



## America's best and brightest are leaving ... and taking the creative economy with them.

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In March 2003, I met Peter Jackson, director of the Lord of the Rings trilogy, at his film complex in lush, green, otherworldly Wellington, New Zealand. Jackson has done something unlikely in Wellington, an exciting, cosmopolitan city of 900,000 whose reputation hasn't caught up to its rising status as a global cultural capital. He has built one of the world's most sophisticated filmmaking complexes. And he did it in New Zealand for a reason.

Jackson, a Wellington native, realized what many American cities discovered during the 1990s: that paradigm-busting creative industries could single-handedly change the way cities flourish while driving dynamic and widespread economic change. With the allure of the Rings movies, Jackson recognized that he would be able to attract a diverse array of creative talent from around the world. And sure enough, during my visit to Wellington I met dozens of Americans from places like Berkeley and MIT, many of whom had begun the process of establishing residency in New Zealand and relinquishing their U.S. citizenship for what they saw as greener creative pastures.

Think about it. The film-production industry symbolizes America's international economic and cultural might. Yet *Rings*, the single greatest project in recent cinematic history, was internationally funded and crafted outside of Hollywood.

As a result, regardless of how many tubs of popcorn American theaters sell to moviegoers, the lion's share of economic benefits from the *Rings* trilogy-the creation of jobs, new companies, even new industries-is likely to accrue not to the United States but to New Zealand. In an equally mighty display of economic irony, Jackson plans to use Wellington as a base for his \$150 million remake of *King Kong*-ironically, a landmark early symbol of Hollywood's power.

### Tale of Two Pincers

The loss of U.S. jobs to overseas competitors is shaping up to be one of the 2004 campaign's defining issues, and for good reason. Americans are seeing not just a decline in manufacturing jobs but also the outsourcing of hundreds of thousands of white-collar jobs. But the loss of these jobs is only the most obvious-and not even the most worrying-manifestation of a much bigger problem. Other countries are now encroaching more directly and successfully on what has been for almost two decades the heart of our economic success: the creative economy. Better than any other country in recent years, America has developed innovative technologies and ideas that spawn new industries and modernize old ones. These creative industries, employing scientists, artists, designers, engineers, financiers, marketers, and sundry entrepreneurs, have generated more than 20 million U.S. jobs since the 1990s and currently account for fully half of all U.S. wages and salaries.

We developed these new technologies and ideas largely because we were able to energize and attract the best and the brightest-not just from within our country but from around the world. During the 1980s and '90s, talented, educated immigrants and smart, ambitious young Americans congregated in and around a dozen U.S. urban regions. These areas became hothouses of innovation, the modern-day equivalents of Renaissance city-states. Creative professionals fed off each other's knowledge,

energy, and capital to create new products, new services, and whole new industries: cutting-edge entertainment in Southern California, new financial instruments in New York, computer products in Austin and Northern California, satellites and telecommunications in Washington, D.C., software and innovative retail in Seattle, and biotechnology in Boston.

Now the rest of the world has taken notice of our success and is working hard to reproduce it. The present surge of outsourcing is the first step, the first pincer of the claw. The more routine aspects of what we consider brainwork-writing computer code, analyzing X-rays, etc.-are being lured away by countries like India and Romania, which have lower labor costs and educated workforces large enough to do the job. Though socially alarming and economically disruptive, history teaches us that such outsourcing is manageable if we are able to substitute a new tier of jobs derived from the cutting-edge technologies and ideas coming out of our creative centers.

What should really alarm us is that our much-admired capacity to adapt is steadily being eroded by a different kind of competition-the other pincer of the claw-as metropolises in other developed countries transform themselves into magnets for higher value-added industries. They're doing it by a variety of means, from government-subsidized laboratories to partnerships between top local universities and industry. Most of all, they're attracting foreign creative talent, including our own. The result is that the sort of high-end, high-margin creative industries that used to be the United States' province and a crucial source of our prosperity have begun to move overseas. Indeed, based on a creativity index that my colleagues and I developed, Sweden actually tops the United States, with Finland, the Netherlands, and Denmark close behind. And other countries, especially Ireland, are becoming more competitively creative at a faster rate than the United States.

Cities in other parts of the world are beating our own on measures of new talent, diversity, and brainpower. Places like Brussels are fast becoming creative-class centers to rival Boston, Seattle, and Austin. Vancouver and Toronto are also set to take off; both city-regions have a higher concentration of immigrants

to help drive their creative economies than New York, Miami, or Los Angeles do. And as creative centers, Sydney and Melbourne rank alongside Washington and New York.

Many of these places also offer to highly mobile creative talent such further inducements as spectacular waterfronts, beautiful countryside, and great outdoor life. They're safe. They're rarely at war. They're transforming themselves into creative centers that draw talent from all over-including your metropolitan area and mine.

