

A NEWSLETTER OF THE ROCKIN' FELLA UNIVERSITY COMMUNITY *"MAKE AMERICA GREAT AGAIN!"*

Surprise U.S. Presidential Candidate to Speak

Don't miss an unnamed U.S. Presidential candidate in a meet-andgreet next Monday, April 4, in the Philosopher's Garden at 6:00pm. Fresh from the spirited and oratorically-illuminating run-ups to the primaries, the candidate will speak to the issues of the nation and the world. If elected, this candidate has graciously offered to donate his or her life-sized statue to the University.

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Hot Tub **Haven**

As an answer to turbulent times, the roomy rectangular hole near the 66th Street entrance will be re-purposed as a hot tub, available to the RU community only, for the relief of stress (available for private parties, when reserved.)

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YOU CAN MAKE AMERICA GREAT AGAIN! TEXT 54321 TO DONATE NOW!



Discovery in the Sky over the University?

Late one evening, a sleepdeprived Research Fellow saw a luminescent specter in the sky, perhaps a new planet or star, shimmering through the branches of the campus trees, and apparently fainted. A Security Officer, on his nightly rounds, patiently revived the Fellow. Further investigation revealed that the apparition was merely a leftover decoration from the Holiday Party that the bucket-lift on campus may have missed.

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AMNESTY ON DEROGATORIANISM

Just in! - In honor of April 1, ALL Democrat and Republican candidates have agreed to a moratorium on spiteful, revengeful, insipid, nasty, lurid, questionable remarks for a twenty-four-hour period.

Let's create a Love-Fest for at least this one day!!





Top Left: Hydroponic research in Epcot Center, Orland/Antony Pranata, CC. **Top** Rigt: Hydroponics/Frank Fox, CC. Bottom panels: Our Windowfarms Project

Growing vegetables in small spaces

GUADALUPE ASTORGA

One of today's global issues concerns the supply of fresh food to people in cities. While the carbon footprint for transporting fruits and vegetables from the areas where they are produced, to the consumers' tables can reach high levels for longer distances, local production and consumption have several advantages. A number of new initiatives make it possible to take advantage of urban spaces to grow fresh vegetables in your own city or apartment.

In cities where the space is dominated by concrete construction, urban agriculture has shed new light into public and private spaces, promoting community interactions and the development of organic alternatives to intensive crop farming.

Different projects have taken over rooftops and unused spaces in New York City, not only to grow fresh vegetables for distribution in the local community, but also to offer a sustainable model for urban agriculture in open spaces.

Other interesting alternatives involve hydroponic cultures, which offer a very efficient way to grow different types of organic plants with no need of big spaces. In recent years, several hydroponic techniques have exploded and evolved in a plethora of varieties developed by en-

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What's Inside?

Click the "cherry blossom" icons to jump to the page!

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Life on a Roll Snow Mountains **By ELODIE PAUWELS**



LUIS DE NAVAS / More on Page 3



Fig 1. Left panel: Hydrosock Version/Jim Flavin. Right panel: Hydroponics principle/iamozone, CC

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thusiastic farmers who have openly shared their knowledge on the internet, making videos with detailed tutorials and instructions for beginners and experienced farmers. Hydroponics are not expensive or complicated, can be started at any time of the year, and you can control what you eat.

In an example of these collaborative initiatives, also born in New York City, hydroponic vertical gardens are designed for our apartment windows, and people around the world have shared their experiences to create new innovative and esthetic designs. You will need a bit of creativity and enthusiasm to make this project in your apartment, but it is certainly worth it.

A more convenient and simpler alternative to get started with hydroponics in your own apartment at minimal cost is the Hydrosock Version, proposed by Jim Flavin (Fig. 1, left panel). This handy design is the easiest version of hydroponics; it does not need an air pump to oxygenate the water, nor expensive or specialized materials. The roots get oxygen as the water level decreases in the reservoir. The principle is shown in Fig. 1 right panel.

I encourage you to make this simple hydroponic system at home for high yields of vegetable production and little cost. This is the proper time of the year to start if you want to harvest delicious vegetables for this summer.

You will just need:

- Empty plastic 1 gal milk bottle
- 1 sock
- Cable ties
- Aluminum foil
- Growing medium starter for your seeds, preferably those made out of coco (less than \$1 each).

