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No, It Ain't Gonna Be Like That

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Abstract: For cultural, social, and institutional reasons, Asians cannot make original contributions to basic science. I therefore doubt Miller's prediction for the Asian future of evolutionary psychology. I believe that its future will continue to be in the United States and Europe.

Keywords: East Asians; intelligence; Nobel prizes; People's Republic of China; Japan; India; creationism; "intelligent design".

Introduction

Miller (2006) paints a very bleak picture for the future of evolutionary psychology in North America and Europe, and holds out hope for its prospect in Asia. For a variety of reasons that I will detail below, I do not believe that his prediction will come true. The future of evolutionary psychology will *not* be in Asia.

1. Asians can't think

And they certainly cannot think outside the box. Miller is correct to point out that East Asians have slightly higher mean IQs than Europeans (Lynn and Vanhanen, 2002). However, East Asians have not been able to make creative use of their intelligence. While they are very good at absorbing existing knowledge via rote memory (hence their high standardized test scores in math and science) or adapt or modify existing technology (hence their engineering achievements), they have not been able to make original contributions to basic science.

Table 1 presents revealing statistics from the entire history of Nobel prizes (1901-2005). The first set of five nations in Table 1 have produced the largest number of Nobel Prizewinners (USA - 155; Germany - 91; UK - 67; France - 38; Switzerland - 24). They are all Euro-American nations. The second set of nations are the nine Asian nations which have ever produced any Nobel laureate (Japan - 12;

India - 7; China - 5; Taiwan - 2; South Korea - 1; Bangladesh - 1; Pakistan - 1; Myanmar - 1; Vietnam - 1). The last two nations have produced only Nobel peace laureates. These numbers are listed in Column (1).

Table 1: Nobel Prizewinners by Nationality, 1901-2005

	(1) Number of Nobel laureates	(2) Share of Nobel laureates	(3) Population in thousands (2005)	(4) Share of population	(5) Relative representation (2) / (4)
USA	155	.1997	298,213	.0462	4.3225
Germany	91	.1173	82,689	.0128	9.1641
UK	67	.0863	59,668	.0092	9.3804
France	38	.0490	60,496	.0094	5.2128
Switzerland	24	.0309	7,252	.0011	28.0909
Japan	12	.0155	128,084	.0199	.7789
India	7	.0090	1,103,371	.1710	.0526
China	6	.0077	1,315,844	.2040	.0377
Taiwan	2	.0026	22,894	.0035	.7429
South Korea	1	.0013	47,817	.0074	.1757
Bangladesh	1	.0013	141,822	.0220	.0591
Pakistan	1	.0013	157,936	.0245	.0531
Myanmar	1	.0013	50,519	.0078	.1667
Vietnam	1	.0013	84,239	.0131	.0992

Sources: Nobel laureates by country (http://www.answers.com/topic/nobel-laureates-by-country) Population (http://unstats.un.org/unsd/demographic/products/socind/population.htm and http://www.census.gov/ipc/www/popclockworld.html and http://www.census.gov/ipc/www/idbsum.html)

Column (2) shows the relative representation of Nobel prizewinners from each nation out of the total 776 laureates. Column (3) shows each nation's population as of mid-2005, and Column (4) shows the relative representation of each nation's population in the world out of the 6.451 billion. So, for example, the United States has produced 20% of Nobel Prizewinners while its share of the world population is less than 5%. Column (5) shows the relative representation of Nobel prizewinners standardized for population. Any number greater than 1.000 signifies overrepresentation; any number less than 1.000 signifies underrepresentation.

The contrast between the five Euro-American nations and the nine Asian nations cannot be starker. The first four Euro-American nations are overrepresented among the Nobel laureates by a factor of 5 to 10; Switzerland is overrepresented by a factor of 28! In sharp contrast, all Asian nations are underrepresented among the Nobel laureates. Japan, for example, has been a major geopolitical and economic power for most of the 20th century (Small and Singer, 1982). Yet it has produced

only 12 Nobel laureates, the same number as Austria, which has one-sixteenth of Japan's population.

This problem has long been known to East Asian specialists as the "creativity problem" (Eberts and Eberts, 1995, pp. 123-127; Taylor, 1983, pp. 92-123; van Wolferen, 1989, pp. 89-90). Some argue that the ideographic Asian languages curb abstract thinking and creativity among Asians (Hannas, 2003). Others point out that Asian cultures, religions, and educational systems devalue and discourage logical thinking (Eberts and Eberts, 1995, pp. 120-123; van Wolferen, 1989, pp. 236-244). Whatever the reason, it is evident from Table 1 that some combinations of cultural, social, and institutional factors combine to stifle basic science in Asia.