### All Quiet on the Western Front

As other nations become more attractive to mobile immigrant talent, America is becoming less so. A recent study by the National Science Board found that the U.S. government issued 74,000 visas for immigrants to work in science and technology in 2002, an astonishing 55 percent drop from the previous year. This is matched by similar, though smaller, declines in other categories of talented immigrants, from finance experts to entertainers. Part of this contraction is derived from understandable security concerns, as federal agencies restrict visas from certain countries after the attacks of Sept. 11, 2001. But more disturbingly, we find indications that fewer educated foreigners are choosing to come to the United States. The NSB study noted, for instance, that most of the decline in science and technology immigrants was actually due to a drop in visa applications.

For the first time in modern memory, top scientists and intellectuals from elsewhere are choosing not to come here. The altered flow of talent-aided by more stringent security measures-is already beginning to show signs of crimping the scientific process. "We can't hold scientific meetings [in the United States] anymore because foreign scientists can't get visas," a top oceanographer at the University of California at San Diego recently told me.

Such frustration is also felt by visiting graduate students, who perform the legwork of scientific research and are the source of many powerful ideas. The graduate students I have taught at

several major universities-Ohio State, Harvard, MIT, Carnegie Mellon-have always been among the first to point out the benefits of studying and doing research in the United States. But their impressions have changed dramatically over the past two years. They now complain of being hounded by the immigration agencies as potential threats to security, and they worry that America is abandoning its standing as an open society. Many are thinking of leaving for foreign schools, and they tell me that their friends and colleagues back home are no longer interested in coming to the United States for their education-they are actively seeking out universities elsewhere.

It would be comforting to think that restricting foreign immigration means more places for homegrown talent in our top graduate programs and research faculties. But it doesn't work that way. We have many brilliant young people-but not nearly enough to fill all the crucial slots that our powerhouse economy has created. Last year, for instance, a vast, critical artificial-intelligence project at MIT had to be jettisoned because the university couldn't find enough U.S. graduate students to compensate for the lack of foreign students able to clear new security regulations.

Even established American intellectuals are starting to look elsewhere. In 2001, Roger Pederson, one of the leading researchers in the field of stem cells, left the University of California, San Francisco, to take up residency at Cambridge University's Centre for Stem Cell Biology Medicine. Pederson bolted because of aggressive recruitment on the part of the British government-and because of the heavy restrictions placed on stem-cell research by our own government. "I have a soft spot in my heart for America," he recently told Wired, "but the U.K. is much better for this research . . . more working capital." And "they haven't made such a political football out of stem cells." His departure illustrates on a small scale how our global competitors' increasing savvy and our own apparent cluelessness are reshaping the macro-level creative economy.

Unfortunately, Pederson's high-profile departure may be among the first of many. "Over the last few years, as the conservative movement in the U.S. has become more entrenched, many

people I know are looking for better lives in Canada, Europe, and Australia," a noted entomologist at the University of Illinois e-mailed me recently. "From bloggers and programmers to members of the National Academy I have spoken with, all find the zeitgeist alien and even threatening. My friend says it is like trying to research and do business in the 21st century in a culture that wants to live in the 19th-empires, bibles, and all."

### "Moving Costs"

This sudden stalling of our own creative economy threatens to undermine two decades of progress. Twenty years ago, America's economy had hit a crisis point, with record unemployment, stagnant productivity, a rusting industrial base, and oil troubles that highlighted a dangerous dependence upon raw materials, the supply of which we could not necessarily guarantee. Underneath the surface, though, some interesting things were happening. Previous investments in scientific research by government and industry were yielding new technologies, from inexpensive computer chips to fiber optics. New financial instruments and practices were making capital more available for innovative ventures. American film, television, and music were finding new export markets. American corporations, spurred by competition from Japan and guided by best-selling books like Tom Peters' *In Search of Excellence*, were restructuring companies, pushing decision-making down the chain of command and into the hands of high-initiative line employees. Everywhere, economists and managers were talking about the need for more "human capital."

Eventually, supply met demand, thanks to two great migrations. First, we experienced the foreign influx that followed the loosening of immigration laws in the late 1960s. In the 1980s, more than six million immigrants settled in the United States—the greatest number in half a century. In the 1990s, twelve million more arrived. Most were unskilled and found work—as their predecessors did—in factories, restaurants, and construction. Others came with good schooling and went into our universities and leading industries. Both groups were able to make a significant positive impact on the American economy.

Most of the educated immigrants originally congregated in a handful of big cities such as New York, Chicago, San Francisco, and Los Angeles, but many have since moved to smaller hot spots like Tucson, Colorado Springs, and Chapel Hill. Without these immigrants, our high-tech economy would be unthinkable. Intel, Sun Microsystems, Google-all were founded or co-founded by immigrants from places like Russia, India, and Hungary. Nearly a third of all businesses founded in Silicon Valley during the 1990s were started by Chinese- or Indian-born entrepreneurs, according to the detailed statistical research of AnnaLee Saxenian of the University of California at Berkeley. Thousands more immigrants constitute the technical core of our high-tech economy.