- Natural Selections Editorial Board **EDITORIAL BOARD** Jim Keller Editor-in-Chief, Managing Editor **Aileen Marshall** Assistant Copy Editing Manager Susan Russo Copy Editor, Distribution **Qiong Wang** Copy Editor, Webmaster, Public Relations Manager Nan Pang **Production Designer** Peng Kate Gao Copy Editor selections.rockefeller.edu nseditors@rockefeller.edu
 - Seeds
 - Nutrients for hydroponics (\$10-30, needed to buy only once)

Check all the details in this instructive video tutorial and look further on Jim's website.

Another easy alternative is to consume local products provided by Community Supported Agriculture (CSA), a popular way to buy local, seasonal food directly from farmers.

These farming alternatives have opened a whole world of possibilities for culturing in confined urban spaces. At a critical moment, where food safety is constantly menaced by the extensive use of pesticides, and soil productivity is menaced by droughts and fertilizer overuse, an open road to self-sustainability is ahead. We can start today making fruitful use of our cities and spaces.

FINDING SPRING Photos by Luis De Navas







Louise Pearce – An Extraordinary Woman of Medicine

SUSAN RUSSO

In 1913, the Rockefeller Institute appointed its first woman researcher, Louise Pearce, M.D., who worked as an assistant to Simon Flexner. Pearce was promoted to Associate Member in 1923, and continued in this position until 1951, when she became President University, and was awarded her M.D. from the Johns Hopkins University School of Medicine, specializing in pathology, in 1912.

While at Rockefeller, Pearce worked closely with Wade Hampton Brown, a pathologist, chemist Walter Jacobs, and imin the Belgian Congo, where she worked in a local hospital; and her laboratory to test the drug tryparsamide in human trials, saving many of the lives of syphilitic patients and patients with sleeping sickness, conditions which had previously caused almost certain fatalities. After re-

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turning to the In-

stitute, Pearce and

Brown added can-

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discovering, in rab-

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Pearce Carcinoma.

in Greenwich Vil-

lage, sharing her

physician, and the

novelist Ida A.R.

Wylie (some of

whose books were

made into films.)

All three women

were active in a

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Pearce commuted

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of the Woman's Medical College of Pennsylvania. During her career, Pearce attained many firsts, including her 1915 election as the first woman member of the American Society for Pharmacology and Experimental Therapeutics (AS-PET); the second member wasn't elected until 1929. Also, Pearce had affiliations with the New York Infirmary for Women and Children (1921); the General Advisory Council of the American Social Hygiene Association (1925); the National Research Council (1931); and was elected Director of the Association of University Women in 1945. In 1921, Pearce was elected to membership in the Belgian Society of Tropical Medicine, and received the Order of the Crown of Belgium, and in 1931 she was appointed Visiting Professor



Acc. 90-105 - Science Service, Records, 1920s-1970s, Smithsonian Institution Archives

of Syphilology at Peiping Union Medical College in China.

Born in Winchester, Massachusetts, her family moved to Los Angeles, where she attended the Girls Collegiate School.She went on to receive her Bachelor's degree in physiology and histology at Stanford University in 1907. Pearce continued her studies at Boston munologist Michael Hiedelberger. Their first endeavors, organized by Simon Flexner, were experiments in the treatment of syphilis, using arsenic derivatives made by Pearce and Brown in animal models. Their work was published in the *Journal of Experimental Medicine* in 1919. Soon after, the Rockefeller Institute sent Pearce to Léopoldville doctorates from Wilson College (Pennsylvania), Beaver College (Pennsylvania), Skidmore College (New York), and Bucknell University (Pennsylvania). Louise Pearce's papers can be found in the Rockefeller Archives, the Drexel University College of Medicine Archives, and the Smithsonian Institution Archives.

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

Part XVII: Torsten Wiesel, 1981 Prize in Physiology or Medicine.

JOSEPH LUNA

In the late 1950's, two scientists sat with a cat in a darkened room and flicked on a projector screen. For this particular movie night with kitty, the scientists showed a series of simple images to the cat, and between each one they waited for the cat to respond. Nearly all cat owners, myself included, have probably performed a variant of this basic experiment, whether with a treat or a feathery toy, to get hold of a cat's finicky attention, or to divert it from a precarious vase or an exposed ankle. But the two scientists, David Hubel and Torsten Wiesel, first at Johns Hopkins and then at Harvard, were after something much deeper. They wanted the cat to tell them what it saw. And magically enough, they had surgically created a talking cat: an electrode was inserted into the visual cortex of the anesthetized cat's head and set up to record from a tiny patch of the brain (rest assured the cat was fine after the experiment). By showing different images to this conked-out kitty, Hubel and Weisel aimed to find the specific stimulus that excited the area they were recording from, be it a picture of a stationary dot or a simple line moving across the screen. If they succeeded at finding the right stimulus, they would hear the characteristic rat-tat-tat of a neuron firing. In other words, a tiny and specific part of the cat's brain would seem to be saying "yup, that's a line right there."

