# THE JCUS VOICE

JCU Singapore's Student e-Magazine



February 2016

# *Psychology: Hard Science or Soft Science?*

### DOUGLAS LIN

Many people joke that psychology is a subject of mind reading. In reality, psychology is difficult to define as it is the science of humans both at the general and the individual levels (Piaget & Kamii, 1978). Simply put, psychology tries to predict human behaviour through studies making use of the scientific method. Scientific method seeks to reveal and establish the sequential relationship of events (Horst, 1931), to determine causality, such as how an acid and a base would react to produce salt and water. This allows psychology to put forth sound and verifiable findings, eventually moving towards being classified as "hard" science.

According to studies, behaviour would appear to have biological origins. A major study considered the case of Phineas Gage who was described as a well-tempered and quiet man, and considered to be the best foreman well-liked by his colleagues. An accident occurred one day. A rod pierced through his head, destroying his left frontal lobe. Gage survived but became hot-tempered, unrestrained in profanities and disorganised. He was so different that his friends said he was "no longer Gage", although he later "learned" to become his old self again (Macmillan & Lena, 2010). The unique case of Gage allowed researchers to eventually deduce that the frontal lobes are responsible for, but not limited to, inhibiting impulsivity and allowing socialisation (Chayer & Freedman, 2001; Floden, Alexander, Kubu, Katz, & Stuss, 2008; Séguin, 2009). With this, it can be predicted that someone with frontal lobe damage would behave in a disinhibited manner.

#### Keen to write for The JCUS Voice? Contact learningsupport-singapore@jcu.edu.au or nimrod.delante@jcu.edu.au

"Happiness is a butterfly, which when pursued, is always beyond your grasp, but which, if you will sit down quietly, may alight upon you."

- Nathaniel Hawthorne

### In This Issue

- Psychology: Hard science or soft science?
- An essay
- Eat smart to think smart
- Sustainability begins at home
- An expert's take on video
  gaming
- Words of wisdom from a JCU Singapore alumnus

Additionally, it has been found that identical twins appear to possess similar personalities (Grove et al., 1990; Velázquez, Segal, & Horwitz, 2015). Evidence strengthens psychology's position as a science and pushes it toward being classified a "hard" science. However, although studies of identical twins are useful in validating psychology as a science, they also bring about conflicts. On one hand, there is evidence that identical twins raised apart can grow up to be very similar to each other relative to identical twins raised together considering IQ, personality or vocational interests, to name a few (Bouchard, Lykken, McGue, Segal, & Tellegen, 1990). On the other hand, they are not entirely identical in the manifestation of psychiatric diseases (Fraga et al.,2005). Why do two persons possessing exactly the same genetic makeup not behave in the same manner? This is the problem which relegates psychology to being a "soft" science. Inasmuch as we can predict the tendency for people to tan themselves to dangerous levels (Ratliff & Howell, 2015), we cannot do it with 100% accuracy, as in the chemical example described earlier. Humans can, indeed, often exhibit unpredictable behaviours (Funder & Colvin, 1991).

The debate about whether psychology is a "hard" or "soft" science is indeed a tricky one. On one hand, studies have shown that the anterior paracingulate cortex, temporal pole and the superior temporal sulcus are activated when people try to infer what others are thinking, a skill known as "theory of mind" (Zimmer, 2003). Yet, the exploration of human emotions or motivation is less precise (McComas, 1923). Where then does psychology lie?

Perhaps, the issue is not the classification of psychology, but how much it has contributed as a science. The Milgram experiments have revealed the mechanics behind the Holocaust (Shanks, 2012), and simply changing the word order when describing a person would change the impression formed about that person (Asch, 1946). Thus, it is evident that psychology is involved in many aspects of human life from emotions and motivation to biology and neurology. Kihlstrom (2010) wrote that cognitive psychology, behavioural neurology and neuroscience now work in conjunction to bring new understanding to the workings of the human mind.

