

Natural Selections

A NEWSLETTER OF THE ROCKEFELLER UNIVERSITY COMMUNITY

DRUG RESISTANCE

An Interview with Marcia Angell

FLORENCE KOEPEL AND FABIENNE BRILOT-TURVILLE

Marcia Angell, M.D., was the first woman to serve as editor-in-chief of *The New England Journal of Medicine*. In 1997, *Time* magazine named Marcia Angell one of the twenty-five most influential Americans. Currently a Senior Lecturer in the Department of Social Medicine at Harvard Medical School, she was invited by The Rockefeller University to give the Insight Lecture on March 20 about her book *The Truth About the Drug Companies* (2004). *Natural Selections* interviewed her regarding this polemical topic.

Natural Selections (NS): Do you think things have changed since the publication of your book?

Marcia Angell (MA): More people are now conscious of some of the problems. Not just because of my book, there have been several books published at about the same time. They looked at somewhat different aspects, but they were all quite consistent. I think there's some increased awareness.

NS: What is the increase in drug expenditures due to?

MA: We can divide it into three reasons: the increase in volume, the increase in prices of new drugs, and the inflation. Each is responsible for roughly a third.

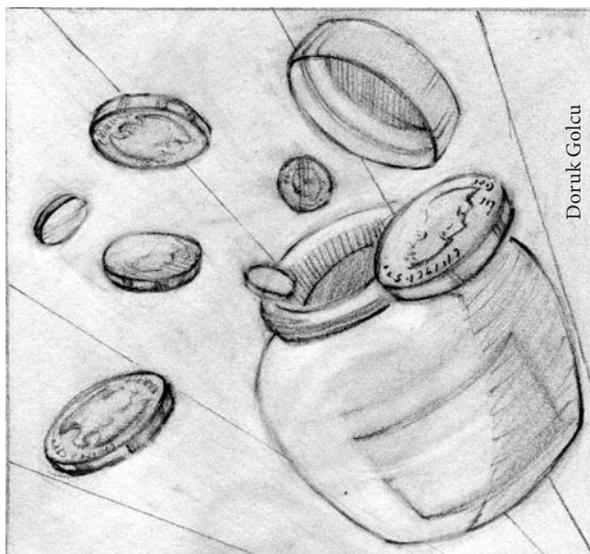
NS: Do you think this increase in prices goes along with the huge cost of health care?

MA: It's actually a little bit faster. Spending on drugs is still only about 12% of the total health bill, but the price of drugs is increasing faster than most other parts of the health care system.

NS: What do you think about this huge cost of health care in general in the US?

MA: It's really the private insurance industry. Our health care system is a market-based system that involves hundreds, maybe thousands, of investor-owned private insurance companies. They keep

their profits up but their premiums down by stinting on medical services, by not insuring high-risk patients at all—if they



can get away with it, and by limiting the coverage of those that they do insure. They also try to get somebody else to pay for it—often the patient himself—through co-payments, high deductibles, or denying claims. We have a health care system that is based on avoiding sick people. Isn't that strange? That's how it works. And that takes a lot of paperwork and a lot of overhead, by which I mean profits, marketing, and administrative cost. We spend roughly twice as much as other countries on overhead, much of which serves the purpose of not providing the services to people who need them.

NS: Although the pharmaceutical industry is making huge profits, Pfizer is laying off more than 10,000 people. How can we explain that?

MA: It all goes to the nature of investor businesses. Wall Street demands companies' profits to be higher this year than what they were last year. It doesn't matter how profitable they are today. It matters how profitable they're going to be tomor-

row. That's what investors are looking at and this is the reason why they buy the stock. So in a sense, you can call them victims of their own success. They are so enormously profitable that they have to keep up. When you run the 4-minute mile, then you have to do it in 3 minutes and 59 seconds. They have to go even beyond what they're making today. This is not about matching the profit, it's about surpassing the profit. That's getting increasingly hard. So, they look to cut costs.

NS: Society in general, including patients, doctors, and the government, has some responsibility for the problem of prescription drugs. Can or should patients be educated?

MA: I'm reluctant to blame the victim. I do think that the public and the patients have bought on the belief that

there is a prescription drug for every ailment and discontent. They have done that more than they should. They haven't been sufficiently skeptical. I think they're starting to question. I talk to groups made up mainly with people from the public. What I find is that they know something isn't right about the pharmaceutical industry and about the health care system in general. But they don't trust their instincts. They say, "It seems to me that they are charging too much for too little. But I don't know, I'm not an expert." They're beginning to respond with an instinctive intuition that things aren't right, but they're not to the point yet where they're willing to trust themselves. I think that patients have got to give their doctors permission not to prescribe a drug. When they go to see a doctor, it's very easy for the doctor to hand out a few samples or to write a prescription. When doctors do that, it looks like they're taking the complaint seriously. They're getting the patient out of the office in a hurry

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and doctors are now under pressure to see more patients faster. It is an easy solution for everybody. I think that patients may have to say to their doctor: “Do I really need a drug for this? Isn’t there any treatment that might be better? If you do think I really need a drug, would you give me a generic drug or the cheapest version available?” This dialog has to go on and I think doctors would be relieved.

NS: In 1997, an Act of Congress softened regulations on direct consumer advertising on television. How did we get there and how is it regulated?

