

A Newsletter of The Rockefeller University Community

The Lab Rat Race By Martin Ligr and Mary Abraham

In May 2004, a New York Times article declared that the US is losing its world dominance in science. Natural Selections decided to investigate this claim and survey the current state of American science. We have concluded that although there may be one or two clouds on the horizon, the sky is not about to fall in on US science.

What are the appropriate criteria to judge different nations' scientific contributions? Although most would agree on qualities that make science "good", they are not easy to quantify. The most easily measured indicators of scientific performance are total number of articles produced (scientific output) and the number of times these articles were referenced in other publications (citations). However, neither of these indicators is ideal: Total scientific output provides up-to-date quantitative information, but a qualitative component is missing. Number of citations contains both qualitative and quantitative components, but due to the speed of information flow within the scientific community it provides mostly retrospective insight. Other potential indicators for measuring scientific success include the number of researchers listed on ISIHighlyCited.com (an index of the most influential scientists based on the citations of their articles published within the past 20 years), or the number of Nobel prizes awarded. Again, these criteria document mostly past performance.

Direct comparisons between nations are also confounded by different

regional emphases on different scientific fields, as well as by latent cultural and institutional biases. For example, in a recent article in *PLoS*, Holmgren and Schnitzer compared the relative prominence of Latin America's ecology papers with the rest of the world. They concluded that the proportion of Latin American papers getting into the top tier of journals and the number of Latin American scientists becoming ISI highly cited researchers was lower than expected.

Despite the problems inherent in using some of these criteria to assess the relative scientific dominance of nations or to try to predict trends, what is the picture that emerges when we use some of these classifications to try to judge the current state of US science? Using indicators such as highly cited researchers or Nobel prizes awarded, the USA appears to have a commanding lead over its nearest rivals (see Figure 1 on page 3).

The foundation for the world dominance of US science has been built during the 40 years of the Cold War, when successive administrations recognized strong science as one of the prerequi-



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sites for containment of the Soviet Union. In terms of financial resources allocated to science, the US is still in a dominant position, and its commitment to funding research is evidenced using a number of criteria. In 2001, the US spent around \$250 billion on research and development (R&D), around \$50 billion more than the combined total spent by the EU and \$150 billion more than Japan, the second ranked nation for R&D spending. The US is in the top ranking group of nations spending the highest percentage of their gross domestic product (GDP) on research, with the US, Japan, Korea, Taiwan, several Western European countries and Canada all spending in the range of 2 to 3% of their GDP on R&D. US academic R&D spending amounts currently to 0.35% of the GDP. The US is also amongst the top four nations in the world in terms of expenditure on R& D per capita. Is the US spending its scientific funds wisely? Research space, a measure of research infrastructure, has grown 38% between 1988 and 2001 (less than 30% of research space was rated as adequate, though). Another measure of the quality of scientific infrastructure is equipment intensity, the percentage of total annual R&D expenditures from current funds devoted to research equipment. This proportion was lower in Continued on page 3

Natural Selections Editorial Board: Mary Abraham, Ian Berke, Diana Colgan, Alexandra Deaconescu, Paula Duque, Ellen Howard, Muriel Lainé, Martin Ligr, and Vasant Muralidharan. It is that time of the year again: Young birdie is leaving his parents' nest, bunny said good-bye to her mom and pop, and a group of fresh doctoral degree holders is going to bid farewell to the halls of their Alma Mater. Since many, if not most, of the goings-on at our University involve pampering and nurturing these future leaders of science, *Natural Selections* asked members of the 2003 and 2004 graduating classes for feedback:

What are your most memorable moments at RU?

Vincent Archambault writes: "There's obviously the day I arrived here (in Sept. '99) with nothing but one dollar in my pocket and one extra underwear. When Gunter Blobel won the Nobel Prize. When I took my first motorcycle driving lesson and they threw me in the middle of 2nd Ave at noon on a weekday after a sleepless night. The student retreats, which I attended all. But hopefully, the day that I graduate will beat them all."

Here is the list of memorable moments of Frank Volmer: "1st, 2nd, 3rd, 4th, 5th and 6th year student parties (7th, anybody?); 1999: the presidential rock concert 'wild thing'; 1999, 2000, 2003: RU Nobel prizes (cheers!); 2001: ocean view bedroom at a student retreat (great organization, Oliver!); 2001: Sid Strickland's student anthem "We will R U" (looking for bootleg!); 2001: support from students and the Dean's office after I decked on the FDR (thanks again, guys!); 2003: Corporate Challenge (RU 2nd place mixed team); 2003: Thursday, August 14th candlelight dinner."