Thus, it is not the fight for recognition as a hard science that will allow psychology to flourish, but its cooperation with other sciences.

### References

- Asch, S. E. (1946). Forming impressions of personality. *The Journal of Abnormal and Social Psychology*, *41*(3), 258-290. http://dx.doi.org.elibrary.jcu.edu.au/10.1037/h0055756
- Bouchard, T. J., Lykken, D. T., McGue, M., Segal, N. L., & Tellegen, A.
   (1990). Sources of human psychological differences: The Minnesota study of twins reared apart. *Science*, *250*(4978), 223-228.
   doi:10.1126/science.2218526
- Chayer, C., & Freedman, M. (2001). Frontal lobe functions. *Current Neurology and Neuroscience Reports*, 1(6), 547-552. http://dx.doi.org.elibrary.jcu.edu.au/10.1007/s11910-001-0060-4
- Floden, D., Alexander, M. P., Kubu, C. S., Katz, D., & Stuss, D. T. (2008). Impulsivity and risk-taking behavior in focal frontal lobe lesions. *Neuropsychologia*, *46*(1), 213-223. doi:10.1016/ j.neuropsychologia.2007.07
- Fraga, M. F., Ballestar, E., Paz, M. F., Ropero, S., Setien, F., Ballestar, M. L., ... Lund University. (2005). Epigenetic differences arise during the lifetime of monozygotic twins. *Proceedings of the National Academy* of Sciences of the United States of America, 102(30), 10604-0609. doi:10.1073/pnas.0500398102
- Funder, D. C., & Colvin, C. R. (1991). Explorations in behavioral consistency: Properties of persons, situations, and behaviors. *Journal of Personality and Social Psychology, 60*(5), 773-794. doi:10.1037/0022-3514.60.5.773
- Grove, W. M., Eckert, E. D., Heston, L., Bouchard, T. J., Segal, N., & Lykken, D. T. (1990). Heritability of substance abuse and antisocial behavior: A study of monozygotic twins reared apart. *Biological Psychiatry*, *27*(12), 1293-1304. doi:10.1016/0006-3223(90)90500-2
- Horst, P. (1931). Psychology and the scientific method. *The Journal of Philosophy, 28*(13), 337-347.Retrieved from http://www.jstor.org.elibrary.jcu.edu.au/stable/2017049
- Kihlstrom, J. F. (2010). Social neuroscience: The footprints of Phineas Gage. Social Cognition, 28(6), 757-783. doi:10.1521/ soco.2010.28.6.757
- Macmillan, M., & Lena, M. (2010). Rehabilitating Phineas Gage. Neuropsychological Rehabilitation, 20(5), 641-658. doi:10.1080/09602011003760527
- McComas, H. C. (1923). What is psychology? The North American Review, 217(807), 209-217. Retrieved from http://www.jstor.org/stable/25112943
- Piaget, J., & Kamii, C. (1978). What is psychology? *American Psychologist*, 33(7), 648-652. doi:10.1037/0003-066X.33.7.648
- Ratliff, K. A., & Howell, J. L. (2015). Implicit prototypes predict risky sun behaviour. *Health Psychology, 34*(3), 231-242. http://dx.doi.org.elibrary.jcu.edu.au/10.1037/hea0000117
- Séguin, J. (2009). The frontal lobe and aggression. *European Journal of Developmental Psychology*, 6(1), 100-119. doi:10.1080/17405620701669871
- Shanks, M. (2012). Milgram revisited. *Journal of Global Responsibility, 3* (1), 66-82. doi:10.1108/20412561211219292
- Velázquez, J. A., Segal, N. L., & Horwitz, B. N. (2015). Genetic and environmental influences on applied creativity: A reared-apart twin study. *Personality and Individual Differences*, 75, 141-146. doi:10.1016/j.paid.2014.11.014
- Zimmer, C. (2003). How the mind reads other minds. *Science, 300*(5622), 1079-1080. Retrieved from <u>http://www.jstor.org.elibrary.jcu.edu.au/</u>

## Contributor's Corner: **An Essay**

### NEHA THAKUR

One day, when it dawned upon Mr Thakur that the God of Death was not the punctual clerk of a private bank who attended grotesquely predictably to his cabin daily to avoid a blot on his record, he called his three children over, two of whom were fraternal twins, and said, "Your parents are dead. Write an essay on what will become of you in 10 years. Describe in detail."