MA: As the industry became wealthier and wealthier, it became more and more influential. It has now an enormous amount of influence in Washington. So, the laws that relaxed the criteria for direct consumer advertising were a gift from Congress in 1997. To a large extent, the Congress is bought and paid for by special interests. The most special of all is the pharmaceutical industry, so they made it happen. The FDA is supposed to regulate the content of the ads to make sure that they are balanced and accurate. They don’t do that. It isn’t so much that you need new laws,

“We have a health care system that is based on avoiding sick people.”

you just need to enforce some you already have. I would prefer no direct consumer ads but given that there are, I think they can be regulated much better.

NS: Do you think a partnership between biotech companies, which have good ideas but lack the infrastructure to develop their discoveries, and the drug companies is bound to happen?

MA: It all depends. There are a lot of biotech companies, particularly start-up companies, that are connected to universities. They have one product and are not profitable. In fact, most biotech companies are not profitable at all. The investors invest in them because they are gambling. What these companies are hoping is that a big pharmaceutical company will come along and buy them. Then, the university, the faculty researchers, and the small biotech company all gain. This is done usually on the basis of public-funded research, performed initially in the university, then handed off to the biotech company for initial development, and then handed off to the pharmaceuti-

cal industry for marketing—that’s mainly what they do with clinical trials. So everything would depend on the product. Sometimes the public pays twice; it pays for most of the research and most of the development, and then it pays again at the drug store. Overall, does it make sense to go from the university to a biotech to a big pharmaceutical company? I don’t see anything wrong with that if the terms are reasonable.

NS: Do you think we should go towards personalized treatments?

MA: I favor anything that works. By *work* I don’t mean *that earns a profit*, I mean *helping people’s health care*. I don’t see how it can work commercially for the big pharmaceutical companies. After all, if we look at their current behavior, they are trying to sell drugs to the biggest possible market. A market of one person is not that much of a market. Just in Economics 101, why would you make a drug for one person? I don’t see the incentive. Insofar if they do that, it would be at exceedingly high prices. Who is going to pay for those? Is it a kind of new boutique drug development that the wealthy might get but nobody else would? That worries me a lot.

NS: In the US, all kinds of dietary supplements are sold commonly over-the-counter. Should they be more controlled?

MA: There is currently no pre-marketing regulation of dietary supplements. They were removed from the requirement that they have to show effectiveness and safety to the FDA in 1994 by the DSHEA [Editor’s note: Dietary Supplement Health and Education Act of 1994]. It was made so that you can put anything you want in a bottle, put it on the shelf, and sell it, without clinical trial whatsoever. The only stipulation is that you are not allowed to claim that the dietary supplement either prevents or treats a medical condition. To go around the legislation, companies have developed code-language. For example, supplement bottles are labeled with the mention “this dietary supplement promotes prostate health,” therefore, they haven’t claimed that it cures prostate cancer or that it prevents it, but everyone knows what the supplement is supposed to do. It has become a huge business.

The difference between the US and Europe, as far as I am aware, is that Europe regulates manufacturing standards; what is said to be in that bottle has to be

- Mary Abraham
- Andres Bendesky
- Fabienne Brilot-Turville
- Manuel Castellano-Muñoz
- Jiabin Chen
- Ileana Cristea
- Paula Duque
- Florence Koepfel
- Monica Lee
- Bluma Lesch
- Anna Magracheva
- Aileen Marshall
- Georgia Patikoglou
- Jonathan Robbins
- Prerana Shrestha
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in the bottle. It is just as bad in terms of whether it is effective as doing anything or not, but at least you know that it is not just weeds from somebody’s backyard in a bottle. In the US, tests on dietary supplements have been performed. For example, *Consumer Report* tested several bottles of dietary supplements supposed to contain a certain concentration of ginseng. Some of them did not have ginseng at all, some had ten times that concentration. You don’t really know what’s in that bottle. That’s dangerous, and it’s also a scam since some dietary supplements haven’t been shown to be effective at all. I am very critical of this. I think that if you take something for your health, you are entitled to know whether it is effective. No matter how they coach the language, companies ought to show that their product is made according to the FDA’s standards of safety and effectiveness. The FDA can get involved only after reports that something happened. For example, Ephedrine was removed from the market after there were many reports of death.

NS: You wrote a review of the movie *The Constant Gardener* for *The New York Review of Books*. Is it really a fiction that the third world is our guinea pig?

MA: No, that is not a fiction, it’s true. In

that respect, everything that the book said and that the movie said about the behavior of the pharmaceutical industry in general was correct. What was not correct was the particular story of the two people. There is no way, I think, that the drug companies would have a woman murdered who did what she did; they don't have to do that. She wouldn't even be on their radar screen, even if they were willing to do it. The kind of things that this fictional character exposed is really standard practice for drug companies, they don't try to hide it. So it was an odd combination of the real with

the unreal.

NS: Drugs, such as HIV microbicides for instance, are currently in clinical trials in Africa. What are the chances that such trials would take place in the US?

MA: It would depend. There are trials in Africa that I'm sure could not take place in the US. Others perhaps could, it varies. If drug companies go to underdeveloped countries, they can escape, to a large extent, the scrutiny that they would undergo if they were in developed countries. So we don't quite know what they're doing, and that's the problem.

