

Einstein in Love

From a review of Einstein in Love: A Scientific Romance by Dennis Overbye

The mistitling of this book reveals the problem of scientific biography. Albert Einstein was in love with one thing—physics. Everything else was secondary, which is why his relations with women and his children were so painfully skewed. If a man's thoughts are absorbed in calculating the gravity of all the mass and energy in the universe with its radius of 10 million light years, matters of the heart take a poor second place.

Einstein (born in Ulm in 1875) was not immune to women's charms, nor they to his dark good looks. He married in 1903 but not before producing an illegitimate daughter and causing his partner, Mileva Maric, a Hungarian fellow student at the Zurich Federal Polytechnic, sad months of lonely waiting.

Poor Mileva, physicist and mathematician, a sombre woman four years his senior, with a congenital hip deformity, got her baby but not her doctorate, and her visions of the two of them as the new Curies vanished. So did the baby, a daughter, fostered out and lost to history.

Very soon, Mileva, who subsequently bore Einstein two sons, was completely out of her husband's scientific life. Whole chapters pass with her doing little but looking over the genius's shoulder at his papers or bringing in some sandwiches. All in all, it seems pretty clear that Einstein was a terrible husband, a guilt-stricken, absent father, a handsome, sociable man, a superb violinist and a good hiker—in other words, the typical Central European male of the early twentieth century. Likewise, his wife became a caricature of the nag, alternating depression with wild bursts of jealousy, and fighting with her mother-in-law, who was Jewish as she was not.

Overbye's book is a superb account of the development of Einstein's thought and the turning points in twentieth century physics. The author provides excellent and digestible explanations of relativity and quantum mechanics, as well as of the fierce fighting among scientists rewriting the rules of Newtonian physics.

These giant steps took place in two crucial decades of Einstein's young manhood. Starting at the age of twenty-two, he moved from Zurich to Prague and then to Berlin, where his ideas flourished despite the turmoil of the Great War, in which he was more or less left alone as a troublesome pacifist. He finally wrung a divorce from the unwilling, crippled Mileva by promising her and the boys the full amount of the Nobel Prize whenever he won it. (He had already been nominated seven times.)

In Berlin in 1919, he married his long-time mistress and cousin Elsa, pausing only to consider whether he might marry her nineteen-year-old daughter instead. From Zurich his ex-wife made endless difficulties about visiting rights, which Einstein, short of money in Berlin, did not try too hard to pursue. Anyway, the boys had turned against him. Later, when his second son developed myriad nervous and physical infirmities, Einstein blamed himself for mating with a damaged specimen.

A brisk, fact-filled epilogue brings the story up to date. Mileva died in 1948, leaving (thanks to the Nobel money) three Zurich apartment houses, and 8,000 Swiss francs in her mattress. In 1933, with his second wife, Einstein left Hitler's Berlin for Princeton, New Jersey, where he wandered, wild-haired and sockless, a local curiosity, and had numerous affairs, before and after Elsa's death in 1936. He died in 1955. His brain, removed and preserved, has recently been pronounced 15 per cent bigger than normal.

Does size matter? A better explanation of what makes a scientist came from Einstein himself in 1918. At a meeting in celebration of Max Planck's Nobel Prize, he declared that, for a scientist, the chance to escape into a world of universal laws is a way 'to find ... the peace and security which he cannot find in the narrow whirlpool of personal experience'.

