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BAY'S THREE-RUN HOMER LEADS RED SOX PAST OAKLAND AGAIN, 12-2

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THE END OF RAKAN'S WAR

Life asked far too much of Rakan Hassan, the Iraqi boy brought to Boston in 2005 for treatment after a mistaken shooting by American troops. The next chapter of his story is hard to write.

KEVIN CULLEN



We were standing on a dusty road in Mosul, Pa. Larry Roman smiled, and he had just left us. It was January 2009 and the boy named Rakan had driven away in an open sedan identical to the one he was riding in when his life changed barely a year before, and so we stood there, with this odd mix of hope and expectation, and shared goodbyes.

Rakan Hassan is 12 years old and playful. His parents killed, when

American soldiers pushed and opened fire on the family as it sped toward them in the fading light of dusk. Rakan and other children and teenagers in Mosul had just taken a break together, and I had watched the whole process, to write about it, and then we brought Rakan back to the way some where he was nearly killed because that was what Rakan and his family wanted.

As we went, and the car driven by Rakan's brother-in-law disappeared into the dust, Larry Roman still has felt what I was feeling because he put his hand on my shoulder, looked me in the eye, and said, "Don't worry. We'll see him again."

We never did. Rakan Hassan, the boy whose life

Larry Roman saved, the boy I sat with that day for five months, the boy who became my son's friend, the boy who looked anybody and everybody he met, was killed in June when a bomb exploded at his family's home in Mosul. He was 14 years old. Two of his sisters — an 18-year-old and a 12-year-old — were injured in the attack but are expected to recover.

It happened June 16, 144 days after the mission that brought him to work to continue. We got a death certificate the other day and so now we know for sure.

The information is like steps to take, sketchy at best. Through an interpreter, Rakan's brother-in-law and cousin, Nelson Rabb, 41, and his



Rakan Hassan flashes his famous smile during a physical therapy session in Boston in November 2005.

In the news

In the worst flare-up of Palestinian strife this year, nine people were killed in Hebron, including a cleric loyal to Fatah from its stronghold. **World, A1.**

An MIT-trained Pakistani neuroscientist is in custody in Afghanistan, two years after disappearing amid accusations she belonged to an Al Qaeda cell in Boston. **Nation, A10.**

With the chief suspect in the anthrax attacks dead, the Justice Department is expected to decide soon whether to close the case. **Nation, A10.**

President Bush's visit set off a wave of nostalgia in Korea, but not, with many saying they will miss the presidential couple. **Cts & Region, B1.**

Jellyfish are becoming more numerous and widespread, a concern of alarm for scientists that may signal the degrading health of oceans. **World, A2.**



What if Michael Dukakis had won the presidential election in 1988? The former governor and Charles P. Feeney imagine what the alternative world would have been like. **Magazine.**

Magic represents a stepstone of knowledge about the human mind with every lesson, some researchers are beginning to realize. **Mean, C1.**

POINT OF VIEW

"That Patrick is rightly a hero to those who believe equality does not begin and end at any state line, and that personal liberty should not be decided by ballot. To supporters of same-sex marriage, the Bay State is leading by example, showing, as Patrick says, that 'in Massachusetts, equal means equal.'"

Opinion, C9.

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2008 OLYMPIC GAMES • BEIJING • AUG. 8-24



Fireworks exploded over Beijing's national stadium yesterday during a dress rehearsal of the opening ceremony.

For Chinese, much more than medals is at stake

Pride mixes with worry at being misunderstood

By Patricia Wen

BEIJING — It's a double-edged sword, less than 10 miles from the glitzy Olympic stadium. More than 100 million Chinese people will cheer for their athletes as the games begin this week.

It's worry? That the world will misunderstand his native land over again. The red-roofed construction worker's weathered hands have helped to build some of the towering structures that have altered the city skyline. But while the state of Beijing, 61, has retained its historic neighborhood, the risk to the new Chinese economy he believes "60 percent" of the changes have impacted the lives of ordinary people, giving most of

REGENTS, Page A4



Games a test for transformed athletic system

By Shira Springer

BEIJING — In Olympic-level sports, more is at stake than the medals. And for Chinese athletes, that's never been clearer than during the 2008 Summer Olympics.

Li and other top Chinese athletes like NBA All-Star Yao Ming are the face of a strong, commercially thriving nation ready to compete with the world's best in Beijing and beyond. Hoping to capitalize on the moment, China has changed its traditional, socialist approach to training and testing athletes in preparation for the games, especially in sports where China has seldom excelled in past international competitions.

