

6-6-05

Dear Oisin,

I've been writing less since arriving in Germany mostly because I'm trying to use the time here to make one or two reasonable discoveries. That means thinking essentially all the time, from when I get up until I fall asleep late at night. Of course, interesting discoveries don't come by so easily and one has to be very patient. Oftentimes, big discoveries only arise through the accumulation of many little ones that move us toward a goal, almost imperceptibly. People sometimes express the importance of patience in this regard by saying 'Rome wasn't built in a day.' I'm sure you'll appreciate that one. And then, sometimes people set out to discover one kind of thing and discover something else, entirely by accident. Columbus, for example, set out to find a new sea route to India, and sailed into America. This discovery ended up being far more significant than what he had set out to do. Remember also that story I told you about the man who traveled from Mecca to find treasure in Damascus? What he found out in Damascus was that the treasure was at his home in Mecca. It's something of an old tradition in many countries to find such notions comforting and you'll find many, many stories illustrating the same point. I tend to agree that there is much to treasure at home, but that one does sometimes need to go searching far and wide just to discover that fact.

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

we started
know the place for the first time.

That is from a poem by Mr. T.S. Eliot, who also wrote all those cat poems. He was born in America, but lived in England much of his life. Most of his poems are not as jolly as Growltiger or Rum-tum-tugger, but rather contain a good deal of contemplative philosophy. They can be enjoyed without thinking too hard, however, because they are composed of very well-crafted sentences. In fact, Mr. Eliot's poems illustrate better than most how even very serious sentences can come together in a pleasant musical way. I will quote for you a few more lines from a solemn poem of his called Ash Wednesday. I'm sure you will find it very pleasing to memorize and recite.

Because I do not hope to turn again
Because I do not hope
Because I do not hope to turn
Desiring this man's gift and that man's scope
I no longer strive to strive towards such things
(Why should the aged eagle stretch its wings?)
Why should I mourn
The vanished power of the usual reign?

Because I do not hope to know again
The infirm glory of the positive hour
Because I do not think
Because I know I shall not know
The one veritable transitory power
Because I cannot drink
There, where trees flower, and springs flow, for
there is nothing again
Because I know that time is always time
And place is always and only place
And what is actual is actual only for one time
And only for one place
I rejoice that things are as they are and
I renounce the blessed face
And renounce the voice
Because I cannot hope to turn again

Consequently I rejoice, having to construct
something
Upon which to rejoice

And pray to God to have mercy upon us
And I pray that I may forget
These matters that I with myself too much discuss
Too much explain
Because I do not hope to turn again
Let these words answer
For what is done, not to be done again
May the judgment not be too heavy upon us

Because these wings are no longer wings to fly
But merely vans to beat the air
The air which is now thoroughly small and dry
Smaller and dryer than the will
Teach us to care and not to care
Teach us to sit still.

Pray for us sinners now and at the hour of our
death
Pray for us now and at the hour of our death.

If you read it several times carefully, you might
find that it is not so different from the cat poems
after all. Remember to be deliberate with the
enunciation.

Well anyways, I've been thinking very hard without
making too much progress. But most of the time in
mathematics, you don't just sit and think. You
might jot a few things down on paper and stare at
it, a formula or a few figures. Or you might read
very carefully something written by another
mathematician in the hope of finding some clues to
help your own work. Almost no one makes interesting
discoveries all by himself. Most of the time, you
add a little bit to something done by others and

then hope that someone else will add a bit more to that. So I concentrated quite a bit on some papers written by Mr. Kato from Japan. I'm sure you remember him. He gave you that wonderful book of Japanese monsters that we looked at again and again when we were in Kyoto. He probably didn't even realize how much fun we would get out of the Tengus and the Kappas and the long-neck monsters. I'm sure you remember him as a very funny and friendly gentleman. But he is also one of those mathematicians who make quite big contributions to progress in mathematics. He is very learned in all kinds of mathematical traditions, but has a very original and funny way of looking at things. So many people all over the world study his papers and develop interesting ideas starting from them. Sometimes his mathematical papers contain references to the Crane Maiden or the Galaxy Train from Japanese children's stories. It's very unusual to find such things written next to difficult formulas. He once told me that when he was a young teacher, he discovered that saying crazy things every now and then seemed to help his students learn mathematics. But funny as they are, the references to fairy tales in his papers do have a serious side that's not so easy to explain. Maybe it was because we made that trip to Japan and learned those fairy tales (and those monsters) better, but I ended up understanding much more of his paper this weekend than when I tried a few years ago. So that made me quite happy. Often, understanding someone else's interesting discoveries is just as exciting as making your own.