The second great migration was an internal one. Millions of young, energetic, and talented Americans from traditional industrial centers, small towns, and rural areas packed up their belongings and moved to thriving metro areas, generally the same ones that the immigrants came to. These native-born migrants helped to design and then feed the emerging creative industries that, during the 1990s, would come to define the age. The influx of talent turned America's creative centers into boomtowns. Salaries skyrocketed, followed by housing prices-especially those in the funky inner-city neighborhoods and gracious close-in suburbs favored by the product designers, video editors, hedge-fund analysts, and marketing consultants who made up this emerging creative class.

But this led to a third migration. The rising living costs and go-go lifestyles engendered by the incoming creative class in turn drove out some of the lesser-educated natives, and even many of these creative migrants eventually had their fill and returned to their hometowns. Statistician Robert Cushing has come up with telling evidence of the economic impacts of these reciprocal migrations. Using Internal Revenue Service data, he found that families moving from Austin, a high-tech boomtown, to slower-growth Kansas City in the 1990s earned an average of \$25,912 a year. Those going in the other direction, from Kansas City to Austin, earned over \$65,000. He found similar disparities between Austin and other older cities-Cleveland, Louisville, Indianapolis, St. Louis, and Pittsburgh.

## The Big Sort

These migrations had not only economic consequences but also profound cultural ones that now threaten our creative economy. For several years, my colleagues and I have been measuring the underlying factors common to those American cities and regions with the highest level of economic growth. Large numbers of talented individuals, a high degree of technological innovation, and a tolerance of diverse lifestyles are the most crucial. But an increasing lack of the latter is jeopardizing our creative economy.

The last twenty years have seen the rise of the "culture wars," between those who value traditional virtues and those drawn to newer lifestyles. In truth, this clash mostly plays out among intellectuals of the left and right, while most Americans manage a subtle balance between the two tendencies. Still, the cleavages exist, roughly paralleling the ideologies of the two major political parties. And, increasingly in the 1990s, they expressed themselves geographically, as more and more Americans chose to live in places that suited their culture and lifestyle preferences.

This movement of people is what Texas journalist Bill Bishop and I have referred to as the Big Sort, a sifting with enormous political and cultural implications. The Big Sort has exacerbated the phenomenon that political demographer James Gimpel calls the "patchwork nation." City by city, neighborhood by neighborhood, Gimpel and others have found, our politics are becoming more concentrated and polarized.

Divisions between people and regions arise not from some master plan but from millions upon millions of individual choices. People are subtly, gradually sorting themselves into communities of like-minded people that validate their lifestyles and identities. Gay sales reps buy ramshackle old houses in the city and renovate them; straight, married sales reps purchase newly built houses with yards on the suburban fringe. Conservative tech geeks move to Dallas, while liberal ones are more likely to go to San Francisco. Young African-Americans who can write computer-software code find their way to Atlanta or Washington, while whites with the same education and skills are more likely to



migrate to Seattle or Austin. Working-class Southern Californian whites priced out of the real-estate market and perhaps feeling overwhelmed by the influx of Mexicans move to suburban Phoenix. More than ever before, those who possess the means are packing up and moving to the cities and neighborhoods that reinforce their social and cultural view of the world.

And while there are no hard and fast rules-some liberals prefer the suburbs of modest metro areas with lots of churches and shopping malls, while some conservatives like urban neighborhoods with coffee shops-in general, these cultural and lifestyle preferences overlap with political ones. In 1980, according to Robert Cushing's detailed election-result analysis, there wasn't a significant difference between how high-tech and low-tech regions voted for president. By 2000, the twenty-one regions with the largest concentrations of the creative class and the highest-tech economies voted Democrat at rates 17 percent above the national average. Regions with lower levels of creative people and low-tech economies, along with rural America, went Republican. In California, the most Democratic of states, George W. Bush won the state's fourteen low-tech regions and rural areas by 210,000 votes. Al Gore took the twelve high-tech regions and their suburbs by more than 1.5 million.

Therefore, there's a sad irony: America's creative economy sparked a demographic shift that now threatens to seriously stifle that same economy. In today's global marketplace, America must for the first time aggressively compete with other developed countries for the top international talent that will spur new industries and new jobs. Yet the political and cultural polarization that have accompanied these migrations make it next to impossible to approach foreign and domestic economic policy with anything resembling a united front.

### To Flee or Not to Flee

Worse still, by thumbing our nose at the world and dismissing the consensus views of the scientific community, we are scaring off that international talent and sending it to our competitors. But it is not just the Bush administration that is at fault. On the key issue of talent flows, it's clear that neither political party gets it.

In the presidential primary, the Democrats quickly seized on the corporate outsourcing of jobs as a campaign issue, and John Kerry and John Edwards have continued to raise the topic. But let's get real: Demanding higher labor and environmental standards in trade agreements-the Democrats' favorite fix-is not going to keep software jobs from migrating to Eastern Europe.

To strengthen our creative economy so that it produces more jobs to replace the ones we're losing, the United States desperately needs economic, cultural, and political leadership with enough savvy to bridge ideological, geographical, and international gaps. Until politicians on both sides of the aisle catch on, the responsibility will surely fall to American economic leaders to create business and trade environments that are increasingly diverse, tolerant, and inclusive, and to draw on the immense reservoir of foreign and domestic talent that will pull the American creative economy out of its current stall.