes the world more understanding." Zuckerberg's view is similar to Norman Angell's 1910 vision of an end to war through economic interdependence in his book *The Great Illusion*. The contrary was true: innovation arose from the same risk-friendliness that made Europe amenable to war.

The prevailing sentiment among the educated classes of the West is what we hear in John Lennon's song "Imagine," that is, for a world without countries or religions to divide us, in which all will be free to define and express their own identity, in the words of Chief Justice Anthony Kennedy. In this world there will be nothing worth fighting for. There is more than a bit of "Brave New World" in this dystopia, with the difference that unlike Huxley's fictional future, we do not yet mass-produce babies in bottles. In fact, we do not produce many babies at all. Europe's total fertility rate stands at about 1.5 children per female. Germany, its most important economy, already suffers a chronic labor shortage in consequence.

Risk-averse cultures that eschew self-sacrifice seem to settle into a hedonistic lifestyle that leaves little room for children. It is interesting that the US and UK, once again, show much higher total fertility rates than Japan and Germany. I am not suggesting a causal link between fertility and productivity. But the cultural traits that influence both variables well may be linked. (France is the odd man out in this comparison, with very low productivity growth and relative high fertility, but the special circumstance of high fertility among a large immigration population makes the French data hard to evaluate.)



Among the industrial countries, Israel once again is the only one with a fertility rate above replacement, at 3.0 overall and 2.6 excluding the prolific ultra-Orthodox population.

Entrepreneurship and innovation may be popular among economists, but they are not necessarily viewed favorably by most of the world's people. We observe this in the way more and less innovative countries are viewed in opinion surveys. Germany was the world's favorite country according to a [2013 global poll by the BBC](#), with a favorable opinion among 59 percent of respondents, while Israel ranked close to the bottom, worsted only by North Korea, Pakistan and Iran. Europeans tend to look at Israel askance, which should be no surprise: the Jewish state reminds them of the nationalism they formerly espoused, and which they blame for a bad 20th century.

The exception is America, where according to the [Gallup poll](#), 70 percent of respondents had a favorable opinion of Israel. That is not

surprising; America and Israel share a hunger for innovation and a strong national spirit at a time when nationalism has fallen into disrepute.

The polarization of global attitudes towards innovation probably is inevitable. Entrepreneurship unleashes creative destruction, and the creation and destruction are not meted out in equal measure in the world market. Modernity is a boon to many but seems like a plague to countries incapable of adapting. That is a leading complaint of the postcolonial theorists who proliferate at universities. I do not believe that we can turn the clock back to suit them, but we should not be surprised at their rancor. It appears that we cannot have it both ways: cultures that produce large numbers of individuals ready to embrace uninsurable risk also manifest risk-friendliness in all areas of life. The same kind of people who start innovative businesses also go to war, raise families, and endeavor to create art that evinces a sense of existential risk. The Jewish sages of antiquity spoke of the “evil impulse,” or *yetzer ha-ra*, a term that refers to ambition, assertiveness, and sexual desire. A parable in the Talmud says that the rabbis once captured this evil impulse and confined it to a large pot. The next morning no-one went to work and not a single egg was laid in all of Israel. The rabbis had to let it so.