

Natural Selections

A NEWSLETTER OF THE ROCKEFELLER UNIVERSITY COMMUNITY

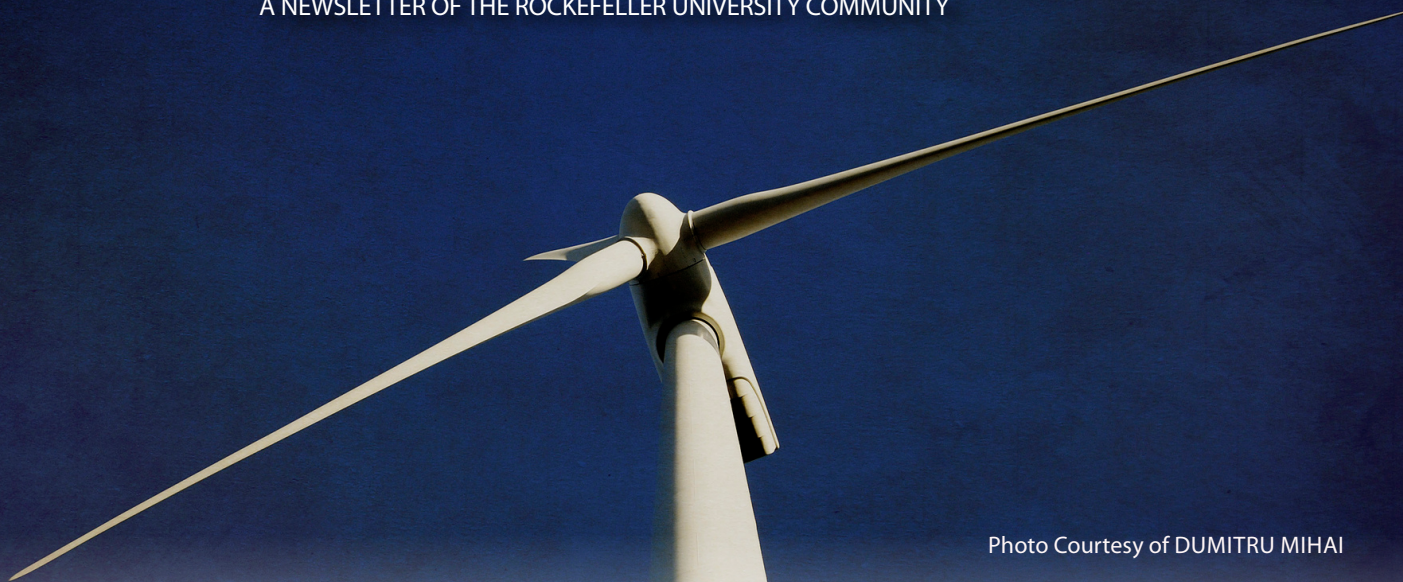


Photo Courtesy of DUMITRU MIHAI

Renewable Energy

YVETTE CHIN

When Sheikhs invest in solar, you know a paradigm change has arrived. A slew of sun-drenched Middle Eastern states, prompted by the now-favorable economics of renewable energy, and a concomitant cloudy outlook for fossil fuels, are looking to transition their oil-heavy economies towards solar energy production. Closer to home, New York State Governor Andrew Cuomo too has a vision—expedited in no small part by the exigencies of climate change, economics & energy security—to secure a clean, affordable and resilient post-oil future.

Governor Cuomo's Reforming the Energy Vision (REV) commits NY state to a Clean Energy Standard (CES) with the goal of meeting at least 50% of the state's energy use with renewable sources such as solar, wind, hydro-power and geothermal energy and reducing greenhouse gas emission levels from 1990 by 40% by 2030. This was prompted by the US Environmental Protection Agency's (EPA) Clean Power Plan (CPP), which mandates a less stringent 32% reduction in carbon emissions from 2005 levels by 2030.

The pivot to renewables has many causes. First, cost is king and with renewables at least, cheaper is better. Advances in technology—cheaper, more efficient photovoltaic (PV) cells and wind turbines; souped up batteries to tide

over times when the sun isn't shining or the wind isn't blowing—have brought down costs and increased reliability so much that the sector is competitive (as low as under \$0.04/kWh) versus fossil fuels. Upfront investment costs are lowered by tax credits and net metering rules, which allows the sale of unused energy back to utilities to recoup expenses. Tax credits in particular were essential to the adoption of renewables, although the necessity of subsidies is receding as the industry is able to stand on its own merit. In December 2015, a divided Congress rallied to extend the 30% Investment Tax Credit (ITC) for solar energy & the 2.3-cent/kWh Production Tax Credit (PTC) for wind energy for five years (through 2020), among a slew of renewable subsidies, to ensure successful implementation of the CPP. On current form, the importance of such subsidies will diminish further as innovation continues to drive down costs and bring about mass adoption.