Brenda Maddox, Literary Review, April 2001

1 What are we told in the first two paragraphs?

- A Physics and love should not be considered incompatible
- B Einstein showed little interest in women
- C Einstein and Mileva married too early for their own good
- D Mileva could not compete with physics for Einstein's interest

2 What is implied about Einstein and Mileva's first child?

- A She was the result of an unlawful marriage
- B Her later life is largely unknown
- C She suffered from the effects of her parents' poverty
- D Her birth posed a threat to Mileva's health

3 What are we told about Einstein and the Nobel Prize?

- A He sometimes doubted that he would ever get it
- B The Prize itself did not seem very important to him
- C The chance of winning it enabled him to solve a personal problem
- D When he got the Prize, it was too late for Mileva to benefit from it

4 How did Einstein react when his second son fell ill?

- A He believed that it was ultimately Mileva's fault
- B He realized that he had not been a good father
- C He feared that Mileva would not let him see his son any more
- D He regretted that he was unable to do much to help him

5 Which of the following statements about Einstein is true, according to the text?

- A His extraordinary brain may provide the key to his scientific career
- B He saw science as a way of compensating for the chaotic nature of private existence
- C His eccentric behaviour caused many people to question his sanity
- D He struggled hard to establish a proper balance between his personal life and his work as a scientist

Please turn over

Canada's Multicultural Mosaic

*From an article by Neil Bissoondath, a Canadian writer
who emigrated from Trinidad to Toronto in 1973*

In the near future, Toronto, Canada's largest city, will mark an unusual milestone. In a city of three million, the words 'minorities' and 'majority' will be turned on their heads and the former will become the latter.

Reputed to be the most ethnically diverse city in the world, Toronto has been utterly remade by immigration, just as Canada has been remade by a quarter-century of multiculturalism. The stated purpose of Canada's Multiculturalism Act (1971) is to recognize 'the existence of communities whose members share a common origin and their historic contribution to Canadian society'. It promises to 'enhance their development' and to 'promote the understanding and creativity that arise from the interaction between individuals and communities of different origins'. The bicultural (English and French) nature of the country is to be wilfully re-fashioned into a multicultural 'mosaic'.

The architects of the policy—the Government of then Prime Minister Pierre Elliot Trudeau—were blind to the fact that their exercise in social engineering was based on two essentially false premises. First, it assumed that 'culture' in the large sense could be transplanted. Second, that those who voluntarily sought a new life in a new country would *wish* to transport their cultures of origin.

But 'culture' is a most complex creature; in its essence, it represents the very breath of a people. For the purposes of multiculturalism, the concept has been reduced to the simplest theatre. Canadians, neatly divided into 'ethnic' and otherwise, encounter each other's mosaic tiles mainly at festivals. There's traditional music, dancing and food at distinctly untraditional prices, all of which is diverting as far as it goes—but such encounters remain at the level of a folkloric Disneyland.

We take a great deal of self-satisfaction from such festivals; they are seen as proof of our open-mindedness, of our welcoming of difference. Yet how easily we forget that none of our ethnic cultures appears to have produced poetry or literature or philosophy worthy of our consideration. How seductive it is, how reassuring, that Greeks are always

Zorbas, Ukrainians always Cossacks: we come away with stereotypes reinforced.

Not only are differences highlighted, but individuals are defined by those differences. There are those who find pleasure in playing to the theme, those whose ethnicity ripens with the years. Yet to play the ethnic, deracinated and costumed, is to play the stereotype. It is to abdicate one's full humanity in favour of one of its exotic features. To accept the role of ethnic is also to accept a gentle marginalization. It is to accept that one will never be just a part of the landscape but always a little apart from it, not quite belonging.

In exoticizing and trivializing cultures, often thousands of years old, by sanctifying the mentality of the mosaic tile, we have succeeded in creating mental ghettos for the various communities. One's sense of belonging to the larger Canadian landscape is tempered by a loyalty to a different cultural or racial heritage.

Often between groups one looks in vain for the quality that Canadians seem to value above all—tolerance. We pride ourselves on being a tolerant country, unlike the United States, which seems to demand of its immigrants a kind of submission to American mythology. But not only have we surrendered a great deal of ourselves in pursuit of the ideal—Christmas pageants have been replaced by 'Winterfests'; the antiracist Writers Union of Canada sanctioned a 1994 conference which excluded whites—but tolerance itself may be an overrated quality, a flawed ideal.