Bino John writes: "The first day at RU. I walked to the plaza, faced the East River and thought how lucky I am to be at RU." Katie Hisert: "I will also fondly remember Fred Cross' Genetics class. One of the best classes I have ever taken." Nebojsa Mirkovic: "...meeting and working with great scientists and people: B. Chait, A. Sali, J. Darnell." Others will remember "the great times interacting with faculty, postdocs and students" and "the great many failures, and the occasional glimpse of nature that makes it all worthwhile."



What will you miss?

"Marta and Kristen in the Dean's office", "the wonderful lack of bureaucracy" and "sense of organization", "the friends", "the beautiful gardens", and, of course, "the cookies". Vincent Archambault says: "I will miss the international character of RU and the almost constant feeling of being part of something great and special. They do a really good job with the propaganda here." Katie Hisert will miss "the casual yet impassioned discussions with other students."And Frank Volmer adds: "Pat's free beer hour, FC BBQ, motorcycle parking and friendly guards, RU gym, running in Central Park, free MoMa pass."

What won't you miss?

Some "can't think of any", but others tried hard to come up with at least some: "The disgustingly hot and humid New York summer days", "smoke detectors in GSR", "experiments that do not work", "working in the biocontainment facility", "the construction", "the cafeteria", "overweening pride and arrogance", "boredom in the presence of a lot of scientists at RU", and, lastly, "my graduate work".

If you come back as the President of RU, what will be your first act?

An anonymous responder writes ominously: "You will have to find out when I am hired for the job." Bino John would "establish specific guidelines for the successful and less torturous pathway for the graduate students in their respective labs," and Frank Volmer would "expand the Center for Studies in Physics and Biology (go Libchaber Lab!)"

Vincent Archambault sums up generous plans of many other presidents in waiting when he writes: "[I would] try to subsidize access to sports, which are quite limited at RU. It seems like the university should be able to get us group discounts (if not subsidize) at sports facilities such as swimming pools, arenas, a wall climbing club, or whatever enough people are interested in. I would also make sure not to reduce the housing subsidies for students and postdocs, and maybe increase them." Other plans include "guaranteed childcare for students and postdocs" and "adding a ladies room (bathroom for women) to the RU library".



"The Lab Rat Race" continued from page 1 2001 (4.6%) than it was in 1983 National Science Foundation (NSF) to investigate the extent to which a lack of instrumentation prevents the acaundertaking cutting-edge science. ence students continues. Despite the possible slowdown in procurement of equipment, the US scientific infrastructure rated, as a whole, number one in the 2003 IMD World Competitiveness Yearbook.

Another factor contributing to the US scientific dominance is the sheer allure that it holds for so many of the best researchers from all over the world. For example, the 2000 census showed that 40% of US scientists with a doctorate are foreign born. Good funding, together with a strong meritocratic culture, relative lack of bureaucracy, and high living standards have helped the US to attract and retain international scientists. In the period 1998-2001, 76% of foreign doctoral degree recipients in science and engineering (S&E) fields planned to stay in the US, and 54% had firm offers to do so. Many foreign scientists also appreciate the American entrepreneurial spirit and the success with which US academic institutions have forged links with industry to commercialize research output: More Canada than 3,200 US patents were granted to US academic institutes in 2001, a tenfold increase since the 1970s.

What are the main problems facing US science? While employment in the R&D sector has been growing steadily, there are concerns about how sustainable the growth will be. The US scientific workforce is aging, and rising retirements are expected over the next few decades. The replacement of retired workers is an issue mentioned prominently in the 2004 Science and Engineering Indicators Report, produced for the President and Congress by the National Science Board (NSB). US science is heavily reliant on foreign scientists, and increased visa problems following 9/11, as well as ongoing efforts by other countries to provide

incentives to retain or attract back their observed in the volume of cited US nationals could produce a decline in the (5.7%). Congress has asked the US science workforce. The NSB has also predicted that a shortfall of foreign cited world S&E literature falling from workers is unlikely to be compensated for by US natives, if the current trend of tening in citation of US literature demic research community from decline in the number of US-born sci-