Second, climate change and environmental concerns lend an urgency to the transition to clean and low-carbon energy sources. Credit Hurricane Sandy for the harsh reminder that ocean levels are rising and reclaiming low-lying flood-prone land. The energy sector ap-

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pears to be a zero-sum game with the rise of renewables occurring at the expense of the coal industry where a projected 50GW of capacity is expected to be lost by 2022 and, indeed, completely phased out in New York state. The upheavals of this energy revolution have been manifested in the rise of populist presidential candidate Donald Trump, fueled in part by the loss of jobs in America's Rust Belt. Advocacy groups such as the Sierra Club and ardent environmental activists are also playing a significant role in the adoption of low-carbon fuels. The Sierra Club's Beyond Coal Campaign organized a community-based push for off-shore wind energy investment with a Clean Energy rally in lower Manhattan followed by personal testimonies from state-wide attendees to the Public Service Commission. These efforts paid off in the adoption of a 90MW offshore wind project, the largest in the country, in federally leased waters off Montauk, in a tie-up between the New York Power Authority (NYPA), the Long Island Power Authority (LIPA) and Deepwater Wind, a private company. Moreover, the CES envisions establishing New York state as a clean energy powerhouse to safeguard the economic future of the state's workforce by ensuring its technical expertise in the renewable energy sector. Slated to be one of the largest solar panel factories in the world, a 27-acre \$750m SolarCity battery facility financed and constructed by New York state is another example of the economic thrust of the REV. The high-efficiency solar panels manufactured in the gigafactory produce electricity at a cost of roughly \$2.5/W and production is expected to hit full capacity in late 2017.

The REV is expected to lower energy bills through localized power generation and distribution, furnish a greater choice of energy providers to reduce dependence on a central utility, advance net-zero energy efficient smart homes that can be controlled remotely, boost employment in the hi-tech renewables sector and improve overall quality of life from the greening of the energy industry. ■

Postdoc Retreat 2016

JULIETTE WIPF

This year's Rockefeller Postdoctoral Association (PDA) Retreat was held from September 21 to 22 at the Interlaken Inn in Lakeville, CT. The Interlaken Inn is a charming country resort with great facilities and over 130 Rockefeller postdocs came to enjoy this getaway. Many supported the event with presentations, ranging in scope from social evolution in ants, aphids and their interacting microbiomes, through to visual signaling in *Drosophila*.

The PDA further organized a panel discussion focusing on non-academic careers, which was one of the highlights of the retreat. Candid responses to heartfelt questions were given by George Yancopoulos, the President and CSO of Regeneron Pharmaceuticals, Inc., who also gave the retreat's keynote address, Nadim Shohdy (Director, Office of Therapeutics Alliances NYU Langone), David Pompliano (co-founder & CSO, Lodo Therapeutics), Imran Babar (Private Equity / Venture Capital, OrbiMed Advisors & VP of Scientific Affairs, Rare Genomics Institute), Yaihara Fortis-Santiago (Director of Science Alliance, the New York Academy of Sciences), as well as two Rockefeller insiders, namely our new President Richard Lifton and our Career and Professional Development Director, Andrea Morris. The speakers depicted the advantages of dropping into a non-academic field and attempted to boost our self-confidence for trying out such alternative career routes. In some cases maybe even out of a personal recruitment interest?

A bonfire by the scenic Lake Wononskopomuc brought the first day come to an unforgettable end. S'more roasting gave the postdocs energy after burning themselves out on the dance floor. After another round of talks in the morning, playing tennis, sunbathing by the heated pool, kayaking and swimming in the lake in the afternoon, everybody reluctantly made their way back to New York City on Thursday night.

Thank you PDA for organizing this event! ■

Natural Selections
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Culture Corner

Television Series Review: *Mr. Robot* and *Gomorra*

BERNIE LANGS

Caution: spoilers ahead

There is a widely-held notion that television is presently in the midst of a golden age and that the quality and diversity in programming has never been better for the medium. One might generally associate the phrase “golden age” with eras of creativity in cultural history, such as the glory days of Ancient Greece or Renaissance Italy, while thinking of television more in terms of crassness and the lowest possible taste (think the Kardashians or the Housewives reality series). Yet I can’t deny that TV is offering many more stimulating choices these days than big Hollywood studio films. The best current television shows are filmed cinematically to big budget movie standards and the writing and scripts of these series offer superlative plot devices and new, untested ideas without falling into the trap of typical clichés that plague so much of our visual entertainment.

Two series in particular have hooked me into becoming a loyal viewer. USA Network’s *Mr. Robot* revolves around the exploits of a young, brilliant, socially-challenged hacker. The other, the Sundance Channel’s *Gomorra*, is an import from Italy based around the inner workings of the criminal mob in the city and surrounding region of present day Naples.