NS: What are your future plans?

MA: I just became a grandmother and I am spending lots of time in Seattle. I also teach at Harvard Medical School. This book has kept me very busy. Now I am regrouping. ☉

Reference

Marcia Angell, *The Truth About the Drug Companies: How They Deceive Us and What to Do About it* (Random House, 2004)

The authors wish to thank Gloria Phipps for her kind help in arranging this interview.

PDA Update: Tying up Loose Ends

PATRICK LUSK

In recent months the PDA surveyed both the postdoc and RA populations in an effort to gather information to best address potential postdoc problems with the administration. The first survey dealt with the current rental and salary situation among postdocs/RAs and also contained questions regarding ResNet. The second survey dealt with a new PDA effort to lobby the administration regarding the need for the inclusion of the postdoctoral body in the university pension plan. A summary of the questions and answers can be found on our Web site: www.rockefeller.edu/pda. In the time following the completion of the surveys, the PDA has published two articles (in the March and April editions of *Natural Selections*) that identified what we felt were the major points and problems with the current situation of postdocs at RU. We have since met and discussed these issues with the appropriate individuals in the administration. The results of these discussions are summarized below.

Housing

While in large part the majority of survey respondents did not report any problems with housing, there were a few concerns that we brought to the attention of the housing office and the vice president of Plant Operations. As has been the case in the past, these concerns were taken seriously. The survey revealed a few potential discrepancies in rental rates, which have since been looked into and corrected (if needed), and the tardiness in receiving lease renewal documents was a result of the massive restructuring of the rental system implemented in July 2006. Expect your lease within 30 days of its renewal date in the future. Perhaps most importantly, the housing office is attempting to become as transparent as possible by keeping their Web site (and housing brochure) updated with current rental rates and codifying the procedures for how certain aspects of the housing office are run. Policies governing the maintenance of the housing and transfer waiting lists, for example, will be public in the near future. In addition, incoming postdocs will be notified once the housing office has received confirmation of the postdoc's official appointment date, so that they will know when they are placed on the housing waiting list.

Residential Network (ResNet)

In the last few months, the hiccups that resulted while setting up ResNet in both the 70th and 81st Street buildings have been corrected and all residents should have consistent online access. Concerns in Faculty House regarding a lack of bandwidth have also been

addressed. As evidence for improvement, there has been a dramatic drop in the number of reported problems. Nonetheless, if you are experiencing problems with your Internet connection, IT has set up a Web site to help you address them: <http://www.rockefeller.edu/housing/resnet.php>.

Salaries

In our survey there were a few individuals who reported incomes below the newly mandated salary minimum guidelines. Human Resources (HR) investigated these potential discrepancies and discovered that in every case these individuals were employed by the Howard Hughes Medical Institute (HHMI). HHMI mandates lower salary ranges that are not under the control of RU. While those of you employed by HHMI may be upset, please bear in mind that HHMI does make significant contributions on your behalf to a tax-sheltered retirement plan.

Retirement

We have met on a number of occasions with HR in an effort to define a strategy to allow postdocs access to The Rockefeller University's pension plan. HR conducted an extensive survey across the US to gather information on how other universities were addressing this issue. Here, as at all US institutions, one of the many issues (outside of securing the funds required for such an initiative) relevant to incorporating postdocs into a tax-sheltered retirement plan is that postdocs with external fellowships are deemed ineligible for these important benefits (since they are not employees). Some institutions have chosen to allow postdoc associates (employee postdocs) to participate in a given retirement benefit while simultaneously denying access to postdoctoral fellows (non-employee postdocs, with outside funding). Our administration (and we support this completely) feels that a retirement benefit should be available to the entire postdoc population regardless of whether they receive external funds. One of the challenges, therefore, is to come up with a solution to this problem. In an accompanying piece in this edition (National Postdoc Association Annual Meeting Summary) we describe how Princeton University has solved this issue by allowing postdoctoral associates access to their tax-sheltered annuity plan, while postdoctoral fellows are given income supplements instead. The PDA feels that a similar policy here at RU would be the most fair and practical. We urge postdocs to share their thoughts and suggestions on this important topic by contacting your PDA representatives at pda@rockefeller.edu. ☉

National Postdoctoral Association Annual Meeting Summary

KRISTINE NOWAK AND HUIDONG WANG

At the end of March, two of our Postdoctoral Association representatives attended the National Postdoctoral Association (NPA) Annual Meeting, in Berkeley, CA. This two-and-a-half day meeting was intended to bring together postdocs and officers of postdoctoral affairs, in order to help fulfill the NPA mission to “enhance the quality of the postdoctoral experience.”