Mr Thakur's absence from the household of ten long years, combined with his disinterest in teaching children, an activity for which he had absolutely no patience, did nothing good for the teacher in him which suddenly awoke that day. On days that his wife had offered him the company of their children at the study table, he had rejected the offer saying "I'd rather cook," and retired to the kitchen to prepare the supper. But that evening, he settled in the chair, spine straightened. He tapped his hand on one of his legs as a headmaster might. What could prepare his children best for an event of his and his wife's deaths? "An essay!" he must have thought, "Like they do in schools."

"Didn't you hear? Write an essay on what will become of you in ten years." Mr Thakur yelled, his eyes full of rage. The call to this essay writing session was rather abrupt. Just a short while ago, the children had been engrossed in their respective activities, the eldest child in reading poetry and the fraternal twins in playing hide and seek. "I wish it need not have happened in my time," said Frodo. "So do I," said Gandalf, "and so do all who live to see such times. But that is not for them to decide. All we have to decide is what to do with the time that is given us."

### - J.R.R. Tolkien, The Fellowship of the Ring

The children had exchanged looks at the vulgarity of the demand that evening. But then, all the demands to all the essay writing sessions ever, had always been vulgar - the essays that marched words like ants, essays that measured a human head with an inch tape, and essays that minted paper dreams in silver wraps. Unpleasant though as it was, the children assumed the gravity of his tone and squatted down right in front of him.

The eldest child left to fetch notepads and pens. The twins picked up pencils and sharpened them while eyeing the eldest child silently - gruff, gruff, glance, gruff, gruff, glance, gruff, gruff, gruff - like children, sans an idea of the syllabus, do in the final moments leading up to the exam. Their cunning eyes sought sympathy. But the eldest child did not have an idea herself. What could she write? She had penned plenty of essays - she had been the Prime Minister of India and run a nation; she had been a Scientist and established colonies on neighbouring planets – all in her essays. But she realized she did not know what became of a daughter when her parents died. She bit her lips and looked at her younger siblings to check if they had started, the twins still sharpening their pencils, gruff gruff glance.

"What are you going to write?" one of the twins whispered.

"I don't know," the eldest said.

Mr Thakur yelled, "Am I not clear? Start writing, and each one on his own."

"Could we take some time to think, please?" the eldest requested, hesitantly.

"All right, sure." Mr Thakur calmed down a little.

The girls could manage to scribble something, but what would the boy, especially with that handwriting of his, pen? How often had the eldest been summoned by the young boy's teachers who thought his handwriting was awful. "Oh dear! You need to help him with his handwriting. If I were to dip a drunk fly in a pot of ink and leave it on a piece of paper to stroll, its footsteps would be better comprehended than his handwriting," one of the teachers had said. Would his handwriting, which had drawn condemnation and judgement of his intellect all those years be considered while marking the papers, or the dented grammar hammered until the hammer broke, or would that vagabond-format saunter as far as it could in those rotten robes? Meanwhile it struck Mr Thakur that no time limit had been set upon the writing session.

"Twenty minutes, you have only twenty minutes," he said. That's what they do in the exams, he must have thought.

The children nodded.

- tick-tock-tick-tock-gruff-gruff-eye-

At the end of 20 minutes, essays were handed in nervously. Mr Thakur cleared his throat and leant back a little, holding up one of the papers. He squinted as though an invisible pair of glasses crouched on his nose. He started scanning the eldest child's essay.