While *Mr. Robot* is the more traditional television fare of the two, it successfully pushes the boundaries of the medium in many ways. Created, written and directed by Egyptian-American, Sam Esmail, it follows the exploits of Elliott Alderson, played with disturbing nuance by Rami Malek. Elliott begins as a kind of hacker vigilante, punishing the abusive people he can gain access to via his superb computer skills, and soon becomes entangled in a plot hatched by a group of misfit hackers to destroy the computer systems of a massive corporation, E Corp (dubbed Evil Corp). Their hope is to change the world by eliminating the records of most credit card debt in America thus freeing the populace from the grips of the greed of capitalism.

There are several innovative ways that make *Mr. Robot* unique. Elliott is an incredibly brilliant young programmer, yet his social anxieties and mental health issues, sometimes used to his advantage, come close to completely destroying him, while

bringing down friends and family. Drug addiction, hallucination, paranoia, loneliness, intense anger, sexual confusion, and a host of other problems including the anxiety of breaking the law are what makes Elliott’s world a terrifying place. Elliott’s personality problems make for tense, dramatic and deeply disturbing viewing and are original to the concept of a star lead in a serialized show.

The plot to undo E Corp and change the course of history involves a great cast of characters including Elliott’s co-workers at a cybersecurity firm and the insiders at E Corp, in particular their own technology executive, Tyrell Wellick (Martin Wallstrom). E Corp’s CEO, Phillip Price (Michael Cristofer), is played as a wealthy hard-nosed, coldhearted corporate leader, yet his personality has enough individuality and complexity to separate him from being a simple television villain.

Mr. Robot has completed two seasons. I’ve viewed the first and one quarter of the second. The huge problem it faces comes from two imposing challenges: the title character of Mr. Robot (Christian Slater) has been revealed late in season one as the ghost and mirage of Elliott’s father and the more difficult plot line that since a major hack has occurred, the show must enter an even deeper world of unreality. Many shows jump the shark at such a crossroad. I feared that might happen with *Mr. Robot*’s second season, after the intense and wonderfully stimulating drama of the first. The first two episodes of season two were a little off pace, as if Esmail had written himself into a corner. He seemed to be too intent on keeping us aware of Elliott’s completely separated internal world to the point of extreme. Yet, episode three hooked me right back into the dystopian nightmare of Elliott’s life and I look forward to seeing what comes next.

Gomorra is simply an unbelievably fantastic show. I can hardly comprehend that a television executive would think of airing on a major cable network a series in Italian with English subtitles. *Gomorra* is shot in the back streets and suburbs of Naples and we get to see views of Italy that tourists and vacationers could never imagine. Horribly conceived apartment complexes litter areas filled with the near-poor who have little hope of a good life. This poverty and general

societal depression enables the mob family syndicates to move in to recruit dispirited young men to join their ranks with fast cash and an exciting life. They don’t blink an eye when these youths wind up murdered in the undertaking of their exploits, much of which centers around bringing cheap drugs to the area for desperate junkies and users.

Gomorra is beautifully filmed with grittiness and often showcases a world of deep shadows, dark alleys, and junkyard abandoned factories. None of the actors and actresses are familiar to American audiences and all of the performances are seamless and powerful. It’s almost akin to watching a fast-paced documentary on Italian crime. The action follows the travails of a crime family led by the ruthless Don Pietro Savastano (Fortunato Cerlino), his wife, the incredibly strong, stoic, and mean-spirited Imma (Maria Pia Calzone), his son, Gennaro (Salvatore Esposito), who undertakes an amazing personality shift in the course of a handful of episodes, and the gang’s most trusted lieutenant, Ciro (Marco D’Amore), who dons the nickname “Immortal” and who is incredibly heartless and ruthless. Ciro has such dynamic personality qualities and charisma that viewers may find themselves wishing beyond hope that he could control his more violent tendencies and become a dynamic leader.

A show like *Gomorra* could have fallen victim into a trap of common plot devices and stereotypical characters seen in a glut of films and television shows on the Mafia. Yet, it succeeds as a social statement of the politics and society facing Italy and much of Europe today and feels incredibly current on its take of what causes such a blight on the face of Italy. After each episode I’m left feeling amazed.

The show was preceded by a 2008 feature film, both of which were based on the book of the same name by Roberto Saviano. His fiction and investigative reporting of the Camorra crime syndicate has led to him currently living under police protection. I cannot think of any other dramatic television show that is so reflective of a lifestyle that is unusual to our everyday reality than *Gomorra*. The first season has aired in America with the second on the way. One hopes *Gomorra* can keep up the fantastic pace it has set. ■

Twenty-four visits to Stockholm: a concise history of the Rockefeller Nobel Prizes

Part XXIII: Ralph M. Steinman, 2011 Prize in Physiology or Medicine

JOSEPH LUNA

A macrophage is on the hunt. Crawling and sniffing its way across a petri dish, this “big eater” lunges forward, its rolling membranes like tank treads, toward a colony of bacteria. A pall descends on the prokaryotes, and soon a membrane washes over them like a toxic blanket. The engulfed bacteria, momentarily stunned, find themselves in the belly of the macrophage and attempt to regain their bearings. They never see the army of lysosomes marching toward them, with acid knives drawn and thirsty.