The late novelist Robertson Davies pointed out that *tolerance* is but a weak sister to *acceptance*. To tolerate someone is to put up with them; it is to adopt a pose of indifference. Acceptance is far more difficult, for it implies engagement, understanding, an appreciation of the human similarities beneath the obvious differences. Tolerance then is superficial—and perhaps the highest goal one can expect of Canadian multiculturalism.

New Internationalist, September 1998

6 What is implied about Toronto?

- A Multiculturalism has had obvious negative effects on the city's original character
- B Most of its population will soon consist of people with immigrant backgrounds
- C It is an exaggeration to say that it is the world's most multicultural community
- D Ethnic minorities are running the risk of being swallowed up by the majority culture

7 What is suggested about Canada's Multiculturalism Act of 1971?

- A Its basic goals were questioned by many ethnic Canadians
- B Its good intentions have never been put into practice
- C It poses a threat to traditional Canadian customs and values
- D It failed to take enough account of immigrants' opinions

8 How does the writer feel about Canadian multiculturalism in action?

- A It has given rise to conflicts between different ethnic groups
- B It is based on a rather superficial interpretation of culture
- C It is successful in fighting cultural prejudice among all Canadians
- D It has considerably broadened the minds of ethnic Canadians

9 How can the writer's basic attitude to cultural differences and ethnicity best be characterized?

He argues that ...

- A the importance of ethnic membership for individuals should be more emphasized
- B the heavy social costs of cultural and ethnic diversity were not foreseen
- C there is a clear psychological danger in focusing on striking cultural differences
- D different ethnic communities have rightly defended their cultural heritage

10 What is the writer's main point about Canadian multiculturalism in the last two paragraphs?

- A Tolerance is a dubious goal but all that can realistically be aimed for
- B It has done more to promote tolerance than immigrant policy in the US
- C Acceptance as a possible long-term goal should be warned against
- D Neither tolerance nor acceptance can be regarded as a legitimate purpose

Please turn over

And here are some shorter texts:

Children Under Stress

What is it that allows some kids to negotiate the tunnel to a brighter day, while others get lost or even crash? Psychological resiliency, a concept first popularized in the early 1970s, focuses on the positive. Its evangelists don't dwell on kids who fail under stress but on those who, against long odds, succeed. "The hallmarks of a resilient child include knowing how to solve problems or knowing that there's an adult to turn to for help," says Robert Brooks, a clinical psychologist on the faculty of Harvard Medical School. "Resilient children have some sense of mastery of their own lives, and if they get frustrated by a mistake, they still feel they can learn from it."

11 What are we told here?

- A Some children seem to be more resistant to stress than others
- B Psychological resiliency is an idea based on the worship of success
- C Most successful people are known to have been resilient children
- D All children are able to learn how to handle symptoms of severe stress

Quality Buildings

Traditional building materials such as brick and stone always weathered well, but the use of reinforced concrete and synthetic cladding in the 20th century led to a catastrophic deterioration in weathering properties. Now our coatings technology is catching up, and today's new building no longer has to be tomorrow's rust-streaked eye-sore.

12 What are we told here?

- A Future buildings will hardly need less repair than those built in the 20th century
- B New building materials will stand up better to extreme weather conditions than the traditional ones
- C The building industry seems to have learnt its lesson from the mistakes of the 20th century
- D Recent developments in building technology are likely to be the end of traditional materials

Online Banking

As corner banks disappear in the wave of mergers, there is no lack of alternatives. Not only are European customers checking their bank balances online, but they are also buying insurance and trading stocks over the Internet. It is loss of this lucrative business that scares the conventional banks most. Yet bank mergers can't do much to stop the flight of customers from bricks and mortar branches to the Internet. That will depend on a more perishable commodity: old-fashioned service.