"Will take up a job, okay! Get siblings wed, okay! Won't marry, alright! Will settle...." He was about to finish when Mrs Thakur, settled in a bed nearby, interjected.

"Why, why wouldn't you marry?" "I want to ensure these two are okay." "You can ensure that along with your husband."

### "No I can't."

"Yes you can. Once you are married, you two could take care of your siblings."

"No I can't."

"She never listens. She never listens." She nudged Mr Thakur. "Make her write that. Make her write that." Mr Thakur handed the notepad back to her. She cut the future out with blue ink and wrote what had been sought. "Try and find yourself a husband. You hear me?" Mrs Thakur asserted.

#### "I'll try."

Then came the turn of the twins' essays. By a fascinating happenstance, among other things, the twins' essays had mirrored towards the end - 'I'll take care of the two' - they did not cheat.

It took Mr Thakur another ten minutes to finish reading the essays. The essays were neither articulate nor scholarly. The boy's words almost dangled down the sheets. The young ladies had only managed to wreathe something with pretty vocabulary. These were not the essays which passed children in most casual tests on a regular day in school. Yet, for some reason, they seemed to content the teacher in Mr Thakur.

Mr Thakur continued to read under his breath, tapping the essays occasionally. After he was done assessing the papers, in the best professional way, he eyed the children and said, "What is the first thing that you'd do when we are gone, the very first thing? Imagine you've returned home from cremation."

"Be with our relatives," one of the children responded.

"No. The very first thing you'd do when we are gone is accept that we have. Do you understand?"

The children nodded.

"Interrupt me if there's something you don't understand. Okay?"

### The children nodded.

"A lot of people die every day," he continued. "Think, um," He closed his eyes in a quick blink like a classical vocal artist immersed in a performance. "Think of death as doing the utensils," he waved one of his hands lyrically. "One moment you are doing the utensils, the other moment you aren't.



Source: Rubin, G. (2014). Cartoons on dying regrets. Retrieved from http://agoodgoodbye.com/death-cartoons/cartoons-on-dying-regrets/

The process culminates when what is deemed ultimate/the ultimate has been attained. One moment we are here, the next moment we aren't. We're all travelers and the travel will end. Do you understand?"

The children nodded.

"This is why you must never cry when one is dead."

"Yes, I think people who cry over death are stupid," one of the twins said. "Everything ends. I wouldn't cry if I tore my favourite dress. It's cloth. It will tear."

"Good girl!" Mr Thakur exclaimed.

"You see, thousands of children never even see their parents. You are lucky that you have had us and luckier that you have each other. If we are gone, it would all remain the same. You would continue to pursue your education and marry like people do, but most importantly you would be with each other. Do you understand?" The children nodded.

"All right then, that's it for today," he said.

Seven on ten for the boy and eight on ten for the girls, and just like that all the matters of life and death, Mr Thakur whisked the papers straight after inscribing and settled the grades on three sheets of paper.

The children collected the essays and nudged at each other -"What did you write? What did you write?"

They returned to their respective activities, the eldest child to reading poetry and the twins to playing hide and seek. Mr Thakur, now a little tired, walked to an old steel trunk that lay in the corner of a room, wearied. He lifted its flap with the dented handle and pulled out a stack of papers. With one hand he aligned the papers to prepare for Mrs Thakur's next chemotherapy and soothed his stomach with another. His stomach had been aching for months now and only yesterday he had urinated blood.

## About the Author

An alumna of James Cook University, **Neha Thakur** was accepted by Razor Literary Magazine through a grant from the Mellon Foundation at Gustavus Adolphus, a residential liberal arts college. Her works have appeared or are forthcoming in The Capra Review and First Class Lit. Originally from Himachal Pradesh, India, Neha can be contacted at <u>khimithakur@gmail.com</u>



### WANG YIZHE

## Eat Smart to Think Smart

Do you feel exhausted when studying, especially when preparing for examinations? You might be anxious because of the coming exams; thus, you take energy drinks like Red Bull to add energy to your body, or sip coffee to keep you awake. However, Red Bull and coffee can also harm your body, such as increasing the feeling of agitation. Therefore, it is useful to know healthy foods that enhance your brain function and memory.