Zanvil Cohn looked up from his microscope and snapped a photo of the battle below. This phenomenon of cells eating cells, or phagocytosis, was well known immunological territory. But armed with time-lapse microscopy, Cohn could record how the macrophage moved and ate in startling detail; with James Hirsch, Cohn discovered that lysosomes swooped in to digest bacteria when engulfed. Cohn and Hirsch ran a joint lab at the then recently renamed Rockefeller University that was an epicenter of macrophage research in the 1960s. Housed in the Southern Laboratory (now known as Bronk) and under the guidance of the eminent René Dubos, Cohn and Hirsch made landmark discoveries on how these cells defended against microbes, using the latest techniques to finally begin answering questions as old as immunology itself.

Eighty years earlier, a Russian zoologist named Ilya Metchnikoff witnessed the first macrophage chomping on microbes, circa 1882. Such a startling discovery led him to propose that an immune system, at the cellular level, was composed of cells like macrophages on constant patrol for viruses and bacteria. It was an innate and uncompromising system. Yet, there was another equally compelling school of thought, championed by German immunologist Paul Ehrlich, of adaptive immunity, an ever-changing system that could recognize a foreign threat, and remember to counter that *specific* foreign threat in the future, through the action of what Ehrlich called *antibodies*. There was never too long of a debate as to which side was right; it was clear that they both were. But missing was the link. How did an adaptive immune response start? How were macrophage foot soldiers connected to cells

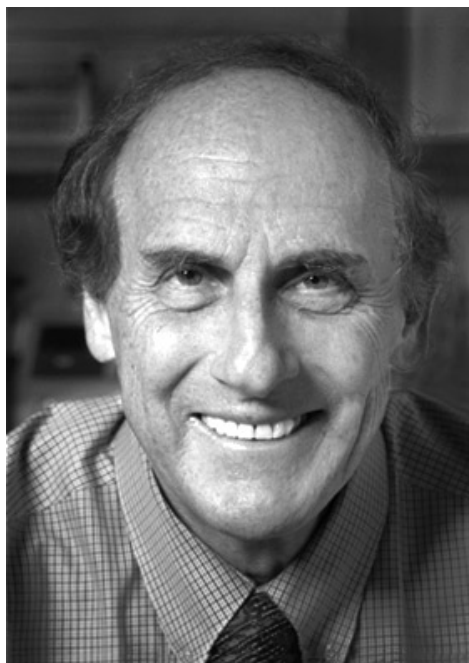


Photo Courtesy of THE ROCKEFELLER UNIVERSITY

of the adaptive immune system, the ones who could produce very specific bombs made of antibodies?

These were questions that kept a young medical resident in Boston named Ralph Steinman up all night. Convinced he wanted to go into research, Steinman attended lectures and dived into the immunology literature. He was particularly fascinated with the work of MacFarlane Burnet and his book, *The Clonal Selection Theory of Acquired Immunity*. Burnet proposed that the immune system was made of a repertoire of cellular clones, each with a unique antigen it sought to destroy. When the antigen showed up, its specific clone expanded rapidly to counter the threat. But missing was how a specific clone knew it was time to expand. One idea was that there might be an accessory cell, one that might instruct adaptive immune cells with parts of the antigen, akin to issuing reports from the front lines with specific coordinates for antibody airstrikes. Among the most promising candidates for such an accessory cell was the macrophage.

Steinman arrived at Rockefeller as a postdoc to work with Cohn in the summer of 1970, set on exploring this idea further. If macrophages could present antigens to adaptive immune cells, it stood to reason that the antigens they encountered weren't completely destroyed, just taken

apart. Except that this didn't seem to be the case: Cohn's graduate student, Barbara Ehrenreich, had elegantly documented how macrophages ground down foreign proteins to individual amino acids. Steinman extended this work by feeding macrophages an enzyme called horseradish peroxidase (HRP) that could be used as a tracer both under the microscope and by measuring its enzymatic activity. He found that the macrophages dutifully ate the protein, only to degrade it all the way to single amino acids, just as Ehrenreich had observed. HRP activity followed a similar course and gradually, but completely, disappeared.

