COGNITO

InCognito

For your monthly study-related needs and feeds.

March 2016

Suggestions, feedback or comments? Let us know at newsletter.cognito@gmail.com.

Brains Abroad: Elisa van der Plas in Oxford

It's Friday night 8:25 pm. The Department of Experimental Psychology of the University of Oxford is deserted. The only sound comes from behind a door with a printed sheet attached to it that says "The Crockett Lab". Me and my colleagues are sitting there, our excitement can be noticed from the fast sound of the typing on our Macbooks; we love our research.

A reminder for the "Dutch society in Oxford" pub crawl-event pops up on my screen. A little voice in my head says I still have too much to do to leave now. Another voice says the first voice was lying; I'm as free as a bird and can leave whenever I want. The raw truth is that I just cannot stop, I first need to know what the results of this other hierarchical drift-diffusion model are. "We're still here, the survivors of the Department of Experimental Psychology" – my colleague just read my mind. She looks at me, smiling. We chuckle a bit about how nerdy we are, and then go happily back to work.

> "Studying in Oxford means a good balance between nice extracurricular activities and working hard
>
> -Elisa van der Plas

This term I started an internship in the Crockett Lab; a team of eight women and one man studying moral decision-making. We all have one thing in common: we strongly believe in the prosocial nature of people and know that a little bit of cooperation can go a long way. Whereas people might argue that morality is too much of a philosophical phenomenon for neuroscience, we use advanced scientific methods to investigate it. We spend our days adjusting economical axioms of personal preferences, fitting statistical models of morality, searching for altruistic brain activity, and, most of all, helping each other with doing this. Yes, our lab knows the importance of cooperation. Not only because we study it, but mostly because we know that even though it might slow you down sometimes, cooperation makes science so much more fun.

A small part of the Crockett lab

The University of Oxford seems to have understood this as well, and some very bright important people of its directory are well informed about the latest social group-identity studies. They provide various team sports and activities, such as rowing and choir singing in their colleges. Perfectly corresponding to Dunbar's number, colleges consist of roughly 150 students a year all living and eating together in extremely beautiful Harry Potter halls. Being part of a college-family enables the University to control how much students study and to improve their collectivism by stimulating group-activities – that, of course, do not take place during office hours, because then you're supposed to study ;)

The effects are quite brilliant! Studying in Oxford means a good balance between nice extracurricular activities and working hard. For example, I usually start my day with a morning "outing" (e.g. row training), in which me and my boat crew ladies (try to) row completely synchronous along the quiet river sunrise of Oxford. After the training we sometimes go to the impressive dining hall of our college, where binging on a full English breakfast is the best thing to do to get ready for a day of proper science. After work, from 5 pm onwards, various different talks are organized by the departments of the University. I often attend seminars about philosophy, politics or artificial intelligence with a friend that works on DBS in another lab. Afterwards, we usually have "healthy" dinner (read: fried stuff) in a pub. Only in Oxford you're likely to spontaneously end up such evenings drinking beer with inspiring people like the CEO of The Economist, the inventor of bungee jumping or a machine intelligence researcher at Google. The open-mindedness of these inspiring people in learning about your opinion corresponds perfectly with the collaborative mind-set of the Oxford community.

During these conversations, both parties often learn so much more than what they would have learnt from a one-way teaching interaction as is usually the case in academia.

We're back in the lab, it's past 9 pm now. The department is even more deserted since my colleagues have both left the office. Working without them is so much more boring and frustrating, so I decide to stop as well and to walk home.

The perfectly organized streets of Oxford spread ahead of me as I walk between the impressive faculties of Oxford Science Park. The characteristic greyish colour of the antique buildings seems to perfectly reflect the dimmed light of the classy lanterns; even they seem to understand the complementary benefits of working together. I think about Albert Einstein, Adam Smith and all the other great scientist that might have walked on this very same street. They are often known for their famous quotes like "The man that walks with the group often gets no further than the group. Whereas the man that stands alone, can get to places no one has even seen before" or "Every man's individual ambition serves the common good".