The first day of the meeting was designed for Postdoctoral Association (PDA) leaders and Postdoctoral Office (PDO) representatives from university administrations. Two parallel sessions (one for PDA leaders and one for PDOs) addressed issues of interest to each group. We attended the PDA session and had a chance to compare our PDA and postdoctoral program to those of other universities across the country. As it turns out, since our administration has taken some initiative to improve our postdoctoral experience and the PDA has successfully advocated for changes, RU postdocs enjoy one of the best postdoctoral programs in the country. For example, many institutions do not give letters confirming appointments; many do not offer benefits such as family health insurance plans and tax-deductible flexible accounts; at several institutions, such as large land-grant universities, there are no standardized salary minimums, let alone a sliding scale of ranges covering years of experience. Affordable housing is not an issue at most universities, so our residential program is rather unique in that respect. One source of information about various institutions is the NPA policy database, which can be found through the NPA Web site at <http://www.nationalpostdoc.org>. Feel free to compare us to other institutions and see how varied postdoctoral experiences can be. This does not suggest that there isn't further work to be done: we are entertaining several ideas on how to improve our PDA to best enhance the postdoctoral experience at RU.

The rest of the meeting was of interest to all postdocs, and there were some in attendance who were not representing their institutions as PDA leaders. There were reports on the progress of the NPA on their recent projects, such as advocating the creation of a standard definition of a postdoc to be used across all institutions (one of which was recently created by the NIH and NSF). Further agenda items for the NPA include funding professional development for postdocs and increasing mobility of international postdocs,

so that they are not tied to an institution because of their visa status.

The meeting also included several short concurrent sessions. One session covered retirement benefits for postdocs, and profiled the benefits offered by two institutions, the University of Pennsylvania and Princeton University. U. Penn treats all of their postdocs as “trainees” (analogous to our postdoctoral fellows, i.e. those who have outside funding and thus are not classified as “employees”); accordingly, they have no access to retirement benefits, but do have health insurance, which is provided with no premium cost to the postdoc. Princeton has two classes that mirror ours (associates, who are employees, and fellows, who have outside funding). Previously, only associates had retirement benefits, which include an employer-contribution plan, and other benefits we enjoy here at Rockefeller such as disability, long term care insurance, and flexible spending accounts. As a result, very few postdocs at Princeton were applying for fellowships, because losing employee status meant losing several benefits. Princeton recently re-evaluated their benefits and decided to give equivalent, though not necessarily identical, benefits to fellows. Several institutions are addressing the issue of employment status of postdocs based on their funding source, as status directly affects several aspects of employment such as payroll taxes, benefits, and eligibility for retirement plans. For more information on this issue, please refer to our article (Another Postdoc Burden) in the April 2007 issue of *Natural Selections*.

Another session addressed the career lifecycle needs of postdocs. The Student-Postdoc Advisory Committee (SPAC) at the Fred Hutchinson Cancer Research Center has identified different needs of postdocs at early, middle, and late stages of their postdoctoral training. For example, they provide postdocs in the early stage a “survival guide” that describes Center resources and policies and provides helpful information for living in Seattle. As postdocs progress, SPAC addresses additional needs such as career development skills, and tools for annual progress review conversations with mentors. To address the needs of senior postdocs involved in job searches, they have established peer mentoring groups to exchange expertise in various skills such as interviewing, public speaking, networking, and CV and résumé writing.

A few sessions during the meeting addressed the topic of mentorship for postdocs. Mentoring can significantly enhance the ability of students and postdocs to enter their ideal careers successfully. Many postdocs do not receive appropriate mentoring, and unfortunately there is no easy solution. UCSF provided an example of how to advocate for and establish a mentoring program. They pair postdocs and students with faculty members in addition to their PIs to facilitate mentoring. Some other potential solutions were suggested and/or tried by a few institutions, including establishing mandatory individual development plans (IDP); there are 20 universities across the country which have mandatory IDPs for their postdocs and mandate annual reports from PIs summarizing their postdocs' career progress and future directions. The mentoring issue will continue to be one of the major topics on the NPA agenda.

Elias Zerhouni, Director of the National Institutes of Health, gave the keynote address. He gave a very inspirational speech about his visions for the future of biomedical research in general, and changes to postdoctoral training in particular. He has been a key advocate for expanding the opportunities available for young investigators, and he has created a New Career Path Committee at the NIH to evaluate the training practices and postdoctoral employment policies in NIH-funded institutions and how they can be improved. We are pleased that the director of the NIH is taking the initiative to make institutional policy changes to improve postdoctoral training in our country. Just as it takes changes in the attitude of faculty to change postdoctoral experiences at an institution, it also takes changes in attitudes of funding agencies to advocate change at institutions.

In summary, the NPA meeting was a very valuable experience for the PDA reps, and as a sustaining member institution we hope to be more influential in the NPA, as well as benefit more from membership. The NPA Web site is a great source of information for both postdocs and graduate students. Any postdoc at Rockefeller can get a free limited membership at the NPA and take advantage of their member benefits. Please visit their Web page, <http://www.nationalpostdoc.org>, for more information. As always, if anyone has any questions or suggestions for the PDA, please send us an e-mail at pda@rockefeller.edu. ☉



This month, Natural Selections features Linden Clement Baynes, Security Guard at The Rockefeller University
Country of Origin: Guyana

New York State of Mind

1. **How long have you been living in New York?** 23 years.
2. **Where do you live?** I live in Brooklyn—in a very diverse neighborhood.
3. **What is your favorite neighborhood?** My favorite neighborhood is in Bedford Stuyvesant, specifically around Fulton and Hull Streets where there are new housing developments.
4. **What do you think is the most overrated thing in the city? And underrated?** Underrated: I think that many people from out of state think that New Yorkers are rude and stuck up. When the opportunity arises, they will see that New Yorkers come together and try to help and improve the situation (for example, the events of 9/11). New Yorkers are actually very helpful and very nice.