ATHLETES, Page A4



Wang Dan, 28, a store clerk, and Li Yang Xin, a shopkeeper, said business has been brisk heading into the Games.

"They've been very challenging times, but I think that there has been motion forward."

CARDINAL SHAS P. O'MALLEY

O'Malley reflects, after 5 tumultuous years

By Michael Pirovano

Some bishops would have attended an anniversary celebration. Others would have held a public Mass. Cardinal Shas P. O'Malley skipped town, checked into a monastery, and prayed.

Five years after he was installed as the Roman Catholic archbishop of Boston, O'Malley reflects in quiet ways on the most unusual of public figures — the prince who dresses as the bishop, the leader

that was before the spotlight, the slipstream of events that led to his rise, to his own remarkable way, tucked out of the headlines from something close to hidden to something open to the world.

He arrived in Boston on July 20, 2003, with a title "for the third time in his career as a bishop, a diocese thrown into chaos by deep-seated crime. But if the attention surrounding the Fall River and Fall River diocese had been with the

attention in Boston was volcanic. So had, in fact, that when Pope John Paul II asked him to move to Boston, O'Malley immediately sent a plan to the pope to consider.

"I dropped the phone ... It was like a shock," O'Malley said in an interview Tuesday. "I did not like to be involved, and it came back immediately with me, this is what he really said to do."

O'Malley talked off the story of some

CARDINAL, Page A1

Fugitive arrested, girl safe in Baltimore

Police crafted ruse to snag Rockefeller

By Ryan Kest and Meghan Woodhouse

Authorities captured Clark Rockefeller in Baltimore yesterday and found his daughter safe inside an apartment nearby, ending an intense weeklong search that included rumors of escape by boat to Paris or Bermuda and reports that the two had been spotted in Chicago in the Caribbean and in New Jersey.

Police found 7-year-old Faith Starrow Miles Stone, whom Rockefeller is accused of kidnapping one week ago, in an apartment on Bay Street in Mount Vernon, a neighborhood of historic brownstones and red brick.

"The first words were that she was very happy to see the police," FBI Special Agent Norman Glendon said at a news conference in Baltimore yesterday after police arrested the girl. The girl was a "little nervous" about being left alone, added police Deputy Superintendent Terry Lee.

Rockefeller, 34, was arrested in New Jersey by the FBI, said the FBI spokesman. Edward E. Bush, who visited the girl yesterday.

Lee said that when he and Glendon told Bush that his daughter had been found, he informed the couple into his arms. Telling the father that his 7-year-old girl was safe was a "one of the best moments of my police career."

NEWS, Page A15

HIV more widespread than thought

Advances in blood tests, tracking boost numbers

By Stephen Smith

The AIDS epidemic has not a far more palpable virus. America has previously believed, federal disease trackers reported yesterday, with the number of new infections since the late 1990s now thought to be 80 percent higher than earlier projections.

The news that a decade, the US Centers for Disease Control and Prevention had estimated that 40,000 Americans a year become infected with HIV, the virus that causes AIDS. But advances in blood-testing methods combined with more tracking of new cases allowed the health agency to determine that the actual figure is closer to 20,000 to 25,000 a year.

The revised estimate of HIV's toll in the United States has been the subject of considerable speculation among AIDS specialists as

HIV, Page A6

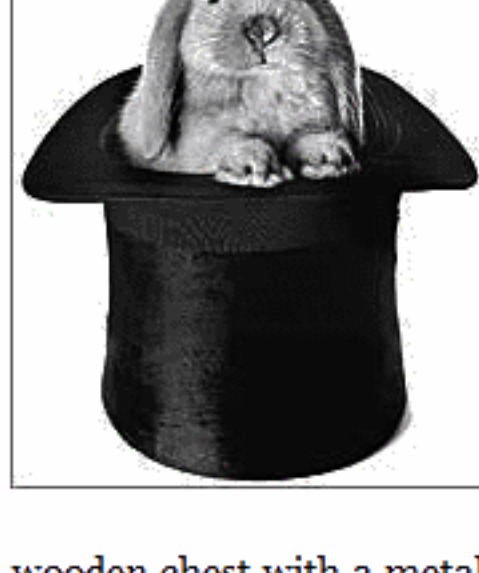
How magicians control your mind

Magic isn't just a bag of tricks - it's a finely-tuned technology for shaping what we see. Now researchers are extracting its lessons.