A few decades further but in this very same town, I guess our little lab has made the first steps towards a new movement. A movement that tries to be less focused on the individual, and knows the importance of getting somewhere as a team. In some way, we as (neuro)scientists together form a team too. I believe that it's time for us to open our eyes and see the importance of cooperation, because if even the greatest scientists would probably not have made it alone, neither will we.

Events

Drinks @ CREA
Every Tuesday, 21:00-late

Cognito birthday party
15 Mar, 19:00-21:30, Common room at REC
Dinner and drinks to celebrate the 9th birthday of the Cognito Student Union!

Alumni career talk: research/ PhD
17 Mar, 19:15-21:00, CREA
International UvA alumni share experiences in finding a research position in The Netherlands. Panel discussion followed by informal networking drinks. Free; registration required.

Symposium: Worlding the Brain
17-19 Mar, ~10:00-~18:00, CREA & Compagnietheater
Neuroscientists, social scientists, and humanities scholars hold talks and panels on how the brain responds to specific social and discursive practices or cultural information and how it is influenced by art, social interactions and technology.

Cognito Brain Slicing Event
24 Mar, 19:00-21:00, Science Park
Cognito members dissect a brain under professional supervision. Drinks follow; registration required.

International Talent Event
15 April, 10:00-17:00, Hotel Casa400
Job fair, workshops, coaching, and matchmaking sessions to meet employers, learn about international labour market in Amsterdam, network, and improve job application skills. Free; registration required.

Alumnus Profile: Andrew Sutjahjo

Andrew Sutjahjo Graduated from MBCS: in December 2014 in the Cognitive Science track.

What is your current position?
I work as an Insights & Data Consultant at Capgemini

What do your daily activities consist of?
That depends on the client: My current client is the National Police. They're trying to unify all the Police corps in the country and share all their data of files, arrests, crime-scene evidence (as well as more mundane things like mail). Each of the 26 corps

> "Most of all, I learnt that I can experiment to see what's best for myself
>
> - Andrew Sutjahjo

in the Netherlands was able to customize how they structured their databases over the past decade. My current project is to make sure that the data of those 26 corps ends up in one central database and have it structured in a consistent way.

I support the interviews we do to understand how each corps has structured their data, but right now I mostly write scripts in an in-house scripting language to make sure that all the data gets validated, resolved, and sent to the new database correctly.

Besides that I also do some side projects such as visual analytics on license plate recognition.

How did you end up in your current position?
Through my network: an old friend knew I had just finished the masters and was looking outside of academia and advised me to look at data science. She arranged an interview for me and the rest is history.

What do you like and dislike about it?
I love the diversity and high-pace of what I'm doing: projects run for a few months to a year and you start out knowing next to nothing about the project or the tools you're going to use. It takes a keen mind to politick yourself to talk to the right people, ask the right questions to figure out what they really need, all the while learning the tooling/software you're using on the fly; it's a great challenge, and you learn a ridiculous amount in short amounts of time while adding value for your client.

I dislike that the projects are not always super interesting: while I'm learning a lot at the police and I have access to highly sensitive information, in its essence my current project is about moving data from one field to another without the thrill of trying to understand the underpinnings of how we/our brain work(s). Thankfully I get to do stuff on the side and the next project will be around the corner soon.

> "The (somewhat clichéd) advice: try hard, fail hard, get back up again. Iterate.
>
> -Andrew Sutjahjo

Why did you decide not to be a researcher in academia?
After my first internship I knew that I would not continue in academia: The project ran long, and by my official end date I had only tested a handful of participants; Every step of the way took longer than expected and in the end I contributed little value to the scientific body, society in general, and the knowledge I gained was focused on a miniscule portion of reality.

Did you feel prepared by the master, and do you still regularly use things you've learned in the master?
I used a lot of time in the masters to figure out what I wanted: I set up an NGO to design and build an orphanage in Kenya and I failed hard. I jumped through hoops to do my second internship in a market research company, and figured out that being the best in very shallow

research is definitely not my calling. There are many skills that I learned in the master's (and my bachelor's) that I still use at my job: how to be hypothesis driven, testing these hypotheses, a lot of statistics; how to deal with and combine different viewpoints, and how to bridge gaps between the people that own them. Most of all, however, I learnt that I can experiment to see what's best for myself, and fostered the tenacity to keep going when those experiments fail.