OVERRATED: I think the pizza in New York is overrated, because I have had pizza outside of New York and it is just as good and sometimes better.

5. **What do you miss most when you are out of town?** What I miss most is that outside of New York City transportation is much more difficult—especially at night. In NYC, transportation is very efficient. In many places outside of NYC you need a car to go anywhere, but in NYC you don't really need a car.

6. **If you could change one thing about NYC, what would that be?** If I could change something I would lower the rents and taxes in NYC.

7. **Describe a perfect weekend in NYC.** Taking friends and family to Coney Island in the summer. Coney Island has the water, the rides, Nathan's, the Aquarium.....There is just so much to do there, and there is not enough time to do everything in Coney Island.

8. **What is the most memorable experience you have had in**



NYC? The most memorable experience that I have had in NYC were the events of 9/11.

9. **If you could live anywhere else, where would that be?** If I could live anywhere it would be in Pennsylvania, because it is quieter, it's in close proximity to NYC, the homes are more spacious, and the change of seasons in Pennsylvania is especially breathtaking.

10. **Do you think of yourself as a New Yorker? Why?** Yes, I would consider myself to be a New Yorker because I've been living here for so long ☺

The Rockefeller University Film Series

ALEXIS GAMBIS AND LUKASZ KOWALIK

Claude Nuridsany and Marie Pérennou's *Microcosmos* (1996) is a portrait of life beyond anything we could imagine and yet almost beneath our notice. The film is an ode to the little, the small, and the microscopic, and has probably one of the largest casts of all times. Beetles, ants, wasps, butterflies, snails, mosquitoes, darning needles, and dozens of other assorted bugs fill the screen going about their everyday chores. They build nests, hunt for food, pollinate flowers, battle over territory, and procreate. For viewers with spiritual inclinations, there is also quasi-religious imagery: mantises that pray and bugs that walk on water. The microscopic drama of *Microcosmos* is surprisingly engrossing primarily because of the exquisite detail of the photography. Through the microscope lens

of Nuridsany and Pérennou, blades of grass are as tall as skyscrapers, puddles become oceans, and seconds turn into days. This portal into the microcosmos is an evening not to miss. Accompanied by the whizzes, buzzes, and chirps of starling creatures, and the orchestra music as insects stomp the grounds, come enjoy a fascinating romantic comedy filled with drama, mystery, eroticism, and mesmerizing beauty. The acting is unforgettable: the frog is superb as it chooses a group of water bugs for an afternoon snack, and the beetles are fierce as they engage in a duel at the tip of a rock. This film is far more than just a nature documentary; it reminds us all that no matter how grand or small we are in this world, we all experience life's triumphs and setbacks, tragedies and celebrations.

In what has become a tradition of sorts, we will finish the season with a movie geared towards families in our midst. And we're presenting nothing else but an Oscar-winning, inspirational tale of a tap dancing penguin—*Happy Feet*. The premise of the film is vaguely ridiculous, but the execution stunning. Emotions run deep. This is no *Finding Nemo*—you will find yourselves engrossed. Special invitations for the youngest members of our community! Please note that this screening is on a Saturday at 3 p.m.!

Microcosmos—Monday May 7 at 8 p.m.
Happy Feet—Saturday May 19 at 3 p.m.

The free Film Series screenings are in Caspary Auditorium. All members of the Tri-Institutional community are welcome. ☺

A Night With David Lynch

ENGIN OZERTUGRUL

On the night of January 12, from where I was sitting, Alice Tully Hall at Lincoln Center seemed to diverge into two worlds. The first world was represented by more than 90 RU members who were seated behind me in the balcony. In this world, human consciousness is viewed as an entity readily accessible by objective observations derived from quantitative measures of electrical impulses, blood flow, and biological chemical changes in different brain regions during different cognitive, behavioral, and emotional conditions. In the second world, David Lynch defined consciousness as “nothing” and “everything,” a description which defies all types of traditional scientific definitions. As the night progressed, David Lynch described Transcendental Meditation (TM) as a method to dive into human consciousness where one experiences utter awareness and profound peace. David told us that TM was the fire behind his creativity and film making ability.

Since the late 1950s, TM groups tried to convince scientists that the positive changes reported by TM practitioners could be verified through scientific methods. The first research results were published in *Scientific American* in 1970. Since then, TM advocates deliberately shied away from the inclusion of subjective descriptions of TM, fearing that TM won't be accepted by the scientific community.

That night David Lynch did quite the opposite; there was no mention of scientific research validating the benefits of TM. His talk was rather disappointing for those who expected some objective criteria or some explanatory mechanisms as the basis of his fertile creativity, but he offered none. Instead, he delivered an odd and inspirational speech based on his personal experience with TM.

So far, we have seen two very distinct TM introduction strategies which both come with their unique problems. In the first, focusing on TM's scientific value alone has not been an effective one for one good reason. Information, regardless of its ingenuity does not always lead to “doing.” For instance, we know that exercise is good for us, but for the most part the only people who stick to it are the non-obese and fit ones. In the second, TM's subjectivity seems to be more problematic even with David's self-convincing descriptions. For instance, when you share your lucid dreams with someone, you realize words become inadequate to fully describe them. The whole experience of your dreams, such as the

colors, feelings, and excitement diminish as you attempt to match words to your actual experiences. This brings us to a bigger problem of our times; subjectivity versus objectivity.