Super brain foods increase brain function and memory. They contain Omega-3 for better blood circulation. Our brains are composed partly of fat, and need fatty acids to process information and for brain cells to communicate. Omega-3 fatty acids play a crucial role in allowing brain cells to transmit signals properly. Lack of Omega-3 fatty acids make brain signals become garbled and difficult to read. Research also suggests that Omega-3 fatty acids can actually help you feel happier by boosting the release of serotonin, the chemical the body uses to lighten depression and improve mood (Nature's Sunshine, n. d.).

In terms of blood circulation, while only occupying 2% of total boost weight, the brain consumes 20% of the oxygen that your body takes. Your brain needs oxygen, which is delivered by your blood. Therefore, having a healthy blood flow means that oxygen and nutrients can maintain the brain to run full power. Therefore, Omega-3 and blood circulation are essential for brain health, function and memory (Nature's Sunshine, n. d.). Here are the top food choices for maintaining healthy brain function.



**Blueberries:** In animal studies, researchers found that blueberries can help protect the brain from oxidative stress and reduce the effects of age-related conditions such as deterioration of memory. Studies show that diets rich in blueberries significantly improve the learning capacity of old rats, making them mentally equivalent to much younger rats (Sorgen, 2008).



**Avocados**: Avocados are nearly as good as blueberries for improving brain function. Avocados are high in monounsaturated fat, which helps lower cholesterol and improve blood flow. Since the brain uses 20% of all oxygen the body consumes, a healthy blood flow carries oxygen and nutrients to the brain. Avocado is also a good source of Omega -3 fatty acids and Vitamin E, which improves healthy brain activity (Sorgen, 2008).



Nuts: Nuts are rich in vitamin E. Walnuts are also rich in Omega-3 fatty acids, and provide a variety of benefits for brain health. They can help improve attention and boost mood by affecting the brain's serotonin levels. For students who suffer from anxiety because of exams, walnuts may be a helpful food to munch on and almonds may help save your memory (Bodenmann, 2012).



Seeds: Seeds such as flax, chia, hemp and sesame, offer big benefits for both the brain and the body. A powerful source of Omega-3 fatty acids and B-complex vitamins, flaxseeds can give your brain cells the food they need for improving cognitive Japanese and Koreans – green tea. Green tea provides many function. Chia seeds are also a super-food. These seeds are rich in Omega-3 fatty acids. Adding chia seeds to your diet can help improve mood, memory and concentration (Sorgen, 2008). Sesame and hemp seeds contain plant sterols which help modulate the immune system and bring down overreaction, such as extreme tension and anxiety due to examinations (Barry, n.d.).

Salmon: Deep-water fish, especially salmon, are rich in Omega-3 essential fatty acids, which is important for brain function and memory. Experts commend wild salmon for its "cleanness" and the fact that it is in plentiful supply (Sorgen, 2008).



Other oily fish that provide the benefits of Omega-3s include sardines and herring. A 4-ounce serving, two to three times a week, can do wonders for your brain (Lewin, n. d.).



Green tea: Let me end with a favourite of the Chinese, benefits for memory and spatial learning, and may positively impact cellular mechanism in the brain (Science Daily, 2012).

If you find it hard to concentrate, feel easily tired when studying, and are highly anxious before examinations, why don't you try these healthy foods to improve your brain functions? With these great-brain foods, you can think smart to ace your exams!