Looking back, what would you have done differently--what is your advice to the current students?
I would've accepted that academia might not be for me and started experimenting to find out what does fit at an earlier point. Science is awesome, but academia made me unhappy. That love for science (and the amount of time invested into gearing myself up to becoming a researcher) contributed to my inertia against looking for that which would satisfy me.

The (somewhat clichéd) advice I have to give: try hard, fail hard, get back up again. Iterate.

What are your next plans?
I'm good where I am for the next couple of years. Down the line I might restart that NGO again, or I'll find something else that fancies my interest. An old friend once told me that consulting is like going to the gym: it's great to build up strength and muscles (and skills). But you don't go to the gym for the sake of going to the gym: it's a springboard for running a marathon, or shooting harder, or whatever goal you may have. It's a great springboard though.

Science News

The discovery of the century
or why Einstein was right all along
by Despina Kortesidou

A long, long time ago in the distant reaches of the universe **two black holes, each one 30 times as massive as the sun, were locked in orbit, spiraling towards each other.** Even as they collided and merged there wasn't a flicker of light to be seen. The real and very violent action in the system was in the form of gravitational waves (GW): ripples in the very fabric of space and time. These waves were constantly draining energy from the black orbits leading to the ultimate collision and merger to form a single black hole. **At that very instant the power of the GW was 50 times greater than that of all the stars of the universe combined.** That pulse of GW, lasting only a fraction of second, expanded through the universe passing unimpeded through countless galaxies. And about 1.3 billion years later it reached the Earth. Each wave and everything they passed through were alternately stretched and squeezed. However, the effect is minimal and invisible in this scale. To detect and measure their properties, **scientists built LIGO (Laser Interferometer Gravitational Observatory), the most sensitive measuring device ever made**. LIGO uses a device known as an interferometer to measure the tiny displacements in space. The LIGO experiment uses two L-shaped detectors, one in Washington and one in Louisiana, to search for gravitational waves. Each detector bounces laser light between mirrors down two perpendicular four-kilometer legs. LIGO splits the light so that the wave traveling through the first leg, Beam A, is out of phase with that in the other, Beam B. When the beams recombine, the waves should cancel each other out, rendering the resulting beam dark. If, however, a gravitational wave passes through Earth and changes the relative length of the legs, the waves will not match up and the combined beams will reveal telltale beats. The effect is tiny, however - **a nearby collision of two black holes will change the length of LIGO's legs by less that the diameter of a proton, but LIGO is that sensitive to detect changes in distance as tiny as 1/1000 the diameter of a proton(!).** And this tiny measurement was the "everyone lived happily ever after" line in a story that began 1.3 billion years ago in the distant universe, when two black holes collided.

Interview: Nelson Mooren in the FSR

By Dimitris Katsimpokis

I met with Nelson on a Monday afternoon at Science Park, to discuss his involvement in the Student Council of the Faculty of Science. After a year of ardent student demonstrations, discussing about student participation in shaping education policy, appears to be of tremendous significance

Nelson, you are the Treasurer of the Faculty Student Council (FSR). Can you briefly describe its structure and function?

In the FSR we have 12 members, 3 of which are the board and they manage both internal structure and external parties. There are 8 so-called task forces, each consisting of 3 members, that specialize on different topics (e.g. extracurricular activities, academic community, rules and regulations). We also have a few committees, that come and go throughout the year (for instance, the teaching and examination regulations). We are in close contact with the dean and the board of directors of this faculty. What we do is we receive their request for advice on a particular plan, and we give them our advice and they have to take it into account. There are some situations, which are also relevant to the study regulations, in which we also have the right of approval on their plan, which cannot pass without our explicit 'yes'.

The FSR claims that "the rights and privileges of Student Councils are defined by law". Could you briefly discuss the legal status of the Student Councils?