> affect biomedical fields in particular? It is instructive to compare the situation in biomedical and physical sciences. In the time period 1975-2001, academic expenditures in biomedical sciences have been increasing nearly exponentially (from 2.1 to 9.3 billions of dollars), whereas increases in funding of sciences such as physics were significantly lagging behind (increase from 0.9 to 2.6 billions of dollars). This seems to explain the anecdotal evidence (provided in the NYT article) that output of physical sciences is stagnating. But is the favorable fiscal situation of biological and biomedical sciences reflected in their scientific output? It does not appear so. Although published reports do not provide a direct Probably not yet. Although US science answer, US scientific output, of which biological sciences account for about 60%, has been stationary as a whole since the 1990s (see Figure 2). More alarming is that a similar trend has been







scientific literature, which flattened during the mid-1990s, with its share of 52% in 1992 to 44% in 2001. This flatoccurred across almost all fields. The reasons for this stagnation are Are there any special conditions that unknown and are supposed to be addressed in NSF's Science and Engineering Indicators 2006.

> Most commentators suggest that the main competition for US science is likely to come from Asia. The 2004 NSB report tips China, South Korea, Malaysia, Singapore, and Taiwan as the new scientific vanguard. This assessment is based on their increases in global shares of scientific publishing, increasing numbers of young people taking scientific degrees, and their developing high technology production.

> So, should we start packing our suitcases and scout the Internet for cheap flights to Beijing, Seoul, or Taipei? faces challenges, its strong foundations alone seem to be good insurance for the future. Others are catching up, but increased competition will only do the country good. The NYT article may be too alarmist, but it is a good sign of public interest in the well-being of science. This is essential if US science is to continue to prosper.

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Meditation By Andres Gottfried

What comes to your mind when you hear the word meditation? Is it an alien concept, is its meaning clear to you, or is it something you've never wondered about?

The first time I learned about meditation was almost 10 years ago. Growing up in a predominantly Catholic culture, I'd never heard mention of it or thought about it before. A girl I was dating at the time told me about a type of meditation she knew well, so a couple of weeks later I found myself sitting in a room with a group of people following meditation instructions. We were instructed to sit straight and comfortably, close our eyes, and follow our breath as it came in and out. Next, we were given a Sanskrit phrase, a mantra, to repeat mentally over and over again in sync with the inhalation and exhalation. The phrase meant "I honor my inner self." After some time, I felt a strong presence, a kind of vibrant and soothing energy being awakened within me. It made me feel joy and love for everything around me, including myself, yet there seemed to be no particular external reason for it. This experience got me hooked immediately. How was it possible to feel so happy and so good about myself and my surroundings without alcohol or drugs, or anyone loving me, offering me gifts, or telling me that I was great?

In the Indian scriptures, meditation is a spiritual practice regarded as one of the most direct means to contacting and achieving the divine. In Indian philosophy, divinity can be attained while still living in this world, and it is considered to be a state in which the individual person is in constant union with God. In Eastern spiritual traditions, 'God' is understood not as a personal Creator or judge, but as the state of perfect existence, all-pervasive consciousness and bliss. This experience is attained through the activation of one's own inner spiritual energy, through the



power of a perfected meditation teacher and regular spiritual practices like meditation.

More and more, Westerners are learning about meditation and its potential benefits for the mind and the body. Today, one can find many meditation paths, teachers, yogas, etc. I have not personally explored many of them, but I've learned that it all boils down to your own personal experience. If what you are hearing doesn't really match what you feel or what you see in others around you, then you should be cautious of false teachers, cults, and the like, which abound in our profit-driven society. In any case, meditation is like any other field of knowledge and it requires a teacher to guide one's learning.

The irony is that meditation is something quite natural to us all. A modern philosopher describes meditation as follows: "Artistic creation, sports, dance, teaching, counseling mastery in any field of endeavor implies that the thinking mind is no longer involved at all, or at least is taking second place. A power and intelligence greater than you and yet one with you, in essence, takes over.! There's no decision-making process anymore: spontaneous right action happens, and 'you' are not doing it. Mastery is the opposite of control. You become aligned with the greater consciousness.! It acts, speaks, does the work."¹ If people meditate regularly in such a way, why is it that more people don't experience an

exalted and blissful state? I believe it is because there is no conscious focus or effort to go within ourselves.

I have learned that meditation is not only a mental exercise to calm the mind and feel at peace, but involves going deep into one's own awareness and establishing a relationship with your deeper knowledge and joy, that inner consciousness, the soul, the spirit, the inner Self. This is why meditation is found in all religious traditions as a spiritual practice, because it is a way of realizing the highest human attributes and virtues.

