To suggest that Iya Whiteley set out to become a psychologist would be misleading, though at an early age she watched a Hollywood film about scientists experimenting on people’s minds and told her mother ‘I want to do that’. She studied psychology to help answer questions she had first asked herself at school.

Iya’s training in psychology led into sky-diving, studying space travel, flying, scuba-diving, sports, computer science and, most recently, robotics. Her talk is filled with a dizzying variety of references, including Star Trek!

So, where has Iya boldly gone? And where has psychology helped in the journey?

To begin at the end
Iya’s present jobs illustrate her interest in human–computer interaction. She is Human Factors Consultant at SEA Group Ltd, a company that focuses on defence and aerospace; she is also Visiting Research Fellow at the Department of Computer Science, University of Bath.

‘At SEA I’m leading a European Space Agency funded project to develop psychological support tools and a technical problem-solving tool for astronauts voyaging to Mars. How can you provide the crew with the information, techniques and skills to solve unanticipated problems – in a highly technical and alien environment? The crew will not be able to speak live to mission control, due to the enormous distance between the crew and the Earth.

I also explore the questions posed by the development of humanoid robots. My husband Graham works at Elumotion Ltd, a company specialising in the development of robotic hardware that aims to replicate human and biological motion. He was appalled to find the lack of realistic prosthetic hands, and his PhD concentrated on designing one. This experience contributed to the design of a prosthetic hand that is now fitted to many people. Elumotion have since built a full-size upper body of a humanoid robot, and I’m investigating how people interact with it. Human beings are very good at deciding that something is not quite right with another person. So, how do people react to a robot, especially if we make it as human-looking as possible? What are the cues – gestures, slight changes in facial expressions, tilts of the head, ways of speaking – that we pick up? Graham and I are both concerned about how robots will grow in their ability to replicate our movements and develop their interaction style. As they start to learn, how will we view them? What questions will they pose about our image of ourselves? Trust will be a big issue in the growing field of robotics. Not to put too fine point on it, robots that can imitate us creep people out. How can we overcome this? What causes it?

Returning to the beginning
Iya is a naturalised UK citizen. She was born in the USSR, brought up in Latvia and has worked and studied around the world.

I was fascinated by school education but I saw a battle between learning something new and exciting about the world through scientific investigation, and education as “memorising and regurgitating facts”. Since I tended to use the former strategy in exams and tests I didn’t do very well! Education should teach you discovery skills and equip you to explore your own questions and learn from what you encounter.

I became interested in how people get the information and answers they need when they need them. It still seems miraculous to me that human beings can do this – to successfully complete complex or dangerous tasks, especially when at first glance the circumstances are not familiar. I did lots of sports at school and they provide examples of this phenomenon. Later on I grew interested in extreme sports and took up sky-diving to try to understand how someone thinks...
and perceives time in such situations.’

Iya referred to newspaper articles about the pilot who landed his plane on the Hudson River and saved all his passengers. ‘It’s a perfect example of cognitive grace under pressure. I want to know the key to this ability and then to be able to offer this key to everyone who is willing to open their mind to new possibilities.’

Iya’s mother is a teacher of literature. ‘She made me read two hours a day, and I became fascinated with heroes – people who optimised their abilities. This is an abiding interest – I study real-life heroes like Shackleton, their character, their motivation, their aspirations and life path. I was fortunate to meet Alexey Leonov, the first person to walk in space. Alexey said that he became a pilot just to see the clouds a little closer so that he can draw them better. He used his art skills to scientifically code and document the colour of our planet’s atmosphere from orbit.’

There wasn’t even a psychology course in the school, so Iya had no real understanding of the subject. A Lyceum opened up nearby, offering a wider curriculum and Iya took the entrance exams. After an interview in which she related Bulgakov’s classic Russian novel The Master and Margarita to martial arts philosophy (which she’d studied), Iya was accepted.

‘Psychology and teaching were taught as arts but, to me, psychology is a science. I developed a very specific view of how you learn. You can use any activity to observe and learn – talking or sitting opposite someone, walking down a street or surfing the waves. We make many discoveries while in the process of searching for other answers. That is the exciting part of science! Retaining a child-like curiosity and an open mind are huge benefits to anyone studying psychology.

People used to say to me that psychologists were “mind-readers” or therapists. Everyone is a natural psychologist. The key difference is that professional psychologists keep a distance between themselves and the phenomena they deal with. They ask more specific questions about what they observe, then develop and test theories about it.’

‘Thinking gets interesting when you know about two disciplines’

After a certificate in psychology and teaching, Iya took a bachelor’s in psychology at the Institute for Social Technology. ‘Before I took my master’s, I had a choice about what to do. I worked part-time for a forensic and clinical
also a way of keeping doors open to other
studied and how they go wrong. It was
of how things work, how they can be
a deeper, more scientific understanding
situations – clinical psychology gave me
maximisation of abilities in extreme
choice. I was interested in the
women or Russian nationals at the time.
but the Latvian air force wouldn’t recruit
Iya applied to become a military pilot,
but the Latvian air force wouldn’t recruit
women or Russian nationals at the time.