We have the 'law on higher education and scientific research', and parts of this law describe the student councils and the workers' council and all the rights and functions that I described before are delineated in this law. The university also has its own rulings, which also have to be taken into account. Our legal function is, in a sense, an independent council; we are not employees of the university, we are university students.

The FSC aims "to defend the interests of all the students at the Faculty of Science". How would you define these interests?

What students want is always a difficult question, but we have a few ways of determining it. First of all, we are all students, from different backgrounds, and thus all we have our social network that we get our information from, and when friends know you are in the student council they will come to you to give you their take on issues. That gives a lot of input. But usually that is not enough. So based on those inputs, sometimes we have surveys on different topics and every year around Sinterklaas we have a big survey spanning most of the things we do. This year we took around 300 responses that we can work with and depending on the need, we also do specific surveys on specific topics. One of the things that we've also started this year is the 'discussion with the council'. Every month or so, we go to different study associations in science park and we give out free drinks and snacks and people can give their input at a more personal level.

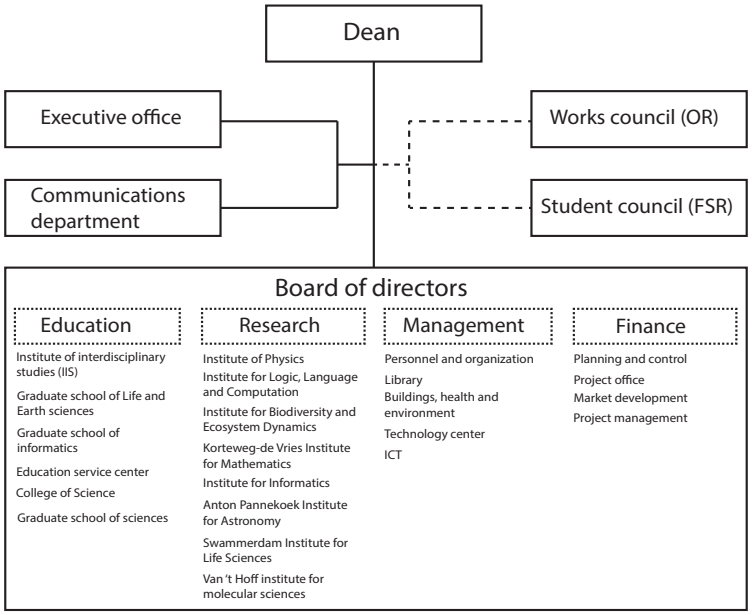
> "What students want is always a difficult question
>
> - Nelson Mooren

What would you consider as a major achievement of (FSR) during the last couple of years?

A few years ago, the UvA and VU had plans to make a joint faculty of science, the student councils had a big say in that and they managed to basically stop the actual joining of the faculties. There is still intensive cooperation of course, but that is something we were very invested in. This year I can only think of smaller victories. But the blocking of the joining of the faculties was a major achievement.

Given the FSR is confined to an advisory role with respect to education policy, would you consider it as an obstacle to your goals?

That really depends on the aspects. The student council is mostly about the rules and the regulations. We cannot say anything about the specific content in a particular study program (this is the job of the educational committees). The constant struggle we have is that we can give advice [to the board of directors], but we need to have as much information as possible, and that can be an obstacle. Sometimes information is not provided by the board of directors and the people responsible for the education policy, or very scarcely or at the latest moment. There is a very delicate balance but I think in most cases, I am content with our advisory role. The problem with wanting to change something about that is that the things that we can advise on, are regulated by the law. If we want to change something about our position, then that law should change. Something that changed in the laws this year because of the occupations last year, is that the student councils can have a say on the university and faculty budgets. These law changes mean that either we have a stronger advisory role, or we get a right to approve of the budget before they can run with it. So, now we are having strong discussions about whether we want that approval role [about the budget], or an advisory role. Most members are in the council for one year and the university or faculty budgets are about millions of euros, so it is very difficult to say anything about it. So it is a struggle between how much power we want, but also how much responsibility we can bear.