How we perceive the outside world has been a central human question for millennia, underwriting large swathes of philosophy, and later, psychology and neuroscience. In the first half of the 20th century, technological developments aimed at measuring the electrical activity of a stimulated neuron in the brain yielded a concrete path to explore how organisms perceive their surroundings. Of the five most obvious senses, studying vision seemed particularly attractive since the input was physically always the same: photons. And yet photons could be arranged in wildly complex patterns to signal, in the case of a cat, the difference between a mouse and a shampoo bottle. How did light get transformed when it hit the eye into something "recognizable"?

This was a motivating question for a generation of scientists in the Department of Physiology at Johns Hopkins Medical School in the middle of the 20th century. And one such scientist was a young faculty member named Stephen Kuffler, who, in 1948, recorded from single cells in the cat retina and found that these cells did not signal absolute levels of light to the brain, but rather they transmitted the contrast information between light and dark. Small spots of light could activate retinal neurons, whereas flooding the eye with light didn't do so. This finding largely confirmed in a mammal what a fellow soon-tobe Hopkins faculty member (and subject of this series) H. Keffer Hartline had seen while measuring the eye of the horseshoe crab over a decade earlier. Like Hartline, Kuffler could conclude that the "raw data" from light was passed to the brain as a code that essentially said, "this part is dark and this part is light", but what happened after the retina was a mysterv.

This is where Hubel and Weisel jumped in. Both had joined Kuffler's lab at Hopkins to explore vision in the cat, picking up where Kuffler left off and using a technique that enabled recording from single cells in the brain. They started by repeating Kuffler's observation, but this time measuring from the next stop in the brain after the retina, a relay station known as the *lateral geniculate nucleus* (LGN). Here they found a similar principle at work: the same small spots of light that activated the retina could be measured in the LGN. But when they moved onto the next and most complex stop in the cat's visual cortex, small spots of light did not cause the neurons there to fire. Instead, the neurons in one spot would only fire if the cat saw a very particular abstraction of light, such as a line moving left or a box moving right. They discovered that cortical neurons weren't really responding to light anymore but an abstract feature of that light. Moreover, a cortical neuron could be immensely precise in the type of stimulus that would activate it, such as a line at a 30-degree angle, but not 90 degrees. By taking measurements at different points of the cat's visual cortex and looking for a stimulus that corresponded to each particular position, Hubel and Wiesel were able to map the pattern selectivity of the cells in this region. It was a first and stirring demonstration of what visual perception really looks like: after light enters the eyes, the signal that makes it to the visual cortex has been broken down into a constellation of lines, constituent shapes, and other features each computed at distinct locations, to yield a full picture.

It was a truly profound discovery, for it implied that visual perception is quite liter-

ally computed and created in the brain. In other words, it is an illusion. An important demonstration of this idea came from Hubel and Wiesel a few years later. By depriving one eye of a newborn kitten of light, while leaving the other alone, they observed that the kitten could become blind in the deprived eye, but not because there was something wrong with the actual eye. Instead they found that the region in the visual cortex responsible for that eye had failed to develop. Depriving an adult eye of light for the same amount of time never caused blindness. Hubel and Wiesel thus defined a "critical window" in brain development during which neural connections present at birth could be modified or even lost if deprived of their essential stimulus. This work directly influenced the improved treatment of children born with cataracts and other correctable eye conditions by highlighting the sense of urgency defined by the critical window.

It is somewhat hard to overstate how Hubel and Wiesel's' findings have shaped our perception of the brain as an exquisitely complex computer that creates the world around us. But along with a bit of feline help, this is exactly what they did.

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

Neuroscience Night

AILEEN MARSHALL

March 14 through the 20 was National Brain Awareness Week. In honor of that, the Rockefeller University's Science and Media Group sponsored an event called Neuroscience Night, run by the organization KnowScience. The event consisted of several talks by local scientists about their fascinating research on the brain. The topics ranged from the infant brain to the addicted brain.