Although I meditate regularly and have not achieved the ultimate goal of meditation, this spiritual practice has granted me many benefits in addition to bringing joy into my life. My concentration and focus are stronger and this allows me to do better in my work and interactions with people. But the greatest thing I have obtained from meditation has been the experience of knowing with firm conviction that there is a higher order and perfection in the world, of which I am a part, and that all the joy, love, and wisdom that I need, I can experience right here, within myself. Plus, when things on the outside get tough, I always have a place inside me to rely on for tranquility, clarity, abundance, and wisdom. Meditation is a practice I recommend for everyone.

¹ Eckhart Tolle, *Stillness Speaks*, page 23

The Language of the Rising Sun, Part I By Kenta Asahina

In the April issue, I talked a little bit about the translation between Japanese and English. Translation between any two languages is an intellectually interesting process, but unfortunately my experience has only extended to translation between these two languages.

I would like to describe how Japanese is different from English. The difference between these two languages is substantial, which is natural because the two language groups separated a long time ago. Japanese is close to Korean and native languages in East Siberia (which form a language group known as the Altaic group), but even Japanese and Korean are considered to have diverged at least several thousand years ago, and it is impossible for a Japanese speaker to understand Korean and vice versa. Contrary to the naive notion of most Europeans, the Altaic group is clearly different from the Chinese group, which forms an independent language group. In the following paragraphs, I will try to describe specific differences between Japanese and English, which may give me some excuses for how terrible my English is...

Please note, though, that this is a personal view and is not intended to guarantee that these are "correct" descriptions of the Japanese language.

1. A consonant should be always followed by a vowel.

In Japanese, one sound should be either a vowel or a combination of a consonant and a vowel. A consonant can never be recognized as an independent sound (except the "n/m"



Illustration by Kenta Asahina

sound). A thick Japanese accent of English is often caused by a speaker's tendency to add an odd vowel after a consonant. For example, "example" can become "i-g<u>za-m- p<u>-l<u>" to fill "gaps" formed by two successive consonants (<u> is the vowel typically added in the Japanese accent). A consonant usually determines the vowel to be added. The "d" consonant is associated with the "o" sound, the "ch" consonant with the "i" sound, just to mention a few. 2. Less variety of sounds.

There are only five vowel sounds in Japanese. English has at least 7 vowel sounds plus prolonged vowels and double vowels as derivatives. In the case of French, the number is a terrifying 12 (although some vowel sounds have merged). This simplicity also extends to consonants. A famous example is that a Japanese (or an East Asian in general) listener cannot distinguish "l" and "r" sounds. Japanese also does not have "th", "f" and "v", and some consonants can be used only with specific vowels (for example, "ts" can be followed by "u" only). Accordingly, it is sometimes very hard for a Japanese speaker to pronounce English words correctly.

3. No tense, no declension, no gender

There is no tense system or declension (change of case, such as "I-my-me-mine") in Japanese. On top of this, the conjugations dependent on the difference of person (Ivou-he/she), the difference of singular/plural, and the difference of gender are also absent. Verbs in Japanese do conjugate, but follow a totally different logic from the European conjugation system. Remembering a conjugation chart of English is a real pain for most junior high school students in Japan. I am still often confused about conjugation of verbs all the time while talking with others and end up saying something like, "... she saids that the person would shown up, but appar-

ently he haven't."

Even the sounds or basic grammatical rules are already quite different, which obviously confuse a lot of poor Japanese people around you.

PDA NEWS

This column provides reminders and updates of PDA activities and services.

The current PDA Representatives are Asifa Haider (Krueger Lab), Tirtha Das (Gaul Lab), Andreas Keller (Vosshall Lab), and José Morales (Auerbach Lab). They will be the PDA Representatives for 2004-2005. For more details, visit http:// www.rockefeller.edu/pda. Here are some highlights of what you can also find on the PDA website:

The PDA provides financial support for Clubs and Societies. Visit http://www.rockefeller.edu/pda/ PDAStructure.html (Section G) for more information.

Plan now! The Summer BBQ Policy covers interlab social functions held at the Faculty and Student Club throughout the year. To find out how to get funding for your next social event, visit and scroll down http:// www.rockefeller.edu/pda/ PDANews. html.