The message of Table 1 is clear: Science is not democracy; it is inherently elitist. A nation does not dominate science by having a large number of people but by having good ideas. And there appears to be a dearth of good, original, scientific ideas in Asia in the last century. If Leda Cosmides were born Japanese, she with her high intelligence would have made an excellent product engineer for Sony and contributed to making the robot dog Aibo look and behave even more like a real dog. But it would have never occurred to her that the human brain might be composed of distinct modules, let alone to modify an obscure logic test to uncover the existence of one such module. That requires massive creativity, which Asians lack.

2. Asians can't write

Nor can they speak English. While Miller correctly points out that East Asians have slightly higher *overall* IQs, he neglects to mention the particular pattern of Asian intelligence. East Asians have much higher visualization IQ than verbal IQ (Lynn, 2006, pp. 121-148). For East Asians in Asia, in studies which assess both types of IQ, the mean visualization IQ is 108.6 while the mean verbal IQ is 101.4. Their high visualization IQs explain East Asians' relative success in mathematics and mathematics-based sciences such as physics and chemistry. Of the 27 Nobel prizes awarded to Asians in Table 1, 10 have been in physics, 5 in chemistry, and 3 in physiology or medicine; there have only been 5 Nobel literature prizes awarded to Asians, and 1 in economics (Amartya K. Sen).

It is true, as Miller points out, that English is universally taught as a second language in all Asian nations. But that does not mean that Asian students learn it. In fact, Asians are notoriously poor at acquiring foreign languages, particularly English, compared to the relative ease with which Europeans speak English. Their low verbal intelligence may explain their difficulty.

Their inability to express themselves in English is likely to hamper Asians' contribution to evolutionary psychology, as long as it remains largely a verbal (i.e. non-mathematical) science, which, for better or worse, it is likely to remain for some time. East Asians might begin to make significant contribution to evolutionary psychology once it attains the level of formalization of the current evolutionary biology. Miller argues that we cannot worry about the accents of our successors,

which is true. However, accents are one thing; impenetrably thick accents which prevent mutual intelligibility is another. That's what many Asians have.

If Geoffrey F. Miller were born Chinese, *The Mating Mind* would have been filled with elegant mathematical equations, and all of his theses would have been mathematically proven. But it would not have been the literary gem that it is, and nobody would have read it. Nobody could have understood him either.

3. The political reality of People's Republic of China (PRC)

As the most populous nation on earth, People's Republic of China (PRC) figures prominently into Miller's vision of the Asian future of evolutionary psychology. While Miller emphasizes recent economic achievements of PRC, however, he conveniently neglects the political reality of communist China. Miller is correct to point out that, due to its higher average intelligence and the largest population, there are millions of bright young students in PRC, but for political reasons we are not likely ever to meet them.

The communist government of PRC has a policy of not letting their brightest students leave the country for fear of the brain drain and of forcing them to study home at Chinese universities. Then it sends the second-rate students to American universities and the third-rate students to British universities, both with falsified transcripts and exam results to make them look first-rate. Here at LSE where I teach, we receive a large number of these third-rate Chinese students dressed up as first-rate. (About 5-10% of all undergraduate and graduate students at LSE are from PRC.) Virtually every Chinese applicant to LSE boasts "the highest exam scores in their province." Apparently it has not occurred to the LSE admissions office that there could not possibly be that many provinces in China. Naturally, most of these PRC students do very poorly and fail out of the program, and, when they do, many confess to having purchased or otherwise fabricated their exam scores and transcripts before they applied for LSE.

Yes, there are millions of bright Chinese students in PRC, but we are not likely to meet them anytime soon until or unless the political reality of PRC changes or otherwise the communist government ceases its policy of sending second- and third-rate students to the US and UK.

4. The conformist culture of Asia

Part of the reason why Asians cannot think for themselves and make original and creative contributions to science is because they are too conformist. One of the factors that Miller identifies as a possible obstacle to the Asian future of evolutionary psychology ("academic conservatism") is actually fatal. Scientific revolutions happen by challenging the established paradigms. No conformists have ever brought about a scientific revolution.

Once again, at LSE, we have an enormous problem of plagiarism among our

Asian students. Despite the fact that each student, Asian or otherwise, must sign a declaration that their work is original and they have not plagiarized, many Asian students simply copy the work of established scholars. To them it is a venerable act of honoring their masters to "borrow" from them, by copying their words verbatim. No matter how much we tell them that it is wrong, Asian students simply cannot understand why it is wrong to honor their intellectual masters by faithfully reproducing their work. Needless to say, this is no recipe for scientific progress.