Brain Awareness Week has been presented every March by the Dana Foundation for twenty years. The foundation is a non-profit that promotes neuroscience research by grants, publications and education; made up of more than 350 neuroscientists, including some Noble laureates. They publish the online journal Cerebrum. They also provide materials for organizations and groups to put on events for Brian Awareness week. Besides the Rockefeller University, many New York City institutes hosted seminars and exhibits, including Columbia University, Mount Sinai, New York University, and the Greater New York City Chapter of the Society for Neuroscience.

Rockefeller's Neuroscience Night was organized by KnowScience, which is a non-profit science advocacy and educational organization founded and headed by Rockefeller's own Dr. Simona Giunta. They run events to improve the awareness and understanding of science among the public, particularly adults.

The first speaker at the Neuroscience Night was Rosemarie Perry, a postdoctoral research scientist from New York University. She spoke about the infant brain. It turns out that babies are a lot smarter than we give them credit for. They learn a lot in their first year. The infant brain is capable of learning several different languages. Like many animals, humans go through a stage when they need a caregiver to survive. She told us how the human's infant brain is geared toward bonding with its caregiver, in order to get what it needs. In rats there is a sensitive period, the first nine days after birth, when bonding is established. In humans, attachment starts in the womb, where the fetus learns the mother's scent and voice. And this attachment is bi-directional, oxytocin is released during skin to skin contact, enforcing the bond of both caregiver and infant. The caregiver can even regulate the infant's brain. In rats, the amygdala kicks in after ten days, which is responsible for fear. Perry's experiments have shown that the mother's presence can block the fear response in rat pups.

The next speaker was Bianca Jones-Marlin, a postdoctoral researcher from Columbia University. Her topic was Love and the Brain. She told us that there is a chemical reaction behind love, no matter if it's romantic, familial, or platonic. It is also oxytocin that is released during eye contact with a loved one. Oxytocin effects the reward center of the brain. Experiments have shown that oxytocin is also released when one has eye contact with one's dog. This hormone works in the left hearing center of the brain. Jones-Marlin's experiments with mice have shown that mice will retrieve their pups back to the nest when they hear them cry. But a virgin female in the cage will not retrieve the pup.

Loren DeVito, a science and medical writer, spoke about memory. She explained how there are three kinds of memory. Episodic memory is when we recall events in our life. Motor memory lets us learn how to ride a bike. And it is semantic memory used when we memorized the multiplication tables in elementary school. Memories are formed in the hippocampus, which then sends those memories to long-term storage. There is a complex chemical reaction that happens when we make a memory, involving neurotransmitters crossing synapses between neurons and the synthesis of a protein. Retrieving a memory makes it stronger. She also talked about experiments that were done to see if memory could be effected by drugs. Subjects who had a phobia to spiders were given a drug that blocks the protein immediately after exposure to a spider. At their next exposure the following week, subjects did not feel afraid.

The last talk was given by our own Derek Simon, a postdoctoral fellow in the Kreek lab. He spoke about how addiction works in the brain. It turns out that addiction has a similar mechanism, no matter if the substance is anything from caffeine to illegal narcotics. Long-term additions actually cause changes in the brain. Drugs change how neurons fire. All addictive drugs cause a rise in dopamine, which also effects the reward center. The same reaction happens during behavioral addictions like gambling. The body tries to block dopamine, to return the level to normal. In long-term addictions, the body has compensated so much that dopamine levels drop below normal, leaving one feeling worse. Derek showed images of a normal and an addict's brain to demonstrate the physical differences. Interestingly enough, while talking about the mechanism of methadone, he mentioned how it had been developed here at Rockefeller in the 1940s.

The next KnowScience event is entitled "Imagine a World Without AIDS". It will be on April 7 at the Kips Bay library. Go to knowscience.org to learn more about their fascinating and enjoyable events.

Click the banner below for the upcoming events!



Culture Corner

Book Review: Sudden Death: A Novel, by Álvaro Enrigue, translated by Natasha Wimmer

BERNIE LANGS

I often view the study of European history as a lesson in arbitrarily defined epochs populated by individuals lost in a haze of their own coping mechanisms, against the ingrained, systematic, and what they felt at the time to be wholly justified violence surrounding them. Future generations may view our current times much in the same way.

A new book Sudden Death: A Novel, by the Mexican writer Álvaro Enrigue (now living in New York City) and translated by Natasha Wimmer, attempts to place the events of the Counter Reformation in a fictionalized setting, centering around a tennis match between the famous Italian artist Michelangelo Merisi da Caravaggio (called "Caravaggio"; 1571-1610) and the Spanish poet Francisco de Quevedo. That both figures are so hungover that they can't recall the events of the prior evening that has led to their vicious "dueling" on the court, is a great running joke throughout the book. The historical Caravaggio is well-known as having been a violent brawler and yes, he played tennis. It is widely believed that it was an argument over a tennis match that led him to murdering Ranuccio Tomassoni. The subsequent threat of punishment by the authorities set off the chain of events leading to the artist's own demise.