So it appeared that macrophages from the mouse peritoneal cavity weren't able to keep intact antigens around. Steinman decided to look somewhere else. It was known since the 1930s that the spleen was an organ where an immune response could begin, and only in 1966 were researchers in California able to generate an immune response from suspensions of mouse spleen cells. With this in mind, Steinman took mouse spleens, ground them up, and plated the cells onto glass dishes. Adherent cells like macrophages stuck to the glass, as was the standard practice to isolate them. As he peered into the microscope, fully expecting lysosome-rich macrophages prowling about, he saw something quite different: cells with numerous extended processes, like branches of a tree. Being in an expert macrophage lab, Steinman and Cohn were quickly able to document all the strange differences between this new cell, which they named a *dendritic cell*, and the usual adherent roamers. Dendritic cells had few lysosomes, were poor at engulfing tracers like HRP, and didn't move around so much as constantly extend and retract their limbs, probing about. These cells were relatively rare (about 1% of spleen cells) and difficult to isolate, but by the mid 1970s the then Cohn-Steinman lab discovered that a single dendritic cell was a hundred times more potent at inducing an immune response. Over the next four decades, the Steinman lab discovered all sorts of functions, mechanisms and potential therapeutic uses for dendritic cells. Like branches on a well-rooted tree, a field was born. ■

Ostuni, A New Jewel in Italy's Crown

FRANCESCA CAVALLO

Puglia, with its beautiful beaches and landscapes, stunning architecture and friendly people has become hugely popular as a holiday destination.

When most travelers think “Italian beach vacation,” they think of places like Portofino and Capri. Puglia is pretty much the exact opposite of those places and all the better for it. While the Italian Riviera and Amalfi Coast are well-groomed, glamorous, and sparkling, Puglia is rugged, simple, and totally laid-back. Its landscape, studded with farmhouses and miles of olive groves, reminds one of neighboring Greece. But its spirit remains 100 percent Italian. Located in the heel of Italy's boot, Puglia is where Italians vacation. This summer I had the pleasure to visit this region, in particular my father's hometown of Ostuni located about 11 km from the coast, in the province of Brindisi. This charming, fortified hill town is known as “la città bianca” (the white city) due to its whitewashed buildings and city walls, which give it a very exotic feel, more Greek or Middle Eastern than Italian.

The stark white of the town is broken up by some beautiful historical architecture, all of which stands out from its surroundings. The Messapii ancient Italian population founded the first nucleus of the city in seventh century BC on the top of a hill protected by walls, which also sheltered it from attacks, and provided for the construction of roads. Later, in third century BC, the Romans conquered it and today some Roman traces remain in farms built on the foundations of Roman villas. With the fall of the Western Roman Empire, Ostrogoths, Lombards, Saracens and Byzantines settled, in turn leaving visible traces of their occupation. The Aragonese created four-door access to the village of which today only the twelfth century Porta Nova is still evident, as well as the Thirteen

Towers and Porta San Domenico, both built in the thirteenth century. With the Spanish rule in 1506, Ostuni began to experience a period of splendor by the granting of special favors by the Dukes. The decline of Ostuni began in the seventeenth century due to the debts incurred during the “Thirty Years War” (European conflicts from 1618 to 1648). King Philip IV of Habsburg sold it to the family Zevallos, merchants that then impoverished it. Moreover, the plague began to rage in the surroundings even if it did not directly strike the village, as the whitewash used to paint houses turned out to be a good and effective natural disinfectant. With the advent of the Bourbon dynasty in the eighteenth century, the city slowly began to flourish.

There are two parts of Ostuni: the Terra, the old town, and the Marina, the modern portion closer to the Adriatic sea, just 6 km away. Walking through old Ostuni from the bottom of the hill there is a baroque column nearly six stories tall that dominates the square and is topped with a statue of Ostuni's patron saint, St. Oronzo. According to legend, the saint found refuge in a cave in Ostuni after he saved the population of the nearby coastal town of Salento from the plague that began in Naples.

From the square, the walk continues through the labyrinth of alleys, staircases and curved footpaths that lead us to small squares on multiple levels. At the top, there is a Gothic-style cathedral with its delicate rose window, which symbolizes the Cristo Sole. It is composed of three concentric circles, with 24 rays finely crafted, 12 concentric arches embellished with floral motifs and figures of the twelve apostles. At the center, surrounded by seven cherubs, is a figure of the Cristo Sole, master of the universe represented by the same rosette. It's one of the few buildings that

isn't painted, but it's still beautiful because of the way light reflects from its stone facade. In the square in front of the cathedral was the elegant arcade Arch of Incalzi, linking the Palazzo del Seminario and the Palazzo Vescovile. All cities and towns of Italy have their patron saints, so-called protectors, and it is an ancient tradition to have religious and public celebrations in their honor. Among all the year round number of feasts commemorating the patron saints in Italy, you do not want to miss the chance to attend the most grandiose and impressive one: the Cavalcata di Sant'Oronzo (Sant'Oronzo ride) in Ostuni. A three day festival is held in honor of Sant'Oronzo every year, beginning on the 25th of August. The festivities promise a cultural extravaganza in honor of the saint. The silver statue of the Patron is carried through the town by 40 riders on horseback, wearing costumes of an elegant red color, dotted with hand sewn sequins, which create a spectacular sight. There are knights, bishops and authorities that escort the statue. Beginning at the cathedral, the parade takes a journey right through the heart of the Piazza Sant'Oronzo. The festivities continue throughout the three days with a variety of food and beverages, until the festival finally concludes on the 27th of August, lighting up the sky with a colorful fireworks show. It is a special occasion indeed to not only appreciate the religious aspects of the region but also to have the opportunity to walk and admire an untainted natural area, its monastic buildings as well as its Mediterranean vegetation.