The Employee Assistance Program Consortium (EAPC) is a free, confidential, short-term counseling and referral service available to The Rockefeller University employees and their dependents. They are located at 455 East 68th St. To contact them, you can phone (212) 746-5890 or email EAPC@mail.med.cornell.edu. For more details, please visit http:// www.rockefeller.edu/pda/ PDANews, html.

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Course Review: Membrane Biophysics By Alexandra Deaconescu

Membrane Biophysics (2 credits) is offered every two years. The credit requirements include a final, oral examination and, unlike most other courses at Rockefeller, participation in a series of lab practicals. This is an intensive course consisting of two allday laboratory sessions and three lectures every week. Ten students registered this spring for the course, and the comments of five of them have been compiled below.

Comments:

Membrane Biophysics, it seems, is a rather misleading title for this course. To some, the title inspired "images of membrane dynamics, lipid-protein interactions and kinetics, and crystallographic protein structure models," while others expected that the course would cover aspects of ion transport as well as protein transport across membranes. However, this "illusion faded away within the first 20 minutes of lecture one, as equations for capacitance, conductance and calculus nomenclature" emerged on the board of the "completely packed" 3rd-floor Bronk conference room, and one realized that this course should really be

RUFP Film Series

Unprecedented: The 2000 Presidential Election. Wednesday, June 16 at 6 p.m. in Weiss 305.



Natural Selections needs you! Please send articles for publication, letters to the editors, or get involved in the production of *Natural Selections*.

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Lectures	Course Content	Credit Requirements
8.4	7.5	6.7
Overall Course Rating	: 7.8	

Ratings given out of 10, with 10 being the highest rating.



called "Electrophysiology." The "very stimulating," "inspiring," and "interactive" lectures constituted the strong point of the course, and featured Rockefeller's own David Gadsby, Sanford Simon, Jim Hudspeth, Tom Sakmar and recent Nobel laureate Rod MacKinnon, as well as guest speakers Fred Sigworth, Steve Siegelbaum and Alessio Accardi. The lecture content was balanced between current experimental research from guest speakers to reviews of classical electrophysiology.

The practicals were centered around key concepts such as the resting and action potential, neuro-

Flag Poll By Mary Abraham

The latest talking point on campus is the "Flag of Honor" shown on page 7, a 9/11 memorial containing the names of all the victims in the form of an American flag that has recently been placed in the joint lobby of Faculty House and Scholar's Residence, both RU apartment buildings.

According to the housing office, the "Flag of Honor" was purchased to replace an American flag that has been attached to the exterior wall of the building since shortly after 9/11. Beware of the Fugu (or the pufferfish) on your sushi platter! It produces a potent toxin, tetrodotoxin, which binds to and blocks voltage-gated sodium channels in the cell.

muscular transmission, the endplate potential and quantal nature of synaptic responses, and also covered techniques such as 2-microelectrode and patch recording in oocytes. Although the lab sessions have the advantage of presenting theory in a practical setting, "beyond pen and paper," the majority of the surveyed students felt that the labwork was "excessively long," "tedious," and "frustrating" as it took a few good hours to get the experimental set-up to work.

Nevertheless, students found the course "rewarding," "worthwhile to take," and highly recommended to anyone interested in neuroscience.

At that time, some residents had requested the display of a flag, and one was donated by a family. The "Flag of Honor" was considered by the housing office to be an improvement over the temporary flag on the exterior wall which was deteriorating due to wear and tear.

Shortly after the "Flag of Honor" went up, an email was sent on the listserv mailing list by an RU member, who highly objected to it because of the "strong political symbolism, especially considering the troubled present times," and offered to take a poll on the matter. This started a *Continued on page 7*

Mountry Marty Marting

How long have you been living in New York City? I've lived here for a little bit more than a year and a half. Where do you live? I live in RU housing on 70th St and 2nd Avenue.

Which is your favorite neighborhood? Like many people, I like Brooklyn.

What do you think is the most overrated thing in the city? And underrated? Jazz clubs are overrated. They're expensive, full of tourists, and they show a dead music. The good dives of the Upper East Side are underrated: Subway Inn, American Trash (a place particularly appreciated by German hipsters).

What do you miss most when you are out of town? The noise. When I leave town, I start to hear a buzz in my ears when I go to bed, because the environment is too quiet. It wasn't like that before I arrived in New York, and it makes me realize how much my hearing has degraded after almost two years and many loud concerts in the city. This is stressful. When I come back to New York, the ambient noise covers the buzz and it's OK.