Graduations

We send our finest congratulations to the latest graduates of the Research Master Brain and Cognitive Sciences! On February 11th, a ceremony was held for the following esteemed graduates:

Jonathan Krikeb
Marieke Schreuder
Martine Cederhout
Valentina Perdomo
Hanneke den Hartigh
Joelle Lafeber
Chaimae Chomrikc
Tara van Viegen

We wish you the best of luck in all your future endeavors!

Birthdays

Suzanne Martens
12 March

Jasper Hajonides van der Meulen
15 March

Lynett Frijling
16 March

Tum Thongpaibool
16 March

Andrea Arciniegas
20 March

Lionel Newman
21 March

Suzanna van Baardewijk-Berg
23 March

Lola Beerendonk
26 March

Cas Smulders
31 March

Marjolein Boots
31 March

Naomi Hanemaaijer
1 April

Alban Voppel
2 April

Tobio Aarts
6 April

Urša Bernardic
12 April

Haiku

Balls deep in data
Scientific canary
That is what we need

-Michael Griffin & Wouter Boekel

Undesired images

Museum of the month: Resistance Museum
by Katharina Müller

Opposite of the entrance to Artis, there lies one of the less known museums of Amsterdam, the Resistance Museum (Verzetsmuseum). Its permanent exhibition tells Amsterdam's story during the Nazi German occupation between 1940 and 1945. This story is mainly one of people. Similarly to Nazi Germany, these personal stories range from obedience, fear, nationalism, frustration, to disobedience, heroism, bravery and sense of righteousness. The Resistance museum does a very good job conveying the hardships and dilemmas of the occupation from a personal perspective. The only minus is the unfavorable positions of displayed artifacts; be prepared to sprain your neck a bit.

Photo: Dick Verdonkschot

> "The resistance museum does a very good job conveying the hardships and dilemmas of the occupation
>
> - Katharina Müller

Next to the permanent exhibition, the Verzetsmuseum has a special, but cruel pearl to offer that is on display until April 3rd. "Desired and undesired images" focuses on unknown aspects of the Dutch Colonial War in Indonesia that the Dutch government did not want its citizens to know about. Stemming mainly from private photo albums taken by soldiers, the pictures tell the cruel side of the war, and the vast gap between the desired, official image and reality becomes clear. One might hope that exhibitions like this could be a start on the long road to a Dutch apology to Indonesia. While this remains disputable, what will likely remain after visiting this exhibition is a feeling of having been fooled. Realizing the power of images and people's readiness to accept the truth as presented in the media will send a shiver down your spine.

Photo: Dick Verdonkschot

Food for thought: A pasta dish that takes you back to Italy

by Max Wunderlich

Ingredients for two
150 -200g of Pasta (anything works, but I prefer Tagliatelle or Tortellini)
High quality olive oil, enough to cover the bottom of a small pot or pan
1 clove of garlic
1 pinch of dried chilli flakes
Sweet cherry tomatoes
A large handful of freshly grated Parmigiano Reggiano (Grana Padano is fine as well, if you want to save money)
Salt and freshly ground black pepper to taste
Optional, but recommended: fresh rocket (a.k.a. arugula), pine nuts or stale white bread crisped in butter

During the summer of 2013 I couchsurfed in a very small Italian village in the foresty mountains at the coast of Cinque Terre. In an attempt to show my host Massimo and his wife how grateful I was that they let me live with them, I offered to make dinner. I decided to make a version of this dish, because it was the only thing I knew by heart and it was simple enough to cook in an unknown kitchen. While letting the pasta slide into the boiling water, I could feel his skeptical look on my back. There I was: a young German amateur trying to cook Tagliatelle in a truly Italian home. It was simply too much to bear for him. He asked me what I was trying to make and then he took over. I ended up watching how he cooked "my" dish. However, he simultaneously explained every single step he made and I ended up learning a lot.

I cook this dish almost every week ever since, because it is simple, full of flavor and very comforting. The quality of your ingredients really matters and it's definetely worth to spend the extra Euros on non-watery tomatoes, good olive oil and real Parmigiano Reggiano.