- Barry, C. (n. d.). 10 super foods that will boost your brain power. Retrieved from http://addicted2success.com/life/10-superfoods-that-will-boost-your-brain-power/
- Bodenmann, J. (2012). Time to go nuts: Nuts may extend brain and body power. Retrieved from http://articles.chicagotribune.com/2012-04-04/lifestyle/sns-201204031830--tms--premhnstr--k-i20120404apr04\_1\_brazil-<u>nuts-acids-vitamin</u>
- Lewin, J. (n. d.). 10 foods to boost your brainpower. Retrieved from http://www.bbcgoodfood.com/howto/guide/10-foods-boost-your-brainpower
- Nature's Sunshine. 13 super brain foods you can find in the grocery store [infographic]. Retrieved from <u>http://blog.naturessunshine.com/en/13-super-brain-foods/</u>
- Science Daily. (2012). Brainy beverage: Study reveals how green tea boosts brain cell production to aid memory. Retrieved from http://www.sciencedaily.com/releases/2012/09/120905083852.htm
- Sorgen, C. (2008). Eat smart for a healthier brain. Retrieved from http://www.webmd.com/diet/eat-smart-healthier-brain

# Sustainability begins at home!

### JOEY KANG

Sustainability has been a hot topic in recent years, but do we *really* know what sustainability is?

According to the United States Environment Protection Agency (2015), sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permits fulfilling the social, economic and other requirements of present and future generations.

Sustainability is important to making sure that we have and will continue to have natural resources for our survival. The Singapore government has been actively walking the talk. In 2009, Singapore developed a Sustainable Development Blueprint. Six years have passed and yet, it still seems like every responsibility is with the government to ensure that Singaporeans live comfortably.

The blueprint has indicated that sustainable development is: **efficient**: we develop with fewer resources and less waste **clean**: we develop without polluting our environment **green**: we develop while preserving greenery, waterways and our natural heritage

What have we done or ought to do to contribute to these efforts?

One way is to recycle organic waste. We produce organic waste every day. These waste, being biodegradable, can be put to good use, to nurture and to fertilize the soil for organic plants to grow. In Singapore, most people live in apartments, in which space can be a constraint to fertilize and grow organic plants. However, it is not impossible to grow plants despite space constraints for as long as people have pots, unfertilized soil, hand gloves and spade.

Each time, when you cannot finish your food, bury the food in the soil. It is that simple. Remember to bury your organic waste at least 3 inches deep so that flies will not swarm your pot. This is one step of 'feeding' the soil. You can feed the soil with



vegetable and fruit waste and pulps from juicing and the like. It is not recommended to feed the soil with meat, dairy products and oily food as the decomposition of these food will invite complaints from neighbors, besides rats and maggots devouring such a feast!

Compost is the most important consideration. It is the primary input, as well as the primary by-product of natural agriculture because it represents the cycle of all living things. Since compost is 'food' for the soil, let's prepare it with love and gratitude. Once you see that the soil is sufficiently nurtured, and all organic waste fully decomposed, you can start growing lemongrass, lettuce, pechay and some herbs, anything at all in the pot. This will be your organic food!

You can get a second pot and repeat the process, with love and gratitude! Plant now and contribute to sustainability!



## An Expert's Take on Video Gaming

### NURHIDAYAH EKBAL

Associate Professor Roberto Dillon teaches video gaming at JCU Singapore. Born in Italy, he is a well-known figure in the South East Asian game development scene where he had taught several award-winning students who are now successful game developers. He believes that video games have transformed from a simple pastime to a vehicle for a variety of real-life purposes.

In his attempt to preserve the video gaming heritage, Roberto instituted the Video Games Museum at JCU Singapore backed by a strong support from the JCU management. Located at the library, the museum has 200 unique pieces of systems, games and catalogues since 1972. The museum is open to all staff, students and external visitors to explore. His intention is to provide a platform for practical studies apart from preserving the history of video games. He feels that the old games are useful in reconstructing the pieces of our lives back in the 70s and that, through an exploration and interaction with these games, we can gain understanding about the progression and meaning of the game industry.

Roberto contends that it is unfair to compare old games with the more advanced gaming technology we witness today. In fact, even with better graphics and visuals of current games, he still feels that the core elements of making games fun, entertaining and interactive have not changed at all. It is clearer to identify a good game back then when special effects do not conceal its strategy and impact. Instead of dichotomizing old games from new games, Roberto prefers to compare good versus bad games instead.