5. The maverick

It is true that evolutionary psychology is currently flourishing in Japan, and many Japanese evolutionary psychologists attend annual meetings of HBES, as Miller points out. But this is due almost entirely to one man: Toshio Yamagishi at Hokkaido University. Virtually all of the Japanese evolutionary psychologists that Miller identifies as regular attendees of HBES are either students or collaborators of Yamagishi's.

Yamagishi is a true maverick. None of what I have said above about Asians hold for him. He is a true exception to virtually all generalizations and stereotypes about Asian academics. Anyone who has ever seen him in action, by attending his nightly lab meetings (yes, *nightly*) in the Department of Behavioral Science at Hokkaido University, as I have had the privilege to do several years ago, will be struck by the enormous intellectual energy and creativity that he generates among his students and colleagues. There is no question that he and his students are producing truly groundbreaking work. (I should point out, in the interest of full disclosure, that, while I have coauthored with Yamagishi and his students, my intellectual contributions to these papers have been marginal; it is entirely his and his students' work.)

Unfortunately for the Japanese future of evolutionary psychology, however, there is only one Toshio Yamagishi, and one maverick, even a truly exceptional one like him, does not make the rule. By 2106, like the rest of us, Yamagishi will be dead (or not; it has never been conclusively demonstrated that he is a mortal, and there has been some evidence to the contrary), and when he goes, so does the entire future of evolutionary psychology in Japan. There will never be another one like him. I should also point out that, while he now operates in Japan, Yamagishi was nonetheless trained in an American university (University of Washington) by American social psychologists (Richard M. Emerson and Karen S. Cook).

6. Why does American fundamentalism matter?

Part of Miller's pessimism for the future of evolutionary psychology in the United States concerns its pervasive Christian fundamentalism. According to the September 8-11, 2005, Gallup polls, 53% of Americans believe in the literal truth of the Book of Genesis, and further 31% believe that God "guided" the process of

evolution (Newport, 2006). Only 12% believe that God had no part in evolution. More frighteningly, 38% of university graduates and 25% of postgraduates with Master's and Ph.D.s believe in the literal truth of the Book of Genesis. (These numbers increase to 66% and 44%, respectively, among graduates and postgraduates who attend church regularly.) Obviously, these people will never understand or accept the theory of evolution by natural and sexual selection.

But so what?

Over 99.99% of Americans (including, I might add, a large number of physicists) do not understand or accept quantum mechanics or superstring theory. Yet we never hear quantum physicists or string theorists complain about the public lack of understanding of their subject matter. True, Americans are not up in arms about quantum mechanics or superstring theory the way they are about evolution, and they don't demand that "alternative" Ptolemaic cosmology be taught in tandem with quantum mechanics and superstring theory the way they demand that creationism be taught. But this is entirely because they are not aware of what these theories entail. If the civilians find out that particles do not have definite locations or velocities and can instead only be described as probability waves or that the very act of observation fundamentally changes the nature of what is observed, or if they learn that the universe contains 12 physical dimensions instead of the familiar 3 dimensions, then they would be just as disturbed and upset as they are to learn that we are descended from monkeys.

Physicists don't have to deal with "certaintyists" or "three-dimensionalists" the way we must deal with creationists because they keep the civilians ignorant about the true nature of their theories. Any effort to educate them would only have deleterious consequences. It seems to me that evolutionary psychologists can learn lessons from physicists. *Keep them ignorant* (the civilians, not the physicists). Let them be taught creationism and "intelligent design" in schools along with evolution. The smart few will realize that there is something wrong with creationism and naturally opt for evolution. They belong with us. Who cares about the rest?

It seems to me that there is a way to present our research to the public on mating intelligence, fluctuating asymmetry, or even cryptic ovulation, without constantly reminding them that we share common descent with chimpanzees. The less the civilians know, the better. Once again, science is not democracy; we cannot enlighten everybody. Science is an inherently elitist enterprise.

There is, however, one caveat. The problem arises when the public, through their democratic representatives, control our research funding. The physicists learned the lesson when the U.S. Congress discontinued its funding of Superconducting Super Collider (SSC) in Texas in 1993 (Weinberg, 1994, pp. 277-282). The public in their ignorance did not appreciate the importance of the SSC for fundamental knowledge about the origin of the universe, leading to the Theory of Everything. It is mandatory that we not repeat the mistake of particle physicists and cosmologists when they lost funding for the SSC. Fortunately, very little of what evolutionary psychologists do is as expensive as the SSC, which came with the price tag of $1

billion.

7. Does anybody remember 1985?

These days I feel like I am the only person who remembers 1985. No wonder I feel old.