Sudden Death, graced with short chapters, has a wider sweep than the tennis match, bringing in far-flung plots that strangely eventually coalesce. Many of them center on the slightly earlier time of the conquest of Mexico by Hernán Cortés. He is fictionalized as completely oblivious to the carnage he has left in his wake and later as having no sense of just how barbaric his land-grab in the name of Spain has been. Also appearing in the novel are Galileo and a host of other well-known personalities from the time of Caravaggio. Most amusing is the tracing back of the ball utilized in the tennis match, made from the packed hair of the executed second wife of King Henry VIII, Anne Boleyn. That human or horsehair or wool were used at the time to make tennis balls is noted by Enrigue in brief interludes, presenting source documents on the evolution of the game of tennis. This, along with countless other diversions, makes Sudden Death a truly interesting and enjoyable read.

Caravaggio is a fascinating figure in art history. Having read nonfiction accounts of his life and work and having seen much of



The Calling of Saint Matthew by Caravaggio located at San Luigi dei Francesi in Rome (**photo: Wikipedia**)

his paintings in person, I found it interesting to see how a novel makes him come alive, if just in the imagination of a writer such as Enrigue. I could have lived without some of the more scatological details and the sections describing the artist's sexual proclivities, but the battling Lombard in Sudden Death neatly coincides with what I've imagined Caravaggio to have been like as a real person.

Baroque painters such as Caravaggio and the Italian artists of the period such as Il Guercino, Guido Reni and painters in the Carracci family, were making one last gasp for religious art after the strange and slightly disastrous post-Michelangelo period of Mannerism. Caravaggio's canvases include wide areas of complete darkness and sparse settings often populated by stark portraits, drawn from the crowd of ruffians he associated himself with. At the time, the griminess in his works were a source of shock, yet his genius was always undeniable. Caravaggio represents the underbelly of Rome that was never hidden, and which comes very much to life in his masterworks. By looking carefully at a painting by him, you can almost feel and experience the texture of his times.

Enrigue steps outside of his novel at times to ask his reader and himself just what it is he is writing. I welcomed these interruptions since I found myself wondering the same thing. His chapters describing the art created by a Mexican craftsman, who is taking the newly learned motifs of Christianity and weaving them into magical arts of his own, were amongst the most beautiful passages of the book. Enrigue goes to great lengths to paint for his readers the ethereal beauty of the conquered Mexican's work. He brings them to life for readers who have never seen such objects, contrasting with the well-known oeuvre of Caravaggio. In the long run, the book presents a case study of different worlds uniting amongst endemic violence in the pursuit of art. That is exactly what Sudden Death achieves as well, a work of thought-provoking prose rising from the ashes of an infamous human past.

BMMMMMMMMMMMMMMNew York State of Mind

This month Natural Selections interviews Ian Brown, Group Leader, Comparative Bioscience Center

INTERVIEW BY GUADALUPE ASTORGA

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

I've been living here for 36 years.

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

I currently live in Brooklyn, and my favorite neighborhood is Clinton Hill in Brooklyn, it is a quite area, with nice parks.

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

I think the most overrated is the convenience of the city, and the most underrated is the niceness of the people, many times it is presumed that they are tough or intimidating, but I think people here are very nice.

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

The activity of the city, there's always something going on.

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

I would say positive, as this Frank Sinatra song says "if you make it here you can make it anywhere". I think this city definitely builds up your character, as you have to deal with different situations and people with very different personalities. I've noticed it's easy to identify people from NYC when they are outside, because they have more character and are more confident.

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

I would shut it down for a couple of hours, there are so many things going on from Sunday to Sunday, people are always going somewhere, I would just stop everybody from driving and walking and tell them: "relax".

What is your favorite weekend activity in NYC?

I like the parks, specifically Central Park, you find all kind of personalities and cultures. If the weather is nice, or if it's snowing, I like to go there to relax, enjoy or make [play] sports. It is a beautiful place.

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

Unfortunately, I'll have to say when the World Trade Center fell, that was big here, it brought a big change and I had never seen such devastation in the city and people.

Bike, MTA or WALK IT???

My favorite: walk, because I like to observe.



