MAINAU

Until his recent death, Count Lennart Bernadotte (left) invited Lindau attendees to visit him on the flower island of Mainau.

MAINAU

CLOSE ENCOUNTERS

After a low-key existence for more than 50 years, Germany's Lindau meetings have opened their doors to the world. Alison Abbott joined 44 Nobel laureates as they mingled with young scientists.

For the past 55 years, a remarkable gathering of minds has been taking place in a small town in Germany. Behind closed doors, Nobel laureates have come from all corners of the globe to meet local students. This year, for the first time, the rest of the world has been invited and some 700 international students have joined the party.

"I can't believe my luck," says Evan Thomas, a chemist working on his PhD in Louisiana State University in Baton Rouge, on the first evening. "I don't know what I'm going to say to them, but I'll definitely say something having come all this way."

Qi Zhang, a PhD student from the Fourth Military Medical University in Xi'an, China, is bubbling over with excitement following a chat with 1978 medicine laureate, Werner Arber. "He discovered restriction enzymes …what we use in the lab all the time… we couldn't work without them…I was talking with him…I can't believe it."

The story of these unusual gatherings begins in postwar Germany. It involves a count, a casino and the small medieval island town of Lindau on Lake Constance. And it has a happy ending: after years of financial struggles, the 2005 Lindau meeting has made the switch from parochial to international, has put its funding on a firmer footing and is using English — for the first time — as its official language.

"The meetings very much needed to become international," says Arber, a regular Lindau attendee. "The German students attending needed that boost — they were becoming complacent." And times have changed, he notes, since the meeting was conceived in 1949.

Back then, Lindau was under French occupation. It was an unlikely time and place to plan an international gathering of Nobel laureates: Germany was destroyed as a scientific, as well as a political, force.

Despite this, three local personalities, who saw science as a promoter of 'peace and brotherhood', managed to bring laureates to Lindau. The original idea belonged to Gustav Parade, a doctor at the Lindau district hospital, who wanted to do something about the scientific isolation of Germany in his field. He teamed up with a local gynaecologist, Franz Karl Hein, to propose inviting Nobel laureates in physiology or medicine for discussions with doctors and scientists from around Germany.

In for the count

Emboldened by the backing of the mayor of Lindau, in early 1950 the two men boated across Lake Constance to the tiny 'flower island' of Mainau. There they sought the support of its owner, Count Lennart Bernadotte, great grandson of King Oscar II, who presented the first Nobel awards in 1901.

The count did not hesitate, and his patronage became the hallmark of the annual meetings until he died last December at the age of 95. Tireless in his dedication to the cause he would stand in line with autograph hunters at the Stockholm Nobel award ceremony for the opportunity to persuade new laureates to take part in the Lindau meetings.

> "Nobel laureates are like the rest of the world — some are smart, some are average and some are dumb." — Ivar Giaever

In the early days it was hard to find cash within Germany's ruined economy for such an indulgence. But political confusion came to the rescue. Being the only corner of Bavaria not under US occupation, Lindau enjoyed a special administrative status that allowed it to sidestep gambling laws. Soon, the town established the Bayerische Spielbank Casino, which became a major source of funding for the meetings.

Attracting Nobel laureates turned out to be the easy part. The first European Meeting of Nobel Laureates in Medicine, in June 1951, was attended by six German laureates and one from the United States as well as some 400 physicians. It was deemed by all to be a big success, although the Swedish Nobel Foundation, which saw Stockholm as the laureates' only legitimate home base, was unimpressed. Tensions have eased in recent years, but the foundation has never formally endorsed the series.

During the first 50 years, a rhythm was established, with meetings rotating between medicine, chemistry and physics. Students, mostly German undergraduates selected according to academic performance, soon replaced the physicians of the first meeting. They enjoyed not only morning lectures, but also the informal company of Nobel laureates during afternoon discussions, a dinner and dance on the first evening, and the traditional final-day boat trip to Mainau as guests of the count.

The laureates quickly came to love the formula, and many come as often as their schedules allow. "I must hold an attendance record," boasts Ivar Giaever, who won the physics prize in 1973 and has been to every physics meeting since. "They make me feel like a king!"

But the series has been on the verge of financial collapse several times. Federal and regional governments came to the rescue in 1970, but it was not until the 50th meeting in 2000 that a formal foundation was established to put it on more secure ground.