Yes, these days, as Miller points out, savvy *Economist*-reading business people constantly hear about the miraculous economic growth in China and India, and how in the near future these two Asian giants will overtake the US and the European Union and dominate the world economy. But doesn't anybody remember 1985, when we were equally afraid that Japan would inevitably dominate the world market, that we would one day soon all be working for the Japanese, and that all western companies must learn lessons from and become more like their Japanese counterparts if they wanted to survive? We read exhortative or alarmist books and articles like *Japan as Number One: Lessons for America* (Vogel, 1979), *Trading Places: How We Are Giving Our Future to Japan and How to Reclaim It* (Prestowitz, 1989), "Containing Japan" (Fallows, 1989), and *The Coming War with Japan* (Friedman and LeBard, 1991). We also read critical reactions like *Shadows of the Rising Sun: A Critical View of the "Japanese Miracle"* (Taylor, 1983), *Unexpected Japan: Why American Business Should Return to Its Own Traditional Values -- and Not Imitate the Japanese* (Riccomini and Rosenzweig, 1985), *Japan as (Anything But) Number One* (Woronoff, 1991), and *The Myths of Japanese Quality* (Eberts and Eberts, 1995).

What happened? Japan went into a recession merely five years later, in the early 1990s, from which it never fully recovered. None of the ominous predictions about the Japanese domination of the world came true. Why then should I believe any of the alarmist hype about China and India 20 years later? I have a feeling that the current ominous predictions of their world domination will somehow never come true.

What to do? What *is* the future of evolutionary psychology?

It seems to me that the best thing we can do for the future of evolutionary psychology is to do what we have all been doing: produce good science, and train our Ph.D. students well. We don't have to go to Asia or anywhere else; we can simply welcome bright students from all over the world (except for PRC until the current government policy changes). There is no cause for alarm.

That is not to say, however, that we do not face obstacles or have enemies; we do. But our enemies are not fundamentalist Christians; they are instead our university colleagues in Women's and Cultural Studies Departments. Our true obstacle is not the Christian fundamentalism in the wheat fields of Kansas; it is the political correctness in the ivy-covered buildings on our own campuses. The feminists and social constructionists, all of whom have Ph.D.s and no problems with the theory of

evolution by natural selection (as long as it is not applied to the human brain), are in a position to do far greater damage to our science than the Christian fundamentalists. Really, what can Christian fundamentalists do to us? Refuse to pump our gas? Spit in our Big Mac? In contrast, our politically correct feminist and social constructionist colleagues control our recruitment, tenure, and promotion processes, and influence our research funding. If anything can interfere with the future of evolutionary psychology in the United States and Europe, it is the cultural insanity of political correctness. That is the true enemy that we must fight.

My alternative vision for the future of evolutionary psychology

Yes, there really will be Tuesday, March 16, 2106. Yes, we really will be dead (except maybe for Yamagishi). Yes, there really will be a Justine Chen studying the history of psychology in her first-year Ph.D. program. But she will not be studying it at Shanghai University, which will then have no more relevance to scientific progress than Tokyo University does today. Justine Chen will instead be studying it at Stanford University, which for more than two centuries now has opened its doors to the brightest students from all over the world, whether they be from Cincinnati or Shanghai.

On September 11, 2001, our Muslim enemies made one crucial mistake; they chose the wrong symbolic target in New York. What makes America great is not the Twin Towers; if it were, then Malaysia, with its magnificent Petronas Towers, will be the greatest nation on earth. No, what makes America great is the Statue of Liberty. The Twin Towers, evolutionary psychology, and everything else in America are mere consequences of the Statue of Liberty and what she stands for.

In the days and weeks following 9/11, two thoughts occurred to me. Our Muslim enemies could destroy the Twin Towers, but they could not have built them in the first place; there are no skyscrapers in Egypt or Saudi Arabia. And they needed to use Boeing-built airplanes to accomplish their destructive goal; they could not even build their own weapons. As long as America remains true to the Statue of Liberty, and the freedom and openness she inspires, then virtually all future scientific progress will come from her shores.

Justine and her cohortmates will take the history of psychology seminar, co-taught by Ying-Ling "Elaine" Zhang and Shilpa Choudhury-Johansson. They may discuss the intellectual contributions of their own mentors, and *their* mentors. All of them received their Ph.D.s at the University of New Mexico, under the tutelage of an evolutionary psychologist who, when he was not wasting time by writing pessimistic opinion pieces about the bleak future of evolutionary psychology, made great theoretical contributions to the field in the early 21st century, a Stanford alumnus for whom the building in which Justine's seminar takes place is named -- the late great Geoffrey F. Miller.

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