I deeply suggest you visit this majestic town. Lose yourself in the alleys, discovering step by step the history, the people and the monuments, with their Romanic and Gothic style influences. Last but not least, don't forget to enjoy the amazing food and beaches. ■



Photo Courtesy of OSTUNI THE WHITE CITY



NEW YORK STATE OF MIND

This Month Natural Selections Features Tiago Siebert, Postdoctoral Associate, Gilbert Lab.

INTERVIEW BY GUADALUPE ASTORGA



How long have you been living in the New York area?

I've been living in NYC for five months now.

Where do you currently live? Which is your favorite neighborhood?

I currently live in the Upper East Side and my favorite neighborhood is hard to choose because there are so many interesting neighborhoods in NYC. But, I really like the East Village, Hell's Kitchen and some parts of Brooklyn.

What do you think is the most overrated thing in the city? And underrated?

Overrated, I guess I still didn't have the experience of being frustrated about something I was expecting. Underrated is the fact that you can go to the beach by sub-

way. I don't see much of a beach culture in NYC, I really like the beach, and it seems that people here don't take much advantage of it.

What do you miss most when you are out of town?

I haven't been out of town much, just in Connecticut for two days. I've become used to the options of places to eat and interesting things to do on the weekends, so if I was out of town I would definitely miss that. I also got used to the agitation of the city, so if I was out of town I would miss that too.

Has anything (negative or positive) changed about you since you became one of us "New Yorkers?"

Negative, I don't recognize anything yet. Positive, I'm getting used to walking a lot, I can walk for more than one hour and I really like it.

If you could change one thing about NYC, what would that be?

I would take out the cars honking, that's one of the things that affects me the most, it's very unnecessary and stressing.

What is your favorite weekend activity in NYC?

To explore new parts of the city, visit new

neighborhoods without a particular goal, just walking on the streets of some place that I haven't been yet. It's a large city and it'll take many weekends until I have explored enough to pick one favorite place and just keep going back there.

What is the most memorable experience you have had in NYC?

The arrival, the first days in NYC. This city is so impressive with all these skyscrapers, the agitation, the size, the cars and the noise. I have never experienced this before anywhere else.

Bike, MTA or WALK IT???

Walk! I haven't ridden a bike much in NYC yet, it's nice, but I like to walk, even if it takes longer, I'd rather walk.

If you could live anywhere else, where [would] might that be?

I would like to live in Europe, somewhere with cities much older than those in America and Latin America, with 1000 year old buildings, I would like to try that.

Do you think of yourself as a New Yorker?

I think I'm getting there, maybe a few more months. People have already asked me for directions in the street and usually I know the answer, so I think I'm on my way. ■

Quotable Quote

"Success is a lousy teacher. It seduces smart people into thinking they can't lose."

BILL GATES



Lesson 2

New York City Dialect New York-ese

AILEEN MARSHALL

Welcome back to our series on learning the New York dialect. Did you practice your vocabulary words from last month? As a recap, the letter T in the New York dialect is pronounced like a D. Our vocabulary words were *dem*, *dese*, and *dose*. Here are some more examples of these words used in a sentence.

I've got all *dese* leftover subway tokens, how do I get rid of *dem*?

Dose cars in *da* intersection are blocking *da* box.

Other common words in which the T is pronounced like a D are water and butter. Click on the links to hear them.

New York City has the best tap [wada](#).

Barbara Streisand's voice is like [budda](#).

This month's lesson:

In the New York dialect, the G is

dropped in words ending in "-ing." The syllable is pronounced "in."

Here are some examples of "-ing" words used in a sentence. Click on the links to hear the pronunciation.

Are you [doin'](#) anything tonight?

I have to go; I can hear my mother [cal-lin'](#) me from up the block.

Dose tourists are [walkin'](#) too slow.

When learning any language, it helps to listen to as much as you can, to train your ear to pick it up. Try to pay attention to conversations you hear on the street and the subway. Also, watch episodes of Seinfeld and listen to the Jerry and George characters.

Watch next month for dropped R words. ■



NAN PANG/NATURAL SELECTIONS

Natural Selections **wants your ART!**

Whether you can't stop drawing while waiting for the bus, or taking a walk around the city; if photography is your passion, or if you're more of a painter, this is your chance to share your art.

Beginning in 2016, Natural Selections will publish a picture of the art we receive every month. To take advantage of this opportunity, email us your work with a title, a brief description, and your name. We'll make sure to include it in a future issue. We hope to receive several images to create an open space for art!