And despite their old-world charm, the Lindau meetings had become an anachronism. Germany was no longer scientifically isolated, and the privileged access to laureates was harder to justify. The failure to recognize English as the international language of science reinforced the air of provincialism.

In the past few years, some laureates became worried that unless they opened up to the world, new laureates would not make the time to come. At the same time Count Lennart was ageing — and he was keen to ensure continuation after his death.

Glittering prize

From 2001, the new foundation's 14-strong committee began to sort out the meetings' finances, and to make them more relevant to science as practised today. They invited scientific academies and other agencies around the world to open competitions for young scientists to attend, then whittled down a list of nearly 10,000 applicants. The final 2005 list of 720 invitees represented a new profile of participant: academically excellent, familiar with societal impacts of their research and fluent in English. They are generally under 30, but the majority are now PhD students or postdocs, pushing up the general level of education.

The weekly schedule of the meetings remains the same, although the lectures are also broadcast live on the Internet. And economics now takes its turn — the first such gathering last year attracted 11 economics laureates. And as of this year, medicine, chemistry and physics will all meet together every five years.

Some things haven't changed — most notably curiosity about Nobel prizewinners as human beings. Even the laureates confess to curiosity — and sometimes reverence — for each other. "I met Dirac once," recalls Giaever with relish, referring to Paul Dirac, the legendary, but famously withdrawn, 1933 physics laureate who theorized the existence of antimatter. "He was very quiet, very quiet."

Some students entertain hopes that they may be recruited into a Nobel lab, as has happened on several occasions. Others long for insight into a secret formula that could help their own quests for success. "I want to learn from them how to think: what is the right thought process and where do you begin," says Steve Bull, a doctoral student in chemistry at Northwestern University in Evanston, Illinois.

Another student wanted to know if the laureates thought that they had simply been in the right place at the right time. "There is a bit of that," admits Günter Blobel (medicine, 1999). "But it isn't the whole story." Giaever sees more diversity among his fellow laureates: "Nobel laureates are like the rest of the world — some are smart, some are average and some are dumb."

Blobel learned something, in turn, about the young scientists. "It is curious to see the questions that students from different cultures ask," he remarked after a discussion on evolutionary biology led by Christian de Duve (medicine, 1974). He was taken aback to find some students expressing so much interest in the 'creative guiding hand' of intelligent design.

A. ABBOTT/NATURE

Memories of a meeting: Ivar Giaever (top right) jokes with student Steve Bull; Werner Arber meets Qi Zhang.

C. THALHEIMER

Serious and social: chemistry laureate Kurt Wüthrich gives a lecture (top), and last year's physics medallist, Frank Wilczek (bottom right), heads for the dance floor.

Political science

Past Lindau meetings have had politics as well as science on the agenda. Back in 1955, some 18 laureates who had been involved in nuclear research, including Werner Heisenberg (physics, 1932), were invited to the chemists' meeting. There they signed the 'Mainau declaration', which called on governments to abandon the development of nuclear weapons, and played an important role in the 1950s ban-the-bomb campaigns.

Since then, many laureates, most prominently Albert Einstein (physics, 1921), have used their fame to push political agendas, mostly promoting peace or equality. Just last month, 18 laureates signed a petition calling for stronger political leadership on neglected diseases.

Several at the 2005 Lindau meeting say they have launched petitions of their own. Others say that they prefer to stay out of politics altogether. "I know nothing more than any man on the street and have never signed a petition that identified me as a Nobel prizewinner", says Robert Richardson (physics, 1996).

But politics is never entirely forgotten in Lindau. In their lectures, many laureates recall their personal debts to Jewish scientists driven from Hitler's Germany to seed frontline research in the United States and elsewhere.

And the philosophy of the new-style meetings is to support excellence in science wherever in the world political or social oppression may seek to stifle individuals.

Aside from such serious issues, Lindau exerts a simpler magic as well. "It's nice here," answered Masatoshi Koshiba (physics, 2002) when asked why he had come. "I just heard it was really good," said William Lipscomb (chemistry, 1976), whose wife added pointedly: "And I wanted to come."

Klaus von Klitzing (physics, 1985), who could be spotted rock-and-roll dancing with students on the first night, claimed it had always been his ambition to get in. He tried to get an invitation as a student, but was turned down. "So I knew I just had to win a Nobel prize if I wanted to attend," he smiles. ■

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