13 What are we told here?

- A Improved personal service is now readily available on the Internet
- B Customers' increasing use of online services will mean reduced profits for ordinary banks
- C The tendency towards bigger and bigger banks will be halted by Internet banking
- D Bank mergers seem to be the main reason for online banking

Judy Garland

Judy Garland was one of the oddest movie stars in film history—an awkward teenager with that show-stopping voice, a grown-up gamine with a biting wit. She never matched Hollywood’s idea of womanly glamour. Yet she refuses to fade into oblivion. She haunts us because we can’t figure her out. And what we can’t figure out is that standoff between talent and doom. Garland’s incandescence on screen seemed to equal her self-destruction off it. She married five times, struggled constantly with depression and died of a barbiturate overdose at the age of 47.

14 What are we told about Judy Garland?

- A She was too fragile for the movies and instead became a singer
- B Her destiny is part of the lasting fascination she holds for us
- C She was a glamorous personality who lived up to the Hollywood ideal
- D Her many marriages led to depressions and a tragic end

A Precious Metal

Platinum is the only metal that most consumers can expect to clap eyes on that is more expensive than gold. Sadly, it looks just like silver, at least within the limitations of the foils and coatings used in packaging things. More significant than its appearance is the complicated snobbery that attaches to this precious metal. If people realize at all that platinum is more desirable than gold, it is likely to be by reverse association, by knowing that a record goes platinum after it has gone gold or that a platinum credit card is harder to get hold of than a gold one.

15 Which of the following statements in relation to the text is true?

- A Platinum is considered more vulgar than gold by rich people
- B The real value of platinum has been exaggerated
- C Platinum is of more practical use than silver
- D Most people would fail to recognize platinum when seeing it

Climate on Earth

How do variations in Earth’s orbital and rotational geometry influence climate? Does the climate system, in turn, influence rotation? We all experience the radiative and thermal cycles of night and day, winter and summer. So we are familiar enough with the influence of Earth’s rotational and orbital motions on the spatio-temporal pattern of light and temperature to make it easy to imagine how long-term variations in the orbit and rotation would affect climate. Much recent data and modelling help confirm that principle. Somewhat further removed from human experience is the notion that climatic change itself could influence the rotational dynamics of the Earth.

16 What is suggested here?

- A Earth’s rotation may be affected by climatic conditions
- B There is little to indicate that climate is influenced by Earth’s rotation
- C Human activities may give rise to variations in Earth’s rotation
- D Earth’s rotation has been proved to be the main cause of climate change

In the following text there are gaps which indicate that something has been left out. Study the four alternatives that correspond to each gap and decide which one best fits the gap. Then mark your choice on your answer sheet.

Does More Mean Worse?

The middle classes the world over see higher education as the gateway to a secure future. Their hunger for credentials grows along with the proportion of university graduates in the population as a whole. In democracies this makes it difficult for governments to**17**..... policies that smack of selection or exclusion. And in non-democratic countries, especially those where the legitimacy of governments is weak and populations are growing fast, it can be harder still. Arab universities are awash with students, only a fraction of whom graduate successfully. As in France, many of those who do graduate take their time about it: the average student in Morocco spends six years completing a four-year degree course.

It is**18**..... too simple to conclude that more must mean worse. There are many counterexamples. The United States has moved farther than most countries towards a system of mass higher education, and yet its 50 or so great research universities probably achieve**19**..... academic standards than ever before. Their ability to pluck the very best students from an ever-deepening pool of eligible applicants is one relevant factor. There is, however, a special reason—beyond America's sheer size and wealth—why they are able to do this. The country's best universities are at the apex of a remarkably diverse range of higher-education institutions, the rest of which are able to give run-of-the-mill**20**..... a university experience that is both more fitting to their aptitude and can be provided at a lower cost.

The Economist, October 4th, 1997

- 17** A evaluate
B adopt
C reject
D analyse

- 18** A consequently
B never
C nonetheless
D hardly

- 19** A higher
B more average
C lower
D more long-term

- 20** A researchers
B students
C academics
D teachers

That is the end of the English test. If you have time left, go back and check your answers.