We'll be delighted to receive your artwork, please email hi-res image or vector files to: nseditors@rockefeller.edu



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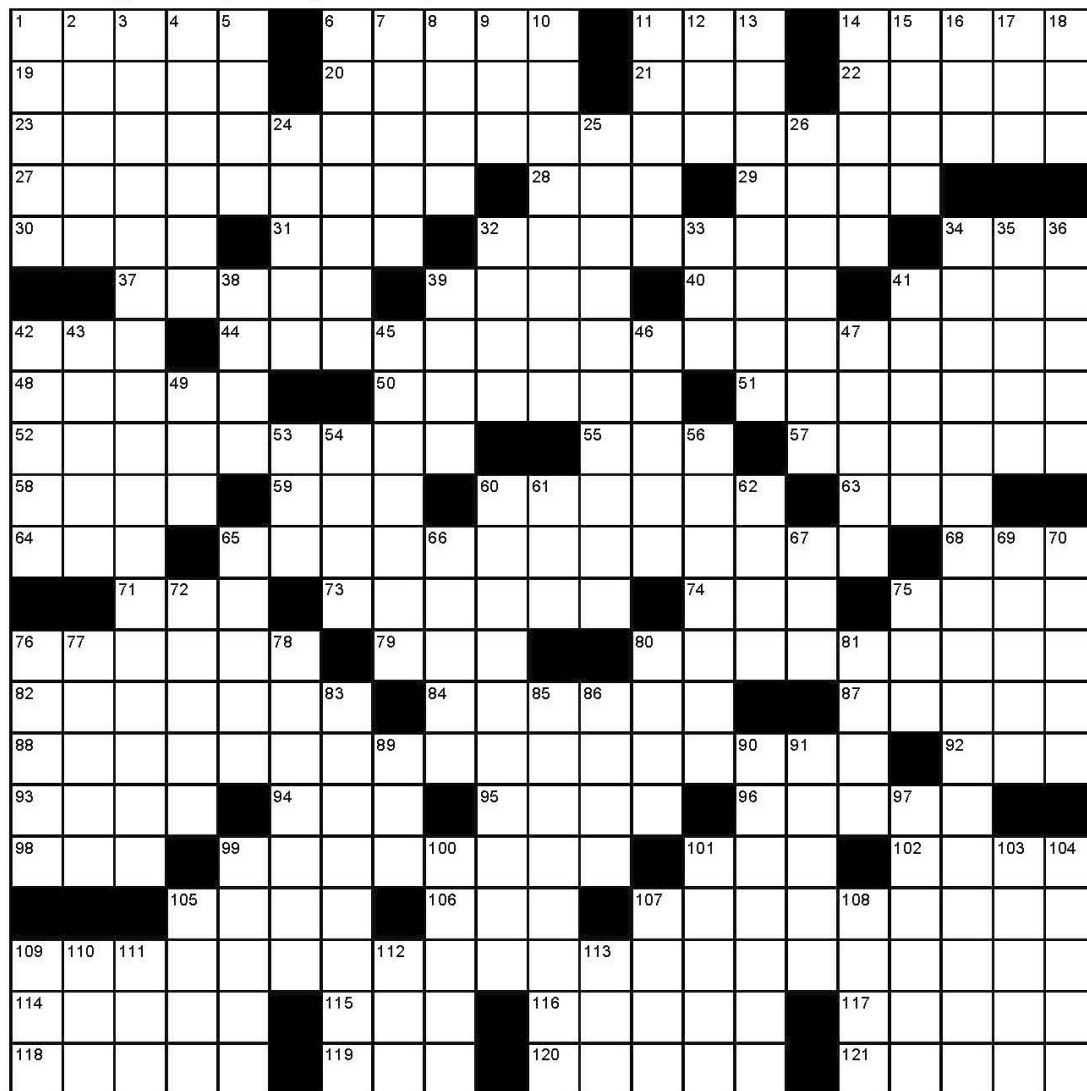
Think Big Deal

GEORGE BARANY AND JOHN CHILD

George Barany is a Rockefeller alum (1977) currently on the faculty of the University of Minnesota–Twin Cities. John Child has had an interesting career and currently lives in Nepal. For more about this specific puzzle, including a link to the answer, visit [here](#). More Barany and Friends crosswords can be found [here](#).