By Drake Bennett
August 3, 2008

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In September of 1856, in the face of a growing rebellion, Napoleon III dispatched Jean-Eugene Robert-Houdin to Algeria. Robert-Houdin was not a general, nor a diplomat. He was a magician - the father, by most accounts, of modern magic. (A promising young escape artist named Ehrich Weiss would, a few decades later, choose his stage name by adding an "i" to "Houdin.") His mission was to counter the Algerian marabouts, conjurers whose artful wizardry had helped convince the Algerian populace of Allah's displeasure with French rule.



A French colonial official assembled an audience of Arab chieftains, and Robert-Houdin put on a show that, in its broadest outlines, would be familiar to today's audiences: he pulled cannonballs out of his hat, he plucked lit candelabra out of the air, he poured gallon upon gallon of coffee out of an empty silver bowl.

Then, as he recounted in his memoirs, Robert-Houdin launched into a piece of enchantment calculated to cow the chieftains. He had a small wooden chest with a metal handle brought onto the stage. He picked a well-muscled member of the audience and asked him to lift the box; the man did it easily. Then Robert-Houdin announced, with a menacing wave of his hand, that he had sapped the man's strength. When the volunteer again took hold of the box, it would not budge - an assistant to Robert-Houdin had activated a powerful magnet in the floor of the stage. The volunteer heaved at the box, his frustration shading into desperation until Robert-Houdin's assistant, at a second signal, sent an electric shock through the handle, driving the man screaming from the stage. The chieftains were duly impressed, and the rebellion quelled.

The story of Robert-Houdin's diplomacy by legerdemain is well-established in magic lore, in large part because it is the only documented instance, at least since antiquity, in which a conjurer changed the course of world affairs. Stage magic, after all, isn't statecraft, but spectacle and entertainment.

In the past year, though, a few researchers have begun to realize that magic represents something more: a deep and untapped store of knowledge about the human mind.

At a major conference last year in Las Vegas, in a scientific paper published last week and another due out this week, psychologists have argued that magicians, in their age-old quest for better ways to fool people, have been engaging in cutting-edge, if informal, research into how we see and comprehend the world around us. Just as studying the mechanisms of disease reveals the workings of our body's defenses, these psychologists believe that studying the ways a talented magician can short-circuit our perceptual system will allow us to better grasp how the system is put together.

"I think magicians and cognitive neuroscientists are getting at similar questions, but while neuroscientists have been looking at this for a few decades, magicians have been looking at this for centuries, millennia probably," says Susana Martinez-Conde, a neuroscientist at the Barrow Neurological Institute and coauthor of one of the studies, published online last week in *Nature Reviews Neuroscience*. "What magicians do is light-years ahead in terms of sophistication and the power of these techniques."

As magicians have long known and neuroscientists are increasingly discovering, human perception is a jury-rigged apparatus, full of gaps and easily manipulated. The collaboration between science and magic is still young, and the findings preliminary, but interest among scholars is only growing: the New York Academy of Science has invited the magician Apollo Robbins to give a presentation in January on the science of vision, and a team of magicians is scheduled to speak at next year's annual meeting of the Society for Neuroscience, the world's largest organization of brain researchers.

And in a world where concentration is a scarce resource, a better understanding of how to channel it would have myriad uses, from safer dashboard displays to more alluring advertisements - and even, perhaps, to better magic.

BREAK

A great deal of the success of a piece of magic is simply getting the audience's attention and sending it to the wrong place - to a right hand flourishing a wand while the left secrets a ball away in a pocket or plucks a card from a sleeve. Magic shows are masterpieces of misdirection: they assault us with bright colors and shiny things, with puffs of smoke and with the constant obfuscatory patter that many magicians keep up as they perform.

For years, cognitive scientists thought of perception as like a movie camera, something that reproduced the world in its panoply of detail. Over the past decade, though, that model has been increasingly questioned. For one thing, people have a pronounced tendency to miss things that are happening right in front of them. Daniel Simons, a psychologist at the University of Illinois, did a series of now-famous studies in the late 1990s that showed the extent of this cognitive blindness. In one, people were approached by someone asking them for directions, only to have, in the middle of the conversation, that person replaced by another. Only half noticed the change.

In another study, people were shown a movie clip of two teams, one in black shirts and one in white, each passing a basketball around. The subjects were asked to count the number of passes one of the teams made. Half said afterward that they hadn't noticed the woman in a gorilla suit who, midway through the clip, strolled through, paused, and beat her chest.

Because of work like this, a new model has arisen over the past decade, in which visual cognition is understood not as a camera but something more like a flashlight beam sweeping a twilight landscape. At any particular instant, we can only see detail and color in the small patch we are concentrating on. The rest we fill in through a combination of memory, prediction and a crude peripheral sight. We don't take in our surroundings so much as actively and constantly construct them.