‘Clinical psychology seemed a good
choice. I was interested in the
maximisation of abilities in extreme
situations – clinical psychology gave me
deeper, more scientific understanding
of how things work, how they can be
studied and how they go wrong. It was
also a way of keeping doors open to other
areas. Thinking gets really interesting
when you know about two
disciplines and put them together.

So I did an MClinPsy with the
University of Indianapolis.’
During study breaks, she was a
tour guide in the United Arab
Emirates (she claims she earned
more in a week than her mother
could earn in two months as a
teacher in Latvia). She then got a
job selecting air crew for Emirates
Airlines. ‘I’d soaked myself all over
with hot, sweet, milky tea
(commonly offered on arrival in
that part of the world) whilst
waiting for the interview. I thought I
should treat this interview as a chance to
learn to ignore non-important dress issues
– after all, they are more important in my
skills.’

The job involved a using
psychometrics in a multicultural
workforce. It also involved sitting in the
cockpit of big airliners. It wasn’t long
before Iya was bouncing along in a tiny
plane on a desert runway trying to make
her first solo landing. ‘I learnt about the
use of peripheral vision in psychology
and that’s exactly what you do when you
level off before touch down to land a
plane on “the piano keys”.’

Her PhD was in computer science,
undertaken at Swinburne University in
Australia, and then at the University of
Bath. Why computer science? ‘I’d started
reading the International Aviation

Ian Florance talks to Peter Spencer about yoga, chronic
fatigue and more

R

ead Dr Peter Spencer’s
profile on the Leeds Trinity
University website and you’ll
notice a huge range of interests
– from gifted children and
utopias to chronic fatigue
syndrome, league tables,
marathon running and personal
construct theory. He also holds
a British Wheel of Yoga
teacher’s diploma. His
conversation relates all kinds of
disciplines and people to his
practice as a health psychologist.

When asked why he trained
in psychology, Peter answers,
‘It was in the air in the late
sixties. People read Penguin
psychology paperbacks on the
train. Popular culture took
states of consciousness
seriously. Movements like
transcendental meditation
addressed it directly.’

He’d enjoyed sciences at
school but didn’t go straight on
to university. ‘I took a couple of
years out. I enjoyed working as
a gardener, and my love of
exercise and the open air is still
a huge influence.’

Ultimately Peter took a PhD
in experimental psychology, but he
was ‘interested in working
with people, particularly with
people who had suffered brain
damage. I started work in
rehabilitation and became
interested in working with
children. A teacher training
qualifcation led to work in
special educational needs.

When I moved into higher
education this was part of
my remit. It reinforced what
I already thought – labels we
don’t apply to the complex
range of problems an individual
patient experiences. We might
say a back injury has caused
depression but this causality
may be the other way around
or an earlier life event, for
instance, might be involved. We
have to approach psychological
practice from many angles
including the social,
philosophical and physical.’

This is the key to the rest of
the interview. Although Peter
followed a reasonably
conventional psychologist
training route (he is now a
qualified health psychologist
and an Associate Fellow of the
Society), our discussion became
less about a ‘planned career’
and more about an intellectual
and personal journey.

Peter had become interested
in yoga in the early ’70s under
the influence of the
transcendental meditation
movement of Maharishi Mahesh
Yogi (a famous late-’60s figure
and the Beatles’ guru). In the
’80s and ’90s this transmuted
into a commitment to exercise,
fitness and marathon running.
‘Too much exercise caused me
physical damage. I took up yoga
again so that I could run better.
But for reasons I’ll explain this
came to a dead stop in 1994.

‘Early in my career, I was
fortunate enough to meet and
work with Don Bannister, who
pioneered personal construct
theory in the 1970s – he wrote
The Inquiring Man, one of those
iconic Penguin paperbacks.
I was interested in whether
psychology could produce a
better world, and that’s where
my interest in utopias came
from. Utopias can be personal
as well as social and political.

Given those times – the growth
of cults and communes for
instance – there were many
eamples of utopias going
wrong. Erich Fromm’s work
on the rise of socialism and
fascism also provided insights.
They all impose a strong
individual’s personal blueprint
for life on other people. Therapy
and treatment can be viewed as
an attempt at a personal utopia.
People often look for a
prescription for living from their
therapist.’