Take the largest pot you can find and bring water for the pasta to a boil, make sure to salt it sufficiently (it should be slightly less salty than sea water) and cook the pasta al dente according to the packaging instructions. While the pasta cooks, take a small pot or a small frying pan, pour in a good amount of olive oil and put it on low to medium heat. Slice (don't chop) the garlic into thin, roughly equal layers and add it to the oil, together with a pinch of dried chilli flakes. Keep an eye on it - don't walk away. You are trying to gently infuse the olive oil with aromas. Therefore, it is important that you don't fry the garlic. Around three minutes later, right before the garlic is starting to brown, add roughly chopped cherry tomatoes and a pinch of freshly ground black pepper. The tomatoes will cool down the oil and stop the garlic's cooking process. Add a splash of the pasta water as well, this will help the sauce stick to the noodles. Don't let the tomatoes sit on the heat too long and don't put salt on them yet, otherwise they will fall apart and make your sauce too thin. Once the tomatoes have softened up a bit add salt, stir, and pour the sauce over the drained pasta. Mix well and slowly add the cheese. If you add it all at once, there is a chance that it clumps together and you won't have that divine creaminess coating your noodles. Cover the pasta and let it sit for a minute to soak up the flavors. Serve it on a preheated plate with a drizzle of olive oil and some more cheese.

> "A German amateur trying to cook tagliatelle in an Italian home. I ended up watching how he cooked "my" dish.
>
> -Max Wunderlich

This tastes pretty good already. However, the good thing about this dish is that you can adapt it and build more layers of flavor. For example, I recommend putting a small nest of rocket on top of the plated pasta. Or add some fresh basil or Italian parsley to the sauce. You could also roast some pine nuts in a dry pan, or cut a stale bread into tiny crumbs and fry them in butter until golden brown and put that on top of the pasta for an exciting textural change.

