

SIGNED

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The American entrepreneur and business philosopher Jim Rohn once said that “Happiness is not something you postpone for the future, it’s something you design for the present.” Rohn was born in the 1930’s and passed away in 2009 but this thought seems more relevant than ever. With the power of technology and design, “happiness” is no longer an abstract philosophical or emotional goal but something more tangible and measurable. And most importantly, the gratification is more immediate than before.

In this issue of SIGNED magazine, we continue to explore the symbiotic relationship between technology, design and people through ‘tesign’. From using Artificial Intelligence to develop machines with “sense” or harnessing big data to create a virtual and seamless world, to the design of an entire city, such as Oslo, in order to foster a sense of “happiness” for its residents, we humans are very coddled, but are we happy?

On the home front, HKDI is proud to host a series of amazing showcases including the Red Dot Design Award exhibition (the highest accolade for design and quality), and some amazing garments will be on display from the Hangzhou Silk Museum, the largest silk museum in the world. Silk having been an important part of the ancient “silk road”, the exhibition is a reminder that sharing the fruits of the designer’s labours is a sure path to prosperity.

The road to happiness can be filled with uncertainties, and good sense is required to find the way. Let’s embark on this road trip together.

Desiree Au
Publisher



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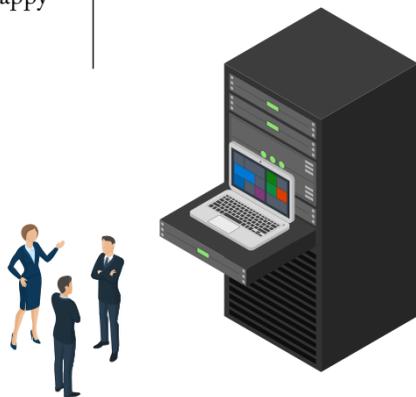
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The Hong Kong Design Institute is a member institution of the Vocational Training Council.
For more information about HKDI, please check our website on www.hkdi.edu.hk,
or email us at hkdi@vtc.edu.hk

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Editorial Board: Leslie Lu, Michael Chan, Cecile Kung, Daniel Chan, Elita Lam,
Tse Ming Chong, Wong Pak Kay, Frieda Lee, Luna Lau

Publisher: Desiree Au | Managing Editor: George Major

Art Director: Noel de Guzman | Contributors: Kavita Daswani, Andrew Major, Veronica Siu, Angie Kwon



FURNITURE SHOW AT HOME SQUARE

Launching in late August, the furniture show is a collaboration between HKDI, Hong Kong Furniture and Decoration Trade Association (HKFDTA) and Home Square. An exciting selection of innovative furniture designs by Hong Kong's first-ever furniture design course graduating class will be on display. By focusing on human needs, happiness and sociability, the designs in the exhibition challenge the limits of the design industry. The designs address the contemporary problems of interpersonal communication and the constraints of tiny living spaces, demonstrating how design can optimise cultural integration and make for better, happier living. From the furniture being exhibited, pieces will be awarded prizes in two categories; the winner of the jury prize will be selected by a panel of professional judges, while the public selection prize winner will be nominated by shoppers at Home Square.

FASHION ARCHIVE REVITALISATION

On 29 September selected guests will attend the opening ceremony of HKDI's revitalised fashion archive. Based in the Department of Fashion and Image Design, the Fashion Archive is a unique resource in Hong Kong with over 1500 fashion objects in the collection including period pieces, contemporary branded clothing, stage costumes, millinery, shoes, bags and jewellery. The revitalised archive has been expanded to serve as a platform to support teaching and learning, consultancy services and R&D projects while facilitating interdisciplinary projects. The archive will continue in its mission to improve the design community's understanding of design, fashion, culture and history while inspiring younger students with an introduction to the finer points of fashion. The first exhibition in the refreshed fashion archive will be Fashionlution, which will run from 13 September until 23 October 2017.



FASHION LEAGUE

Fashion League is an integral part of HKDI's annual Emerging Design Talents programme. The event was held at the prestigious Elements mall, adjacent to the new West Kowloon Cultural District from 6 to 14 June. Fashion League showcased the talent and creativity of the new generation of fashion designers for the public to enjoy. The whole event, from the brand concept through to the final execution was developed and run by five groups of students from HKDI's Fashion Branding and Buying programme.