At first glance, it would seem impossible to think that subjective experiences could possibly find a place in science, given the excessive reliance on objective and concrete measures in science and the lack of explanatory mechanisms in subjective experiences. In reality, however, the distinction between objectivity and subjectivity may not be as clear-cut as we wish it to be. Imagination, intuition, creativity, the moment of insight and understanding have always been integral to the progress of modern science. Intuition-based scientific enterprise plays a central role in many scientific discoveries. Let us be reminded that Einstein's groundbreaking General Theory of Relativity and Special Relativity are largely based on intuition, insights, and parables. In conventional sense, Einstein never performed a single experiment in his life.

Of course, there are those who are unaware of the scientific data validating TM's benefits, and dismiss it altogether as “voodoo science”¹. If we measure TM's progress as an attempt toward a complete integration of subjective and objective components, based precisely on our individual capacity to produce, create, and promote peace, (as beautifully expressed through David and Donovan's art), then it is certainly a practice worth pursuing.

If we hope to make a successful evolutionary leap forward, we may need to reconsider mainstream view of “right” and “wrong,” “either this or that” and start thinking “how can we integrate all these ideas and facts to create a new solution.” Einstein once said, “We cannot solve problems using the same thinking that created them.” We have to learn to think in a new way². In *The Quark and the Jaguar*, Nobel laureate Murray Gell-

Mann says “if something new is discovered (and reliably confirmed) that does not fit in with existing scientific laws, we do not throw up our hands in despair. Instead, we enlarge or otherwise modify the laws of science to accommodate the new phenomenon”³. The David Lynch Foundation For Consciousness-Based Education And World Peace offers us a new way to look at the world's most challenging problems.

As proclaimed by their practitioners, TM contributed to two beautiful art forms that many enjoyed over the years through David Lynch's films and Donovan's music. Entertainment aside, that night David Lynch and Donovan invited us to uphold a tenet that seemingly contradicts reason, a purely artistic expression of TM. This is not something that young bright scientists do to advance their research careers. Naturally, some will shrug their shoulders and walk away, while some will have sufficient curiosity to inquire further. ☺

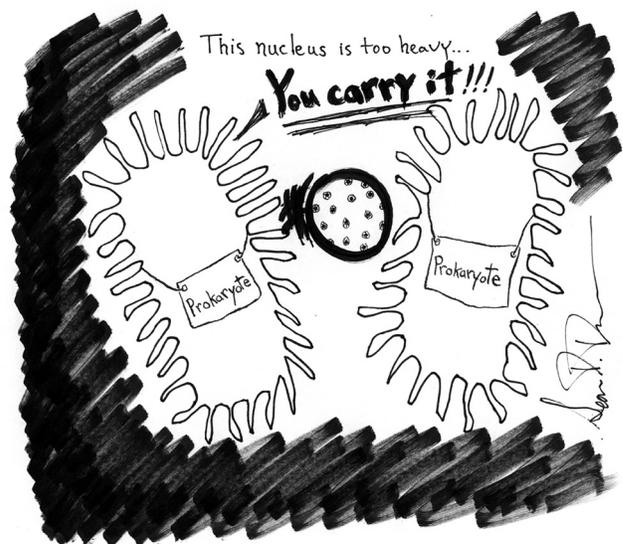
Note: The views expressed on this article are mine alone and do not necessarily represent the views or the opinions of the TM official Web site or the David Lynch Foundation.

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ACADEMIA NUTS

cartoon by Sean Taverna



Another great moment in evolution and nomenclature

Novel Writing (Live From Wessex)

Reading *The Return of the Native* by
Thomas Hardy

HEATHER KING

I have this beat-up copy of *Moby Dick* full of margin notes by students who attended my high school and passed it down or sold it back to the bookstore. Somewhere in the chapter on cetology the phrase “THIS BOOK SUCKS” is written in block letters across the bottom of the page. I didn’t write it, but I remember smiling conspiratorially. At 15, I really did think *Moby Dick* sucked. Now I think it’s the most beautiful, insightful thing I’ve ever read. The way we read changes.

After college, we’re (hopefully) more open to literature and not put off by the strangeness of Gogol’s galloping troika or the crazy genealogy of Nabakov’s *Ada*. Moreover, we are willing to feel our way through strange places and unfamiliar times to get to those characters who love and suffer in the same complicated ways that we do. C.S. Lewis said, “We read to know we are not alone,” and people who love books understand that they are not only an adventure, not only an education, but ultimately a comfort because they let us know what is poignant about our own life is there in the lives of others.

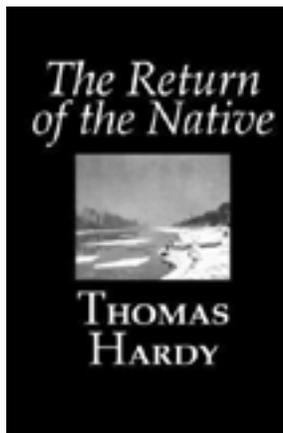
Many years later, I am starting to realize the way we read keeps changing after the transition from “THIS BOOK SUCKS” to being hopelessly in love with Henry James. You more seasoned and perceptive readers out there have probably already noticed such a transition, but for me it took a recent reading of *The Return of the Native* by Thomas Hardy.