The onset of chronic fatigue
syndrome in 1994 marked a
turning point in Peter’s life. ‘I’d
loved exercise and I couldn’t
understand what was happening.
It was a dark time. I’d just
Getting on the career ladder, and your careers-related letters

When I was a student, I chose my degree with career progression in mind. As a psychologist, I became interested in how pilots make decisions. Increasingly they work in a “glass cockpit” which is all computer screens. They use an electronic flight information system that has elements of autonomy and authority. Watching Emirates’ pilots and the crew work, I’d also grown aware that planes are private, self-organising universes. My PhD was on how you could construct a glass cockpit that can be fitted to the person and how they think, rather than one which insisted the person adapt to the system – something which we’re rather good at.’

Didn’t she need a high degree of computer expertise to take on this area of study? ‘You don’t have to be a programmer to study human–computer interaction. You interpret between engineers, mathematicians, software designers and users. You mediate a number of different languages, and cognitive styles. Pilots, for instance, are fascinating people who constantly calculate “What if...?”; what would happen next and how to react in the most efficient and safest way.’

Developing the right hook

At the end of our meeting Iya summed up her work succinctly. ‘It’s like I’m continually developing the right hook to catch the right fish in people’s heads to understand how they manage to do the amazing things they do. And, in a hugely technologically defined environment, I’ve increasingly become interested in how the information and technical systems around us affect us. Most specifically, how can we adapt technology to enhance human abilities, to the way we work and think rather than vice versa.’

Any advice for people seeking to study the area? ‘It takes a lot of time to study it so find something exciting that will give you momentum.’

started working at a hospital, treating people with chronic pain. One key to my ultimate recovery was a wonderful GP who used cognitive behaviour therapy without realising that was what she was doing. She also provided a key by saying “you should treat it as chronic pain.”

Peter’s article in The Psychologist of May 1998 (see www.bps.org.uk/spen) records his own approaches and other sufferers’ diverse treatments. ‘People identified 39 different beneficial interventions. They recovered in their own way. I used many approaches in what amounted to a study of one patient seen from the inside and the outside. I changed my diet, had acupuncture, aromatherapy and spiritual healing. I started gentle yoga again. I began to recover 18 months later, and, without being overly dramatic, it changed my life. I never was particularly ambitious but I became less so. Relationships became more important. The barrier between me in and outside work became completely permeable. I decided to become a yoga teacher and to investigate how it could help different conditions.’

The article elicited a number of critical responses as well as sympathetic ones. One of the latter, from an eminent psychologist, was supportive and suggested ‘the best treatment is often no treatment’. ‘Which is an interesting thought,’ says Peter. But the whole experience confirmed in a very personal way, views of psychology Peter had been developing throughout his life. ‘First, the mind–body split makes no sense to me and that’s a key to how I approach psychology now. There aren’t two things that need to be linked. Asking if an illness is psychological or physical is – not quite, but nearly – a useless question. One of the things yoga teaches you is not to see thought, muscular movement and breathing as separate things. Yoga means stillness, reaching a place where words aren’t important. It teaches that the way to go round a problem is to go inside not outside. Some of these ideas link back to the work of William James and Abraham Maslow, and to new thinking like Oliver James’s Affluenza.

This is an example of drawing ideas from anywhere useful. I got ideas on hysteria – which led to my interest in witch crazes – from Arthur Miller’s play The Crucible and also from the 1970s D.M. Thomas novel The White Hotel. Psychology needs to be open to ideas from different areas, even those which we might initially distrust. If there’s a report that aromatherapy or acupuncture helps a syndrome we should take the reports seriously and research them.’

My son is an experimental psychologist, was supportive the latter, from an eminent physicist and his discipline appears as if it is imitating 19th-century Victorian experimental science rather than an open 21st-century one. I think health psychology has taken the lead in being more open in this way.’

Peter’s recent work reflects these views. ‘I run yoga classes with patients suffering from multiple sclerosis, depression and Parkinson’s. I teach health psychology to undergraduates and also serve as an external examiner on an MSc on learning disabilities and a BSc in counselling psychology. Then I have some research going on into the use of yoga in chronic pain and fatigue.’

Can you see progress in the area? ‘There’s an article in a recent Health Psychology Update reporting research into the effects of yoga treatment of cancer patients. So, yes, some of these areas are being looked at. But there are some fundamental questions to be asked about what psychology is, how we train and how we do it.’

“Imagination and flights of fancy are techniques of modern hard science”

Psychology Journal. It’s the journal of the Association of Aviation Psychologists founded in 1964. Aviation brings psychology, computer science, engineers and many other disciplines together. I was interested in how pilots make decisions. Increasingly they work in a “glass cockpit” which is all computer screens. They use an electronic flight information system that has elements of autonomy and authority. Watching Emirates’ pilots and the crew work, I’d also grown aware that planes are private, self-organising universes. My PhD was on how you could construct a glass cockpit that can be fitted to the person and how they think, rather than one which insisted the person adapt to the system – something which we’re rather good at.’

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