Roberto also works together with fellow gaming experts worldwide. Late last year, he invited the technology pioneer, Mr Michael Tomczyk, to co-lead a retro-inspired showcase at



JCU Singapore. The showcase pulled a large group of games enthusiasts with 14 teams from different schools around Singapore who participated in a 30-hour game jam. Teams were required to design a game revolving around retro and SG50 themes since it was Singapore's jubilee year. JCU Singapore's team won Audience Choice Award for their game which employed Nabu technology.

Roberto hopes to see more effort in preserving the video games heritage and the usage of these games in recreating or transforming games in the future. He is an active academic, games designer and author. You can check <u>Dillon's Daily Digest</u> where he publishes a great selection of curated content on games design. He believes this is one of the many ways that he can contribute to the evolving video games industry.

Associate Professor Roberto Dillon founded Adsumsoft, an indie studio that develops original games. Adsumsoft also offers game design consultancy services. Visit <u>Adsumsoft</u>.

If you missed Roberto's public lecture in 2015, visit JCU Singapore YouTube channel <u>here</u>.

# Words of Inspiration from a JCU Singapore alumnus

Isn't it rewarding to complete a postgraduate study? Let's hear some inspiring thoughts from Peter, a new PhD graduate from JCU.

*Question:* You were just recently conferred with your doctorate degree by JCU Australia. How does it feel?

**Peter:** I am happy that I have completed my studies and excited about moving on to the next phase of my life.

*Question:* What motivated you to finish your graduate studies? Why is it important to finish a graduate degree?

**Peter:** I wanted to be an academic, to do research and to teach, and the only way to do that is to obtain a Ph.D.

*Question:* How do you see yourself five years from now? What is your plan for the future and why that plan?

**Peter:** I hope to be an academic, a lecturer in a university five years from now. My plan is to conduct research on racism.

Singapore has implemented many measures to maintain racial harmony. Three key measures include public housing where an ethnic quota is enforced, education (including Racial Harmony Day), and National Service (Judd, 2005). However, the effectiveness of these measures have never been investigated in experiments. My plan is to examine racism in sequential steps. For example, what stereotypes do Chinese Singaporeans hold of Malay Singaporeans? Are they prejudiced against Malay Singaporeans? Consequently, do they discriminate against Malay Singaporeans? Such research is important in informing government policies.

### References

Judd, M. (2005). Is harmony possible in a multiracial society? The case of Singapore. In R. Pinxten & E. Preckler (Eds.), *Racism in metropolitan areas* (pp. 107–111). New York, NY: Berghahn Books. "Anyone whose goal is 'something higher' must expect someday to suffer vertigo. What is vertigo? Fear of falling? No, vertigo is something other than fear of falling. It is the voice of the emptiness below us which tempts and lures us, it is the desire to fall, against which, terrified, we defend ourselves."

### - Milan Kundera, The Unbearable Lightness of Being

**Question:** What advice would you give to JCU students who are considering or who wish to succeed in graduate studies?

**Peter:** In addition to intelligence and hard work, students who wish to succeed in graduate studies should have high tolerance for ambiguity and the ability to set deadlines for themselves. Unlike undergraduate studies, most research degrees do not follow the semester structure, where students study for a period of time before taking an examination. Instead, research degrees have minimal structure (read: no written examinations!) and graduate students have the freedom to decide what they wish to do every day. However, such freedom could lead to anxiety arising from ambiguity (e.g., am I doing well enough?) and procrastination due to the absence of deadlines. Accordingly, students should learn to tolerate ambiguity and set deadlines in order to succeed in graduate studies.



Peter Chew is a Research Pool Coordinator at JCU Singapore where he manages the SONA systems and the research participation pool. He currently finished his Ph.D. at James Cook University.