CALENDAR



FRANK LLOYD WRIGHT AT 150: UNPACKING THE ARCHIVE, NEW YORK
Until OCT 1

Frank Lloyd Wright remains one of the most daring, iconoclastic and influential architects of the modern era, almost 60 years after his death. This exhibition at MoMA New York promises to delve deep into the Frank Lloyd Wright archive to give an insight into the multifaceted work of this radical architect and thinker.

moma.org



SMART WORKSPACE DESIGN SUMMIT, AMSTERDAM
OCT 12-13

This two day programme of talks, workshops and exhibitions addresses a critical issue of our time; how can work-life be made more productive, healthier and happier? The event will also include a series of webinars, so that anyone interested in how design can improve their working life can tune in and find inspiration.

smartworkspacedesign.com



WORLD DESIGN SUMMIT, MONTREAL
OCT 16-25

The World Design Summit is as ambitious as its name suggests. This gathering of practitioners from a diverse range of disciplines along with government and business leaders, industry representatives, media and NGOs, aims to address the theme 'how design can shape the future.'

worlddesignsummit.com



ADOBE MAX, LAS VEGAS
OCT 16-20

Adobe MAX is proof of the vast influence on Adobe's software over multiple disciplines. During the course of this five-day event, filmmakers, photographers, illustrators and designers will mingle with coders and musicians. Plus there will be hands-on workshops with the latest Adobe technology.

max.adobe.com

Happiness: a 'Tesign' for life

Happiness can be hard to come by. Since Aristotle walked the streets of ancient Athens preaching the good life, the search for happiness has fed the imagination and driven innovation. Can our contemporary world of high-tech connectivity provide the satisfaction we have always sought? "Tesign" - the combination of technology and design - is here to help

A fleeting feeling of warmth, a hit of serotonin, happiness is a slippery concept. It is the feeling of wellbeing that comes from good health, but it is also the feeling of satisfaction that comes from overindulgence. Happiness is the comfort of safety and security, but it is also the rush of reckless risk-taking.

"Tesign" really can improve our lives, offering access to unlimited information and creating opportunities to build new types of community, maybe even freeing us from manual labour and in some imagined scenarios, leading us to a life of ease and... happiness.

Enhanced communications technologies such as instant messaging, the free flow of data offered by open data and the automation of manual work by robotics may seem to make this future inevitable. In the most optimistic speculative worlds, "tesign" will lead us to the technological Eden imagined by the poet Richard Brautigan; "Where we are free of our labors and joined back to nature ... and all watched over by machines of loving grace."

But "tesign" offers a double-edged sword; the filmmaker Adam Curtis ironically adopted the closing lines of Brautigan's poem as the title of his documentary in which he argues that technologies invented to liberate humankind have instead "Distorted and simplified our view



of the world around us." The promise of happiness is exploited to fix our eyeballs on social networks in the name of driving up advertising viewership. The online world can be a hotbed of untruths and misinformation, it can be an incubator for doubt and insecurity. The needs of the individual become almost irrelevant in systems designed around big data. AI and automation leave workers fearing for the future of their jobs. The happiness "tesign" promises to deliver may not be addictive in itself, but it can certainly drive addictive behaviours - a phenomenon that has shaped the design of our online lives.

Ultimately, the choice between these two visions of "tesign", and these two versions of happiness is our own to make as individuals and as communities. The technology is out there to be used; we can become uncritical consumers of information and producers of data, or we can harness the opportunities offered by "tesign" on our own terms. Humanity's never-ending search for happiness will continue to drive forward the development of new technology

Over the following pages we will hear from individuals who give serious thought to the effect that technology has on their personal happiness. And we will look at cities where technology is being exploited to positive effect, with the aim of generating higher levels of happiness to the benefit of the whole community.



Tesign
What can "tesign" do to make you happy today?

Horace Spyne retired political scientist
My kids showed me to apps to track my health and make it easier to get out and about. I have a step-counter that gets me moving every day and a smartwatch that warns me if I'm getting ill. Well-designed, modern public transport makes it easy for older people to get around too. I video-call my family every day even though they all live far away.

Cornelia Lee firefighter
The health of my family is most important to me. People don't believe money brings happiness, I think it can. When my grandma was ill, she had great doctors, that was possible because of money. Health is my priority, money helps to reassure. Also, I love photography, it's a way to capture moments and retain memories. Videos and photos relive snippets of life. And brighten up hard times.

Gavin O middle-school student
I used to have trouble staying focused in class, but having a laptop with internet access and messaging apps on my smartphone makes school more fun. I can find summaries of books online which makes studying easier and I'm never out of touch with my friends. I'm connected to technology from when I wake up to when I go to bed, so these things are never far away!

Angie Kwon writer
Happiness is freedom to do what you want without worrying. Holidays without worrying about money. It's not important if I fail in what I'm doing, but that it is my decision to start. It's important that I build a safety net. I think tech like smartphones has changed how we see the world. They're a constant companion. It's super useful for travel and it's been my exercise buddy some time.

Xavi Guo engineer
Spending time with someone I love makes me happy. We are able to express our thoughts freely because we trust each other. Modern technology provides us with lots of tools, such as apps that can be used to book a fancy restaurant for a date.

