swellings that appeared on my wife. Now the tragedy is here, as was ordained. One must bear one's lot without complaining. One concerns oneself with the sick and consoles oneself with the well."

The boy's illness was later diagnosed as schizophrenia. Scrofula is tuberculosis of the lymph glands, particularly in the neck. (In medieval times it was known as the "king's evil" and believed to be curable by a king's touch.) Many psychiatrists today believe that schizophrenia has a hereditary component. However, physical medicine holds that if scrofula were transmitted by the mother, it would result in death of the offspring. By contemporary standards, Einstein's belief was unfounded.

What do we make of his being able to work throughout all this? Does he have no feelings? He describes himself as "cautious and hard boiled" and he shows himself to be hard boiled in the financial dealings with his first wife during the separation. The impression I form from the letters is that he has the feelings and sensitivities and passions but is able to rule with his head as few men can. He survives by pouring his energies into work.

Einstein is as different from Besso as the opposites who are purported to attract. This is striking even in their writing styles. Einstein's letters read like his essays, clear, to the point, without frills, but with flair and humor. Speziali informs us that they were single drafts, with virtually nothing crossed out and only one or two words inserted. Besso, on the other hand, writes several drafts over days or weeks before mailing the final one. Einstein, with a bit of affectionate teasing, says of his friend's style:

"Your letters are like a Japanese present, artistically wrapped in bits of paper of all possible colors, complicatedly tied with little strings, so that the business of unpacking is pleasurable but rather protracted."

Besso is the perpetual student, enrolling in courses into his old age, taking hundreds of books out of the library. His publications are listed in the introduction. There are twenty, on subjects ranging from patent law, through genetics, to space-time. He is constantly wrestling with his soul and worrying about his place in the universe. Einstein, meanwhile, is worrying about the universe itself—at least in these letters.

The range of subjects in the correspondence is enormous: physics, industrial management, the gold standard, literature, politics . . . There are Latin quotations and Greek citations, mostly by Besso, but Einstein could not have been unfamiliar with them. And it is he who, in 1916, tells Besso "not to forget to poke your nose into the book by Mann."

(Speziali speculates that the book may have been Death in Venice.)

On "something for everybody" in the correspondence, graduate students will appreciate Einstein's:

"I will not go for a doctorate; it will not help me, and the whole farce has become tedious."

Physicists can profit from his observations that

"One who has been infatuated with an idea for more than half a year can no longer be released from its spell, at least not by others." "... For nearly everybody, temporary success has more power of persuasion than consideration of principle; fashion makes people deaf—if only for a while."

As human beings we can only respond with distress to the last letter in the collection, written by Einstein to Besso's son and sister on being informed of Besso's death. It was written less than a month before his own death.

"The gift of a harmonious life is seldom paired with such a sharp intelligence, particularly to the degree encountered in him."

This then evokes in the old man the tragic revelation:

"But what I most admired in him as a man is the fact that he succeeded in living for many years with one woman, not only in peace but in constant accord—a venture in which I twice rather shamefully foundered...."

Reference

10/4/76

8/12/76

 R. W. Clark, Einstein: the Life and Times, World, New York (1971); page 523.

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Inaccuracy

Luis Alvarez has pointed out an inaccuracy in my article "Rowland's Physics" which appeared in the July issue. Actually it was Frederich Banting and Charles Hubert Best who made the discovery of insulin.

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Problems with fossil fuels

Something like 98% of the world's energy demand is supplied by oil, coal and gas. Yet, there is much less concern about these fossil fuels than about nuclear energy. Even scientists are signing statements against nuclear energy without stating if they prefer an increased use of fossil fuels, or if they are advocates of a drastic change to a low-energy society.

Inspired by the lists of arguments against nuclear energy, I have tried to make a similar check list for fossil fuels to

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