Oh yes, but yesterday in particular, I did a few things besides mathematics. For one thing, the landlady was kind enough to invite me to a lunch party. It was a very big event with maybe fifty people standing around, talking and laughing. It was a bit confusing at the beginning because

everyone was speaking in German. But gradually, as the crowd broke up into little groups, I was able to understand at least the drift of the conversation. Besides, all the people around me were very kind, and tried hard to speak to me slowly, explaining every now and then what they were talking about. One very talkative man was actually a sea captain who knew how to sail six different kinds of ships. He was born in Iran (that is the modern name for Persia) and has lived in Germany for quite a while. Another man was an engineer. He's built many bridges in various parts of Africa. And then there was a dentist and his wife who were both retired. They spend a large part of the year at a house in Mallorca, Spain. In Korea, when people hear about Mallorca, they immediately associate the name with the composer Frederick Chopin, who lived there (it is apparently a very beautiful island) for a few years with the writer George Sand. While there, he composed many of his sublime nocturnes, which you should listen to right away. One of these days, you can play them for us in the evenings. We spoke about romanticism many times now, and those nocturnes are really quintessential romantic music. On the other hand, Mr. Byron might find them a little bit too sweet to be truly romantic. Mr. Chopin, by the way, was from Poland and lived in France most of his life. (I think he's buried in one of those famous cemeteries in Paris.) He was another one of those perpetually homesick people. When I casually referred to Chopin's residence in Mallorca, the old couple with the house seemed not to have been aware of it at all. It's funny how some people and stories become even more beloved far, far away than at their point of origin. It was especially like that growing up in Korea, where you ended up absorbing odd, old-fashioned stories about Beethoven or Chopin or Heine or Hesse that no one in Europe appears to have heard even once. There's something awkward

about that but in a nice way. In the course of the conversation, several times Mrs. Maringer, the landlady, came up to me and started speaking in English, and the others urged her to speak to me in German, so that I could practice. That was a lot of fun. The food, by the way, was genuinely German, with potatoes and sauerkraut and many different kinds of marinated fish. It was all prepared by Mr. Maringer, who is apparently listed as one of the hundred best cooks in Germany.

[german food]

Perhaps because it was Sunday, I felt a bit more tired than usual. So after a few more hours of thinking, I went for a walk. Bonn is really a very nice city for wandering around. Coming out of my apartment, I said hello to the statue of the Kaiser as I walked by, threw a stone into the fountain, and made my way towards the big lawn behind the university building. This main building is very fancy because it was at one point the residence of the Kurfuerst, or Elector, of Cologne.



Elector's house, University of Bonn

This was an important position from the middle-ages right up to the eighteenth century or so because an Elector was someone who cast a vote to determine the Holy Roman Emperor. From there I walked past a small granite memorial dedicated to Mr. Heine and up a hill to the Alter Zoll.



Heine memorial

This is a little paved area surrounded by a low stone wall that used to be part of the city's fortification. It was there that the city collected taxes from the ships going up the Rhine. There are two cannons still pointing towards the river, apparently from the Napoleonic era. Nowadays, it's a very nice place from which to look out at the water and the hills and trees on the opposite bank,

which of course was very pretty in the evening light. A few families were out walking there, and the children were climbing all over the cannons. That reminded me of the time at the army museum in Paris when Niall kept crawling inside the little cannons in the courtyard and making himself all dusty. This was while you were at the exhibit with mommy, working on sketches of the armor that belonged to Henry IV.



Alter Zoll, Bonn

From the hill I walked back towards town center. I passed a little church called Remigiuskirche, which I later learned was the place where Beethoven had been baptized. As a young man, he was also an assistant to the court organist there. They were just starting up a concert, so I went inside and sat down. It was actually a very nice performance of an oratorio (this is like an opera without the

action) by Mr. Mendelssohn about the life of St. Paul. The music was very nice, especially the way the deep voices of the main singers reverberated in the aisles, but the text was put together in a pretty haphazard manner from Mr. Luther's translation of the bible. It would have been hard to follow for someone who didn't already know a lot about St. Paul. Of course the intended audience must have been regular church-goers, so Mr. Mendelssohn was perfectly right in assuming them knowledgeable. I thought you would have liked the part where St. Paul and his squire Barnabos are traveling around preaching. They come to the Greek town of Lystra, where St. Paul commands a lame man to walk, and he does. Witnessing this miracle, the townspeople think that they are gods. They call Barnabos Zeus, and think Paul is Hermes (because he is doing most of the talking). The priest of Zeus in that town wants to sacrifice cattle to them.