Thomas Hardy needs no review by me. Certainly, there are plenty of high schoolers out there who might think “THIS BOOK SUCKS,” and there’s always that pretentious ass who fancies himself a real iconoclast and will give you five reasons why any great novel isn’t really, but most can agree *The Return of the Native* is a good read. Hardy brings you into the story through Egdon Heath at dusk, and there you remain until the novel’s end. The heath is “a thing majestic without severity, impressive without showiness, emphatic in its admonitions, grand in its simplicity,” and a great place to spend a few days. The writing is gorgeous and so perceptive it often inspires that half-laugh you get when something is not so much funny as spot-on. The thing I really love about this book though, is how Hardy’s characters force the reader to think twice about them.

From the young maid to the grim aunt to the returning native himself, they are more than multi-dimensional—they are unpredictable in the way that characters who represent some general type can never be and real people always are. A tangled love story with oedipal elements and secret rendezvous might sound ready for prime time (or Lifetime), but this one is not nearly so easy or generic. Even impassioned, star-crossed love is subject to scrutiny. When Eustacia Vye summons her lover to the heath for a forbidden encounter, the narrator points out, “Whenever a flash of reason darted like an electric light upon her lover—as it sometimes would—and showed his imperfections, she shivered thus. But it was over in a second, and she loved on. She knew that he trifled with her; but she loved on.”

There was a time when I may have read through that holding on to the idea Eustacia loves on because she loves so deeply. At this point in the novel, it’s established Eustacia is beautiful and brilliant, so it would follow that she loves with passionate perfection, right? But here and elsewhere Hardy begs the reader to be a bit more mature and to ask—is she not a bit self-indulgent? Is it possible that grand passion can be an easy guise for a toxic combination of boredom and vanity? The thought makes me want to re-read a few other novels and re-evaluate a few other characters. Ten years ago I would have responded with a hearty “Never!” to the following question posed by Eustacia: “But do I desire unreasonably much in wanting what is called life—music, poetry, passion, war, and all the beating and pulsing that are going on in the great arteries of the world?”

In the context of this novel, however, the answer is yes, and like the answers to so many questions the novel asks, it is not the most exciting, but one that deserves consideration. If you like novels, you may want to try it or try it again. It is a highly readable bit of literature with a refreshingly anti-romantic lesson, and it gives readers a chance to consider how they respond to people they meet on (and off) the page. ☉



In Our Good Books

Some reading suggestions have been kindly written by staff members of the downtown bookstore McNally Robinson.

Man Gone Down, by Michael Thomas

Not a plot-driven page-turner, but no less riveting. One of the most intricately detailed surveys of interior life I’ve read. This is a great work of fiction, particularly if you judge it by the standard of how it does the thing that no other art form can. Like Joyce or Ellison, Thomas’s gift is for penetrating consciousness, revealing the Brueghelian landscape of our minds.

To Kill a Nation, by Michael Parenti

Little has been covered about the former Yugoslavia since the civil war that unfurled there in the 1990s. Parenti reports on what happened and focuses in on the under-reported maltreatment that the US and NATO aided and abetted.

American Prometheus, by Kai Bird

The story of the WWII race to build The Bomb is infinitely fascinating, especially considering the ethical and moral implications that are still reverberating over 50 years later. But the life of the man who oversaw the project, J. Robert Oppenheimer, is perhaps even more fascinating. Full of passion for French literature and the expanses of the New Mexico wilderness, to say he was undeserving of the fate that he met is a gross understatement.

Chuck Klosterman IV, by Chuck Klosterman
Klosterman is a brilliant, insightful, and witty cultural critic, and he approaches each of his subjects from the perfect angle: Is Britney Spears a marketing genius or completely oblivious? How does Steve Nash apply socialism to basketball? And why are men who wear leather pants logically without friends?

The Architecture of Happiness, by Alain de Botton

Blessed art thou who takes on grandiose topics and makes them such a pleasure to read. De Botton is a wizard at prosaic theory, and he unravels how and why humans build what they do, from buildings to art. He even stuck in photos of the things that he’s writing about (what a nice chap). This is a true gem of a book to own. Lucky me. Lucky you. ☉

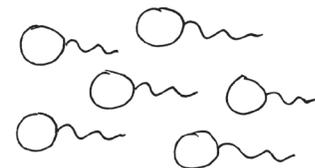
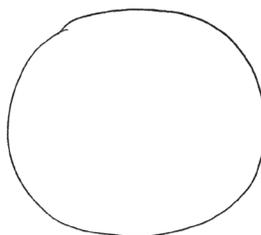
McNally Robinson independent bookstore is well worth a visit. The store is located in NoLIta at 52 Prince Street between Lafayette and Mulberry. Visit them on the Web at <http://www.mcnallyrobinsonnyc.com/>

Seminal Contributions

VASILIO DEFRENZE

"Many women see this as another way to give their child a head start in life," says Lori Andrews, a professor at Chicago-Kent College of Law who has studied the sperm bank industry...And increasingly, say the banks, women want proof of perfection before buying a dream donor's sperm....At the Fairfax bank, "there is a preference for guys with medical and law degrees," ...The Fairfax bank...most-requested donor is of Colombian-Italian and Spanish ancestry, is "very attractive, with hazel eyes and dark hair," and...is "pursuing a Ph.D."...We just can't keep enough of his units on hand," Mr. Jaeger says.