"Our picture of the world is kind of a virtual reality," says Ronald A. Rensink, a professor of computer science and psychology at the University of British Columbia and coauthor of a paper on magic and psychology that will be published online this week in *Trends in Cognitive Sciences*. "It's a form of intelligent hallucination."

The benefit of these sorts of cognitive shortcuts is that they allow us to create a remarkably rich image of our environment despite the fact that our two optic nerves have roughly the resolution of cell-phone cameras. We don't have to, for example, waste time making out every car on the highway to understand that they are, indeed, cars, and to make sense of how they are moving - our minds can simply approximate from the thousands of cars we have already seen in our lives.

But because this method relies so heavily on expectation - not only to fill in the backdrop around us but to determine where to send what psychologists call our "attentional spotlight" - we are especially vulnerable to someone who knows our expectations and can manipulate them, someone like a magician.

"In magic," says Teller, half of the well-known duo Penn & Teller and one of five magicians credited as coauthors of the *Nature Reviews Neuroscience* paper, "we tend to take the things that make us smart as human beings and turn those against us."

Misdirection is, in a sense, the conjurer's tool that is easiest to understand - we miss things simply because we aren't looking at them. Martinez-Conde is particularly interested in misdirection, and the question of what it is about certain movements that attract and hold our attention. Robbins, a performing pickpocket and another of the magicians to coauthor the *Nature Neuroscience* paper, has found, he says, that semi-circular gestures draw people's attention better than straight ones. "It engages them more," he says. "I use them when I'm actually coming out of the pocket."

Martinez-Conde is intrigued by this distinction, and has hypothesized that the particular magnetism of curved motions might spring from the fact that they don't map as easily onto the quick, straight movements, or saccades, that our eyes instinctively use to focus on objects. As a result, she suggests, curved motions might require more sustained attention and concentration to follow.

Other effects, though, are more befuddling. Often eye-tracking studies show that subjects can be looking right at an object without seeing it - car accident survivors report a similar paradox. Or, with just a little encouragement, a person can be made to see something where there's nothing.

The vanishing ball illusion is one of the most basic tricks a magician can learn: a ball is thrown repeatedly into the air and caught. Then, on the final throw, it disappears in midair. In fact, the magician has merely mimed the throw, following the ball's imagined trajectory with his eyes while keeping it hidden in his hand.

But if the technique is easily explained, the phenomenon itself is not. If done right, the trick actually makes observers see the ball rising into the air on the last toss and vanishing at its apex. As Rensink points out, this is something more powerful than merely getting someone to look in the wrong direction - it's a demonstration of how easy it is to nudge the brain into the realm of actual hallucination. And cognitive scientists still don't know exactly what's causing it to happen.

For the moment, the cognitive scientists looking at magic are confining themselves to these sorts of simple effects, and the fundamental questions they raise. Eventually, though, Rensink envisions a sort of periodic table of attention effects: methods for getting someone's attention, methods for deflecting it, methods for causing someone to be blind to something they're looking directly at. Such a taxonomy, he argues, wouldn't just be helpful to magicians. The control and management of attention is vital in all sorts of realms. Airplane cockpits and street signs would be designed better, security guards would be trained to be more alert, computer graphics would feel more natural, teaching less coercive.

Still, even if none of this came to pass, there's a value in simply coming to grips with the gaps and limits in our awareness. Like Robert-Houdin's audience, awed by a magnet, we are more easily manipulated and more likely to put ourselves in compromising situations if we don't know what we don't know.

"The main thing is knowing that you've got limitations," says the cognitive researcher Daniel Simons. "Most people don't understand the extent to which talking on a cellphone affects their driving."

According to Teller, magic, more than anything else, serves as that reminder. And that explains why, despite its comparatively humble effects, it continues even in the age of Imax to attract practitioners and audiences.

"The fundamental thing we do every day is ascertain what is reality, it's this diagnosis of what the signals coming into our eyes are supposed to mean," he says. "We say, 'That's a fence, I must not walk into it,' or, 'Is that a car coming around the corner? How much can I see of it? Oh, no, it's only a bicycle.'"

What draws people to magic, he believes, is an appreciation of how slippery that seemingly simple diagnosis can be.

"They realize," he says, "that the best way to grasp the power of deception is to do it themselves."

Drake Bennett is the staff writer for Ideas. E-mail drbennett@globe.com. ■