Remigiuskirche

After the performance, I walked to the institute and sat down to think some more. That was when I discovered that I understood what Kato was trying to say. So it could be that listening to the music relaxed my brain and it was able to absorb the difficult material. Whatever was behind it, things do sometimes get done even when you are not the one doing them. This is expressed beautifully in the

following poem by Mr. Rabindranath Tagore.

On many an idle day have I grieved over lost time.
But it is never lost, my lord. Thou hast taken
every moment of my life in thine own hands.

Hidden in the heart of things thou art nourishing
seeds into sprouts, buds into blossoms, and
ripening flowers into fruitfulness.

I was tired and sleeping on my idle bed and
imagined all work had ceased. In the morning I woke
up and found my garden full with wonders of
flowers.

Mr. Tagore lived in Bengal (in present day
Bangladesh and North-East India) which about 400
years ago was probably the richest region of the
world. It was then part of the mighty Mughal
Empire, one of whose emperors built the Taj Mahal.
By the time Mr. Tagore was living there it had
become possibly the poorest part of the world and
it remains so to this day. It is one place where
many, many people really do not have enough to eat
or a place to sleep. Needless to say, he was very
sad about that state of affairs and sometimes angry
that so many good people had been made poor and
destitute. His poetry shows everywhere how much he
really loved the poor people of Bengal. But
somehow, many of his poems, like the one above, are
about the generosity of life, and his gratitude to
god for it. Here is another one:

I was not aware of the moment when I first crossed
the threshold of this life.

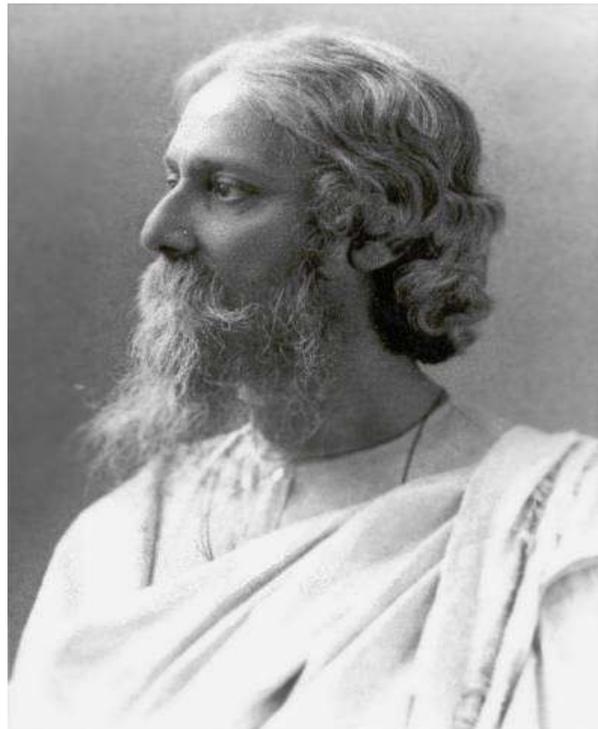
What was the power that made me open out into this
vast mystery like a bud in the forest at midnight!

When in the morning I looked upon the light I felt in a moment that I was no stranger in this world, that the inscrutable without name and form had taken me in its arms in the form of my own mother.

Even so, in death the same unknown will appear as ever known to me. And because I love this life, I know I shall love death as well.

The child cries out when from the right breast the mother takes it away, in the very next moment to find in the left one its consolation.

I especially like the part where he says that because he loves this life, he knows he will love death as well. You need to think about it quietly to truly capture its meaning. It's a line of poetry I think about often. You wouldn't know from reading these lines that Mr. Tagore was really very sad at the time of its writing, because his wife and children had recently died. But then maybe you would.



Rabindranath Tagore

Anyways, I'm still trying to figure out how to use Mr. Kato's ideas for my own investigations. Somehow, I have a feeling that this issue isn't going to be resolved simply by taking a walk and listening to music. Sometimes, you just have to think hard. On the other hand, as Mr. Tagore suggests, sleep can be very helpful.

Good night, Mr. O.

Mr. D.