Evelyn Wong artist
I feel happiness comes hand in hand with freedom. It feels like a vortex of information exists in a portable, convenient form on my smartphone. Texting my parents to see if anything needs picking up on my way home, checking emails, looking up the definition of something to prove a point... even buying products by just pointing the camera at a billboard.

Edwin Hui beekeeper
For me, happiness is being in control of my own life because the moment you lose control, you slack off super easily and end up wasting time doing nothing, or just doing things only when you feel like it. If anything technologies such as smartphones make things harder because it's so easy to just spend time scrolling on your phone.

Enter message...



Five cities where 'tesign' is creating happiness

Around the world, cities are implementing policies that create happiness through the application of good "tesign"

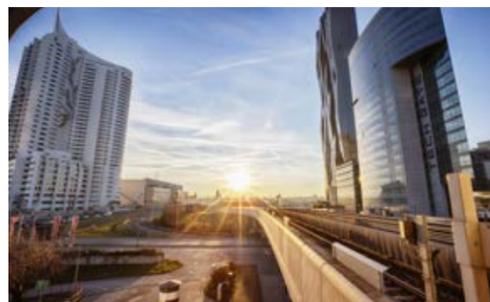


COPENHAGEN

In recent years, Copenhagen has developed a reputation as a frontrunner smart city. The city aims to become carbon neutral by 2025 and is leading the way in clean-tech. The city's user-friendly architecture and transportation system help keep the population happy. However, the technology that has the biggest impact on the daily life of Copenhagen's citizens is rather an old one; Copenhagen is well known as a haven for cyclists, meaning the streets are safe and clean, and the commuters are kept in great physical shape.

VIENNA

Visitors flock to Vienna from around the world looking for Mozart, Beethoven and Sigmund Freud, but local residents see another side to the city - one that is far more contemporary and high tech. Vienna is a leader in digital governance; open government data helps create a smarter city which, in conjunction with innovative new tech, is helping create a happier more equal society. Big data is also helping Vienna to become a pioneer of green initiatives and carbon reduction, which improves the environment for all the city's inhabitants. Vienna underscored its commitment to a green future by hosting the first European Green Infrastructure Conference in 2015.



TOKYO

Tokyo perennially tops the list of Asia's happiest cities. It is also a city synonymous with high-tech innovation. Japan's low birthrate has led to an ageing population and a dwindling workforce. Necessity has driven innovation in automated technology, making Tokyo a user friendly city, despite its vast size and dense population. In the runup to the 2020 Summer Olympics, to be hosted in Tokyo, some of Japan's most iconic tech firms have been developing 'smart cities' in Tokyo's suburbs. When these smart cities are complete, they promise to showcase how cutting edge tech can improve quality of life.



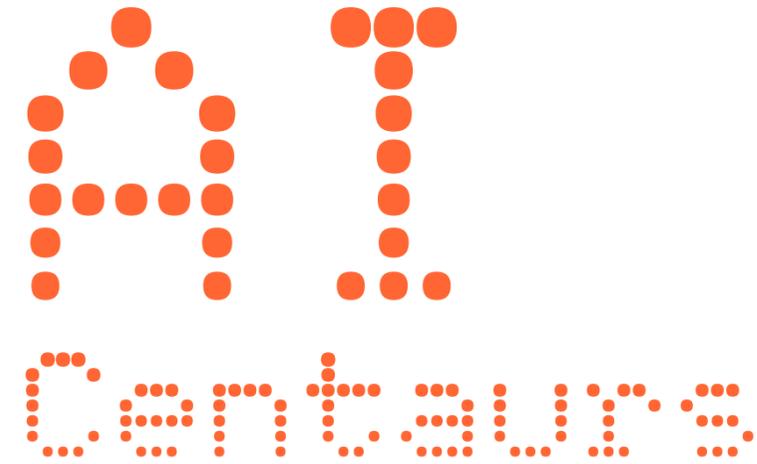
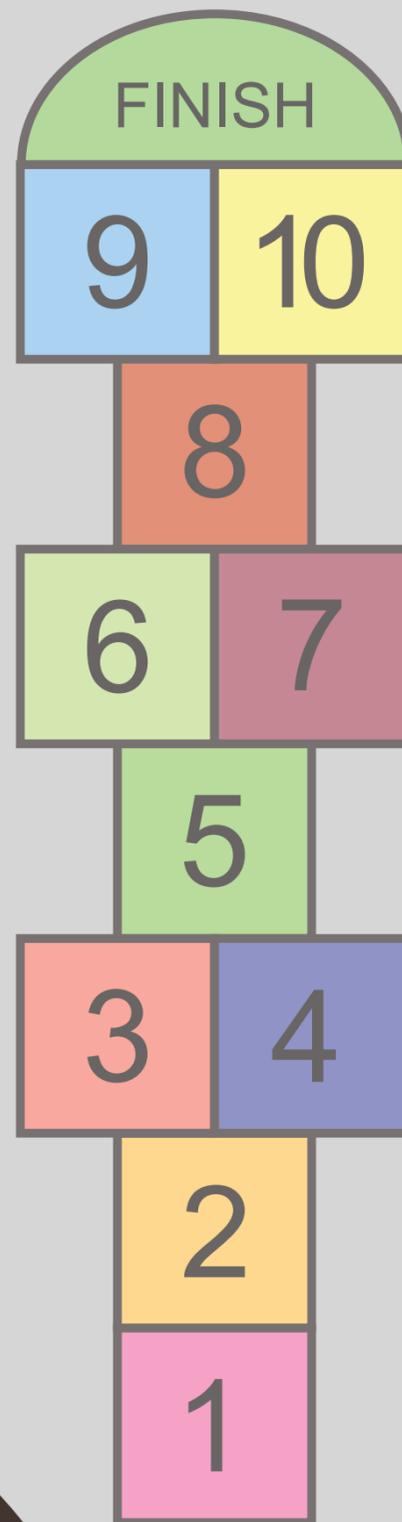
OSLO