Photo Courtesy of Ian Brown

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

Given that I'm a New Yorker, I like the countryside, the calm and the beach. But if I have to choose a city it would be Paris, because is not as crazy as NY, it is more laid-back.

Do you think of yourself as a New Yorker? Yes, definitely!

QUOTABLE QUOTE

"Anyone who has never made a mistake has never tried anything new."

Albert Einstein, 1879-1955

Send in interesting quotes to be included in future issues to nseditors@rockefeller. edu.

Quotes can be philosophical, funny, clever, anecdotal - but NOT too salacious or outright unpublishable - and short enough not to need copyright permission.

Photo by **Ferdinand Schmutzer**

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Supreme Effort

GEORGE BARANY AND FRIENDS

This bipartisan politically themed puzzle was created within hours of a much-anticipated announcement by a consortium of friends of Rockefeller alum (1977) George Barany, who is currently on the faculty of the University of Minnesota-Twin Cities. For more about this specific puzzle, including a link to its answer, visit here. More Barany and Friends puzzles can be found here.

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39. They follow the "nus"					_															
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44. Word rhymed with "hotel" by Elvis in											_					_				
"Heartbreak Hotel"	66						67	68	6.9		70		71		72					
46. Anesthetized, perhaps																				
49. Admitted guilt for, as a lesser charge	73				74	75				76				77						
50. President who followed Article II of the																	_			
Constitution three times during his two terms			78					79					80		81	82	83			
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53. Like some knights and baseball throws	84	85			86		87					88					L			
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Stockholm	5. Two-time Super Bowl MVP Manning 6. Fine porcelain									47. Airport or Amtrak code associated w Wisconsin's largest city										
70. Best Foreign Language Film of 2014	7. Cardinal family name									48. Eponymous verb derived from a 1987 Rea										
72. Honey maker	8. It incited a 1773 party									Supreme Court nominee										
73. Chief judge of the United States Court of	9. Jewish rights org.									51. Football positions: Abbr.										
Appeals for the District of Columbia Circuit	10. SNL's Father Sarducci									52. French broths										
78. Plural suffix with auction or musket	11. Hard word for Eliza Doolittle									53. Dutch treat										
79. Minor tautomer for majority of ketones	12. Became proficient in										54. Greet the judge, for example									
80. Lubricated, like a baseball glove being	13. Honest, the first Republican President									55. Strategic withdrawals										
broken in	14. Far from draconian									58. Take the money and run										
84. Half a Hollywood Hungarian	17. Some pond coverings										59. Sailor's affirmative									
86. Request from 50-Across to 26-Across, with	20. Polish site										60. Job lot?									
respect to nomination of 73-Across to succeed	25. Appeal										62. Disapproving sound									
19-Across		27. Individual mandate, according to a June 2012										64. Org. with Jerry Lewis-hosted Labor								
89. Muesli morsel		Supreme Court ruling										telethon (1966-2014)								
90. Cell alternative		28. Fred's "Silk Stockings" co-star 29. One of the deadly sins										e hidc								
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92. Yiddish laments					an Ac		iy Aw	ard f		71. Oft										
93. One-named Irish Grammy winner		playing a transgender woman											ing b	oast						
94. Govt. grp. that once subcontracted work to		31. King of ME, e.g.										75. House channel								
Edward Snowden		32. Bull's partner										76. "The Thinker" sculptor								
95. Tournament ranking	33. Adam's madam 38. Type of tuna									77. Demanding, egotistical types 81. Kind of wolf										
DOWN																				
DOWN	40. "Parting is sweet sorrow" 42. Green govt. grp. since middle of Nixon									82. Kitchen extension?										
			govt.	grp.	since	mid	ule o	I NIX		83. Exi										
1. Bibliog. space saver	admi									84. Bro										
2 Lisa	43. Charity									85. Utter										
2 Nobol Poaco Prizo winnor from South Africa										-										

45. Actress whose lover Johnny was stabbed to

death by her daughter Cheryl

87. Unspecified number

88. "Are ____ pair?" ("Send in the Clowns" lyric)

- _ Lisa 2. _
- 3. Nobel Peace Prize winner from South Africa
- 4. Thunderous event



Life on a Roll

ELODIE PAUWELS http://elodiepphoto.wordpress.com





It is that time of the year when mountains are covered with snow. I took a few days off to forget all about the urban and stressful lifestyle. Walking for hours in such black & white scenery, with my steps and the distant echo of a bell or the barking of a dog as the only sound, is such a simple and relaxing joy.