Across

1. Actors Damon and Dillon
6. Brainstorms
11. F/X tech.
14. Enjoy the taste of
19. Rhone tributary
20. Old Pac. pact
21. Arles article
22. “Pygmalion” protégée
23. Baby boomer’s boom?
27. Place of safe haven
28. Element with the symbol Sn
29. They are each made of three bones
30. Sony co-founder ____ Morita
31. “6 ____ Riv Vu” (1972 Broadway play)
32. Friends with ____
34. 24 horas
37. GDR org. with informants
39. What the troubador did for his supper
40. Govt. property overseer
41. Squander
42. Cow, perhaps
44. YouTube coverage of a celebrity roast?
48. Derring-do
50. Singers Martell and Ronstadt
51. Words with wedge, in an idiom
52. “You’ve gotta be joking!”
55. Acct. akin to an IRA
57. “My sentiments exactly”
58. Birnam, in “Macbeth”
59. Cul-de-____
60. It’s just not a raga without them
63. Mauna ____
64. Future bacon, perhaps
65. “In vitro” footwear?
68. Pick, pick, pick
71. Mail place: Abbr.
73. Right and fitting
74. Netflix nuisance
75. Org. that hired Darrow for the Scopes Trial
76. Cromwell’s crime



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79. Suffix for a saturated compound comprising only C and H
80. Something lost unluckily that’s believed to be lucky when found
82. Like a short flick
84. Mythical sea monster and sigil of House Greyjoy in “Game of Thrones”
87. Beehives, e.g.
88. Bangkok second-story man
92. Babe Ruth and Hank Aaron, e.g.: Abbr.
93. In 2012, Neil deGrasse

- Tyson testified that its current annual budget was “half a penny on your tax dollar”
94. Path
95. Nobel Peace Prize venue
96. Chew the scenery
98. Word with maker or breaker
99. Jello or pie topping
101. ____ Paulo, Brazil
102. Dog star
105. Flightless bird extinct since 1681
106. “____ and the Art of Motorcycle Maintenance”

107. Enters tentatively
109. Telling treats in a game show green room?
114. Squalid place to live
115. Old tar’s tool
116. Five, seven, and five / Just count the syllables / ____ is easy
117. Presto’s opposite
118. Word with dog or leap
119. Imminent tassels wearers: Abbr.
120. Physicist Mach
121. Gas used in some lasers

CONTINUED TO P.9 ➡

Down

1. "___ Solemnis" (Beethoven)
2. Drenched
3. Balm for court problems?
4. Activewear material
5. Group out of the mainstream
6. Kosher : halal :: Jewish : ___
7. Kind souls
8. "Piece of cake!"
9. Co. founded by Alexander Graham Bell
10. Began to melt
11. Fashion knockoff
12. Emerald, ruby, or diamond
13. "Are we there yet?"
14. Slips through the cracks?
15. "The Sound of Music" backdrop
16. By means of
17. English wts.
18. Stool pigeon
24. Tendon-bone connector

25. Heist's brains
26. Japanese electronics giant whose name means "sunrise"
32. Auto___ (Kraftwerk title)
33. Three-pointers: Abbr.
34. Italian or Russian, for saddle-sore city dwellers?
35. "Goodnight ___" (Leadbelly song)
36. Battery part
38. Early hairstyle for Jesse or Michael Jackson
39. Get a move on
41. Weekly event at some churches
42. Confesses
43. Rebel yell
45. Title heroine for both Sophocles and Euripides
46. "___w___ directed"
47. Small lab containers
49. JFK : New York :: ___ : Chicago
53. Literary monogram
54. Catch on a trunk
56. Draw out
60. It has more than a hundred flights
61. "May ___ of service?"
62. Chicken pox reminder
65. Plain ___ (obvious)
66. Big seller of little trucks
67. Metric wts.
69. High and mighty
70. Ballpark figure
72. It can come before frost
75. Non-speaking part in "Antony and Cleopatra"
76. Anwar's successor
77. Early computer called Project PX when contracted by the US Army in 1943
78. Answer for "Do you carry it in stock?"
80. Subway fare?
81. French bread
83. Lineup headers
85. Potent potable in Paris
86. Nancy who played Miss Jane Hathaway on "The Beverly

- Hillbillies"
89. Hooper Charisse
90. Request at the butcher's counter
91. Oil company that merged with BP in 1998
97. Blowhard
99. Wraith maker, in short
100. Polo alternatives
101. Solicits
103. Relate, as an issue
104. Williams who played Patsy on "Happy Days"
105. One caught in the headlights?
107. Nabokov's title professor (1957)
108. Kansas city in "violation"?
109. Toddler's constant query
110. Weed-killer
111. 93-Across spacewalk: Abbr.
112. Noel staple
113. Mideast alliance, 1958-1961: Abbr.



In-n-out NYC: Grand Central



Life on a Roll

ELODIE PAUWELS

<https://elodiepphoto.wordpress.com>

Les Sables d'Olonne is a French town located by the Atlantic Ocean and is particularly known for being the start and finish points of the "Vendée Globe." This is a non-stop round the world single-handed boat race, which takes place every four years. François Gabart won the last race in 2012-2013, as immortalized by a plaque on the seafront.

Early November, about 25 skippers will travel along the channel from the large marina called Port Olona, crowded for the occasion, and then between both lighthouses towards the vastness of the ocean. The lucky ones completing the circumnavigation are expected to come back anytime from late January/early February 2017. Can't you feel the call of the sea? ■

All Photos by **ELODIE PAUWELS**