—*The New York Times*, February 18, 2007



It is rumored that plans are being made to open a sperm bank at The Rockefeller University Hospital. The unique feature about this proposed facility is that the only eligible donors will be Rockefeller University scientists with, or in the process of completing, a doctoral degree. In this way, the center can inhabit a highly in demand market niche. It is envisioned that the sperm bank will have no problem attracting sufficient donors, as cash-strapped scientists already frequently take the

time to participate in volunteer studies. As an added incentive, profits will be used to build much needed new housing for researchers. The convenient and secluded location of the Rockefeller Hospital provides the ultimate in discretion for Upper East Side ladies seeking to ensure that Junior has the most exemplary genetic beginnings possible. The latest speculation is that the sperm bank will be known as the Rock U. Buy Baby Clinic, and will use the slogan: "Scientifically Proven DNA." ◉

Hospitality Counts

JASON W. CROCKETT

"What should we do?" I wondered aloud. Peering past red and white shutters through the windows of the administration building, we saw no sign of life. We tested the front door and found it unlocked. Though five cars sat in the driveway, we appeared to be the only people around. As the sun set beyond the tower in front of us, a cool breeze rustled the multitude of bare trees that dotted the grounds. Dead limbs, perhaps the calling card of a recent heavy storm, lay scattered about, leaving me to question whether or not we had found the right castle. But every detail looked as it did in the pictures, right down to the brick ruins that flanked the tower. Stepping through a dilapidated doorway to explore further, I suddenly heard voices and caught a glimmer of movement in the corner of my eye. I bounded back to the driveway, where a tall, smiling man emerged from the base of the tower with two other guests. "Are you Count Friedrich?" I asked in German. "Yes!" he replied, looking amused, and stuck out his hand as a warm greeting.

In the 21st century, meeting a member of Germany's old nobility does not require the formalities of yesteryear. Even with intimidating titles such as the Count and Countess of Eulenburg and Hertefeld, along with a familial manor dating from at least the 1300s, the owners of our bed and breakfast remained firmly down-to-earth. Located in the village of Weeze, near the border with the Netherlands, Haus Hertefeld provides a charming sojourn for anyone wishing to experience castle life in high style. Less than an hour's drive from Düsseldorf, Weeze furnishes a sleepy glimpse into life around the lower Rhine River. A fixture in the region for centuries, Count Friedrich's family saw their castle burned to the ground in 1945 by German troops who wanted to prevent the Allies from using it as a command post. Soon after the war, his relatives briefly considered rebuilding their home, but more pressing concerns intervened.

In 2004, the count and countess decided to follow through on these plans and began to restore the castle, using as many original building materials as possible. Without the help of an architect, they relied on the memories of relatives and townspeople, as well as a few photographs, to reconstruct only the castle tower, the heart of the old building. The result is an impressive baroque masterpiece rising above

the ruins, complete with a spacious suite, a grand guest room, an exquisite events hall, and a captivating cross vault. Three more guest chambers await visitors in the administration building, which is also where the count and his family live. An additional suite occupies two old guard houses, once separate but now joined by a luxurious addition, on the outskirts of the estate. Each space possesses a unique theme, all of which are certain to satisfy the most demanding tastes.

We chose the tower suite for our stay, persuaded by its spacious rooms and striking views. Ascending a narrow wooden staircase, we opened the door to our quarters and entered a sumptuous sitting area adorned with blue and white striped walls and a massive chandelier. Steps led to another sitting area overlooking the main room, the perfect place to enjoy a cup of tea in the company of a good book. The bedroom beckoned with an oversized bed topped with plush linens that seemed destined to guarantee a good night's sleep. Not to be outdone by the rest of the suite, the bathroom offered a clawfoot tub, perfect for unwinding after a long day of sightseeing. Although the surroundings took us back in time, the trappings were thoroughly modern. Radiant floor heating in the bath and radiant wall heating throughout ensured that we stayed warm and toasty during the cold winter nights.

No bed and breakfast is complete without a suitable morning meal, and the count and countess personally ensure that every guest leaves satisfied. When served at ground level in the castle's remarkable cross vault, ordinary fare becomes exceptional cuisine. Painstakingly recreated with the help of classically trained bricklayers from Poland, the cross vault is an engineering feat to be savored as much as the delicious breads, meats, and cheeses available for breakfast. Also used for special dinners, the cross vault places guests in the midst of the ruins, with intriguing views of the castle's damaged wings. For now, Count Friedrich intends to keep the ruins as a reminder of the past, making Haus Hertefeld a type of live-in museum. Fittingly, they add to the castle's charm, helping to fully authenticate its history, while the soaring new tower points the way to the future. With such welcoming hosts and exclusive accommodations, there is no reason to think that Haus Hertefeld's prospects are anything but bright. ◉

<http://www.schlossruine-hertefeld.de/>



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