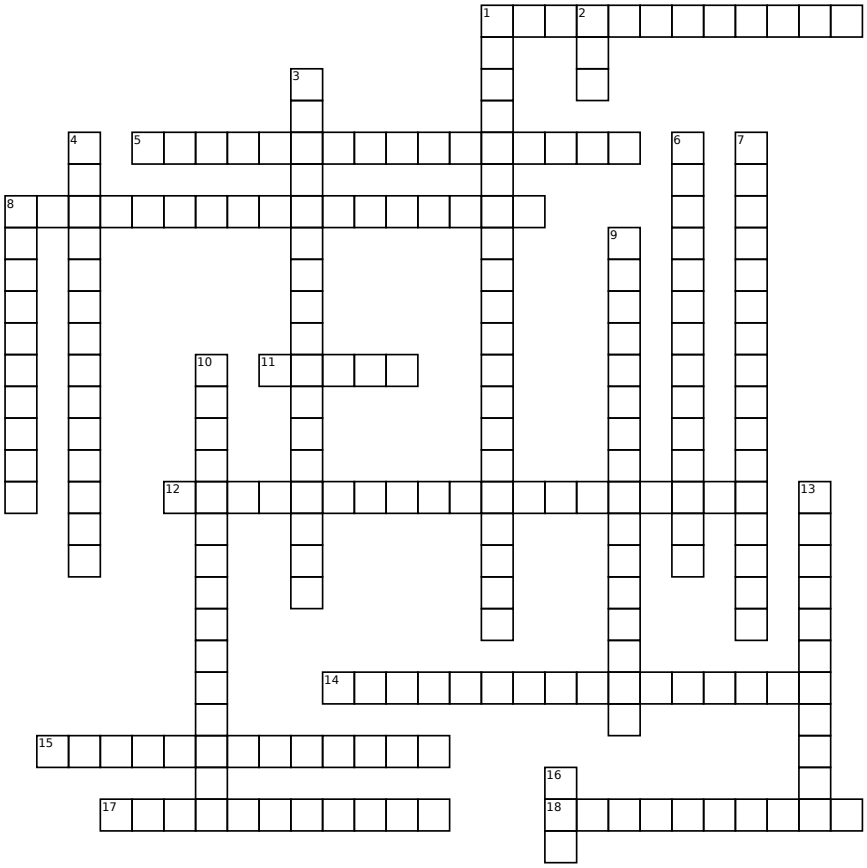
Words inCognito: cryptic crossword

A cryptic crossword is somewhat like a normal crossword puzzle, except all clues are riddles in themselves. An example of a typical cryptic crossword clue is "Disguised as a newsletter", which would be 'in cognito', the title of this newsletter and a synonym for 'disguised'. The letter count of each solution is indicated in the clue, with (4+6) meaning two words, of which the first has 4 letters, and the second 6. Good luck on this MBCS-themed brain teaser!

Oops, was the puzzle too difficult, or are your internships too time intensive? After an exciting draw between three contestents last month, no winners this month!

Let's give you another shot: a new puzzle. The prize is the same, a beautiful book on the history of the Netherlands. A cultural gem bound to add to your knowledge and make you the most interesting person at parties. Who doesn't want to talk about the Dutch 17th century painters all night?

Send your answers to newsletter.cognito@gmail.com. Whoever gets most answers correct, wins! The answers and winner will be announced next month. Good luck!



Across

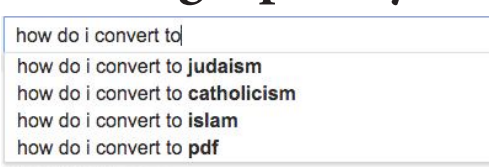
1. Such a brave reply! (4+8)
5. A brain cell that is not just manic depressed, but has more states of mind (10+6)
8. Cutting up smart people is our yearly tradition (5+7+5)
11. Obama, Poetin, Merkel and many other have this, which is their chance to find effects (assuming it exists) (5)
12. A plan inside a participant (6+7+6). A hurricane in a mind (10)
14. This pressure group lobbies for quick saccades, but only appears when dreaming (5+3+8)
15. The nucleus of this neuron contains a sarcophagus (9+4)
17. It only appears to hurt, but it's very real nonetheless (7+4)
18. It's your job to decide on moving or not (2+2-2+4)

Down

1. A plan shared by participants (7+7+6)
2. Dutch chemistry multinational or psychiatric manual (3)
3. A critical lack of copies (11+6)
4. Predecessors of trackpads with exogene DNA (10+4)
6. A theatrical opponent of medicine (4+10)
7. A predisposition to say 'yes' (12+4)
8. A hurricane in a mind (10)
9. The director is in command (9+7)
10. When you get a cold turkey without (something that sounds like) female heroes as a drug (6+9)
13. He doesn't make it on this Latin day of birth (4+7)
16. Brain nucleus or Linga Linga Airport (3)

Last month's answers:
Down: 1. Newsletter; 2. Radial arm maze; 3. Board; 4. Visuospatial sketchpad; 5. Alpha rhythm; 7. Pressure cooker; 8. Blood brain barrier; 9. Master; 10. Simon task. Across: 6. Event related potential; 11. Science; 12. Bouton; 13. Spike; 14. Mismatch negativity; 15. Cognitive control; 16. Neuron; 17. Blue monday.

Google poetry



Horoscope

Aries
21 March – 19 April

As an Aries, your bold, aggressive, and energetic nature means that you enjoy leading others in efforts that are risky yet innovative, oftentimes appearing arrogant and domineering to others. You thrive with competition and tend to start grand projects when pushed to prove yourself, but you are usually too impulsive to finish them. Sometime this month, as you take your daily walks through the park to get into fights with the dogs, you will notice a group of small children playing together and pretending they are exploring outer space. You will run into their group and immediately begin drawing up plans for a solar-powered rocket ship, and start intensive training for the children to survive in space without breathing, because "helmets are for pussies". However, your ambitious project will tragically end prematurely when you see a dog attempting to catch a frisbee, prompting you to abandon your astronomical endeavors so that you can run over and snatch the frisbee from the air to "show [the dog] who's the master."

Lucky sport: dwarf tossing
Lucky walking style: stray cat strut
Lucky panda snack: BBQ bamboo burger

Comic