Loic Le Goff Postdoctoral Associate Hudspeth Lab Country of Origin: France

If you could change one thing about NYC, what would that be? I would like to see more kids playing in the streets of Manhattan (a thing that I have only yet seen in Harlem).

Describe a perfect weekend in NYC. After getting enough scientific results on Friday afternoon not to worry for a couple of days, I would get up pretty late on Saturday and go to the swimming pool. This perfect weekend in NYC would be a warm spring or summer weekend, so that in the afternoon I could walk around the places I like, for example, the Bowery (to check the record stores Downtown Music Gallery and Jammyland), along Delancey Street and the Williamsburg Bridge. I would also go to listen to some live music, probably at Tonic in the Lower East Side, or maybe at Northsix in Brooklyn. I personally prefer the music at Tonic, but I've realized there are more girls in Brooklyn clubs. On Sunday, I would go

for a bike ride in the city, trying to find nice places that I don't know of. In the evening, I would go back to these places with a friend.

What is the most memorable experience you have had in NYC? Nothing exceptional, but having to go to the New York City Criminal Court, for trespassing a private property, was quite interesting. In the waiting line, I was surrounded by nervous crackheads who were in pretty bad shape (apart from my neighbor, who had peed on a tree). My case was dismissed.

If you could live anywhere else, where would that be? Paris, where I studied before coming to New York. Berlin, London, Barcelona.

Do you think of yourself as a New Yorker? Why? Not really. I was born in the countryside, and I'm a hick. I don't think New Yorkers, if they exist, would consider me as one of them. But anyway, that's the point: A majority of people here are like me. What I love in this city, as in any big city, is that it is mostly made of recent immigrants. New York is not really made of New Yorkers. And you cannot really define a New Yorker.

"Flag Poll" continued from page 6

debate in which a large volume of emails were exchanged expressing strong opinions both for and against the removal of the "Flag of Honor". The discussion has been wide-ranging, including such topics as censorship, use of a shared space, the international dimension of a 9/11 memorial, and the rights of foreigners to criticize the US.

On 5/21, the poll results of 105 respondants were 59 to take it down and 46 to leave it up, although it remains unclear how many of the respondants are residents of the buildings in question. The discussion continued on after that date, with no decision having yet been made on the fate of the "Flag of Honor".



Much Tattoo About Nothing? By Edward Hamilton

Cracking open a bottle of Champagne has long been the traditional means to celebrate the publication of scientific papers. However, the more avant-garde scientists amongst us consider such festivities to be "lame" and "totally bourgeois". For scientific hipsters, the in vogue way to commemorate scientific success is to hop the F train to the Village and emerge with a permanent tattooed memento of their achievements.

It is thought that this phenomenon began in the late 1990s, spearheaded by NYU grad students seeking to maintain NYU's reputation at the forefront of downtown scientific cool. The idea rapidly caught on and today enjoys the greatest popularity amongst the mouse geneticist community.



The tattooing craze does have some opponents. Some Rockefeller P.I.s often express reservations about a procedure they consider a distasteful display of scientific exhibitionism. Students have also expressed disquiet about the peer pressure to get a tattoo. Those who opt out of the procedure are often ostracized by colleagues for lack of commitment to their work.

I asked one student to describe the experience of getting a tattoo. "Actually" he replied, "doing the cloning for the paper was much more painful".



Hey,

bat

That's a coo

by Seall Tavellia

Howzzat! Cricket at the Tri-Institutes By Vasant Muralidharan

Cricket, as you may or may not know, is one of the most popular pursuits in the world. Especially if your world happens to be the Commonwealth, i.e., the former British colonies. It was invented somewhere in Olde England around the 16th century. For those, who don't know what I'm talking about, it's a sport involving a bat and a ball. The rules may seem complicated for the uninitiated. The best way to learn is by having the good fortune of being born in the Commonwealth or just start playing. A few of us from the Tri-institutes have started playing this revered game every week. Don't worry, we only play an extremely abbreviated form, better known as Gulli Cricket in the Indian subcontinent. We are trying to form a team

and join an amateur league in New York. Even if you have never played before, come and try it, there are a few with us who have never played the game. We play every Tuesday from 7.00 to 9.00 p.m. at the indoor basketball court at Olin Hall (69th and York). Now that the weather is nice, we will start playing outdoors on the weekends. For more information please email me: muraliv@rockefeller.edu.

Are they still

u point?



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