France may be the biggest country to announce a ban on petrol and diesel cars, but Norway got there first. The country also has the highest rate of EV use in the world. Which is ironic, seeing as Norway's high standard of living is based on oil wealth. Aside from a prosperous society with fair wealth distribution and good public services, Oslo's citizens' lives are improved by high-tech architecture that reinforces the link between the city and the outdoors, between the people and nature. Find out more about Oslo in this issue's Design City feature on page 22.

SEOUL

Seoul is a hyper-connected city that relies on the convenience and interactivity provided by "tesign" innovation. Seoul is a city that sees entire apartments controlled by smartphone apps and groceries done with the click of a smartphone camera. The 'smart home' is no longer an exclusive concept in Seoul, Seoulites can use their smartphones to control the temperature of their apartment or the timer of their ricecooker from the comfort of their office. Homeplus Virtual Supermarket allows users to purchase groceries from a subway advertisement by simply taking a photo of the products displayed. Seoul is a "tesign" nirvana where technology works hard to provide the leisurely needs of its citizens.





As artificial intelligence outstrips human intelligence, AIs can now beat humans at any game. A pessimist might claim that this marks the end of the line for play. But a mythical beast has come to save playtime from the robots.

Centaurs are creatures from ancient Greek myth. They have the body of a horse, but the head and torso of a man. They are depicted as sometimes wild and lustful, and sometimes wise beyond imagining; animal strength with human intelligence. But a 21st century centaur is a vision of the future for humanity. A humanity that uses augmented intelligence to take play into a new dimension.

The concept of an AI centaur initially grew out of computer chess, but is now ready to be applied throughout many other fields. Imagine Formula 1 racing drivers who are able to calculate the perfect racing line in real time using machine intelligence. Or an AI that can predict the spin on a tennis ball, advise you on where to move on the court and help you beat the best players in the world. The technology to achieve this, and more, already exists.

How did the sedate world of chess give birth to this radical vision of the future? Chess is almost infinitely complex, there are 10^{120} possible outcomes for a chess game, more than there are fundamental particles in the observable universe. This has made it a classic test for AI, which has become better at spotting its opponent's mistakes and anticipating its opponent's plans than any human ever could. The most complex games ever conceived have effectively been 'solved'. Computers can play 'perfect' games and never be beaten. All of which would seem to herald the end of play. But AI centaurs set a new standard for play.

Centaur games are played by teams consisting of one human and one AI. This has the capacity to take play to levels of previously unthinkable skill. Games become elegant

battles of perfect tactics and strategy, while audiences are given an insight into the players' thought processes by being given access to projections of the players' computer screens.

The centaur model can be applied to any game or sport, the human half of the centaur team concentrates on strategy, while the AI aids with advanced planning and helps avoid blunders. And the human/AI pairs are truly a team. Not only is the human's ability enhanced by the machine, the human's strategizing has been shown to get better results than when computers are allowed to play solo. In fact, for all their incredible abilities, the AIs are the junior partners in a successful centaur team. The Russian chess grandmaster Vladimir Kramnik has said; "People tend to overestimate the importance of the computer... You can do a lot of things with the computer but you still have to play a good game..."

So the dystopian future where humans are ruled by AI overlords is on hold for now. The beauty of play between centaurs is that the most skilful, fittest player and the most mentally nimble strategist will always win. Marathon runners can use monitoring tech to track their metabolic rate while an AI helps them pace their race for a win; round the world yacht racers can use AI's advanced understanding of meteorology to catch the wind; surfers can use AI's knowledge of fluid dynamics to catch the perfect wave. The options have no end. AI centaurs have the potential to be more than just performance enhancing toys. The concept is an invitation to design new uses for AI, to augment human intelligence and enhance human capabilities. The possibilities are as unlimited as our imaginations.

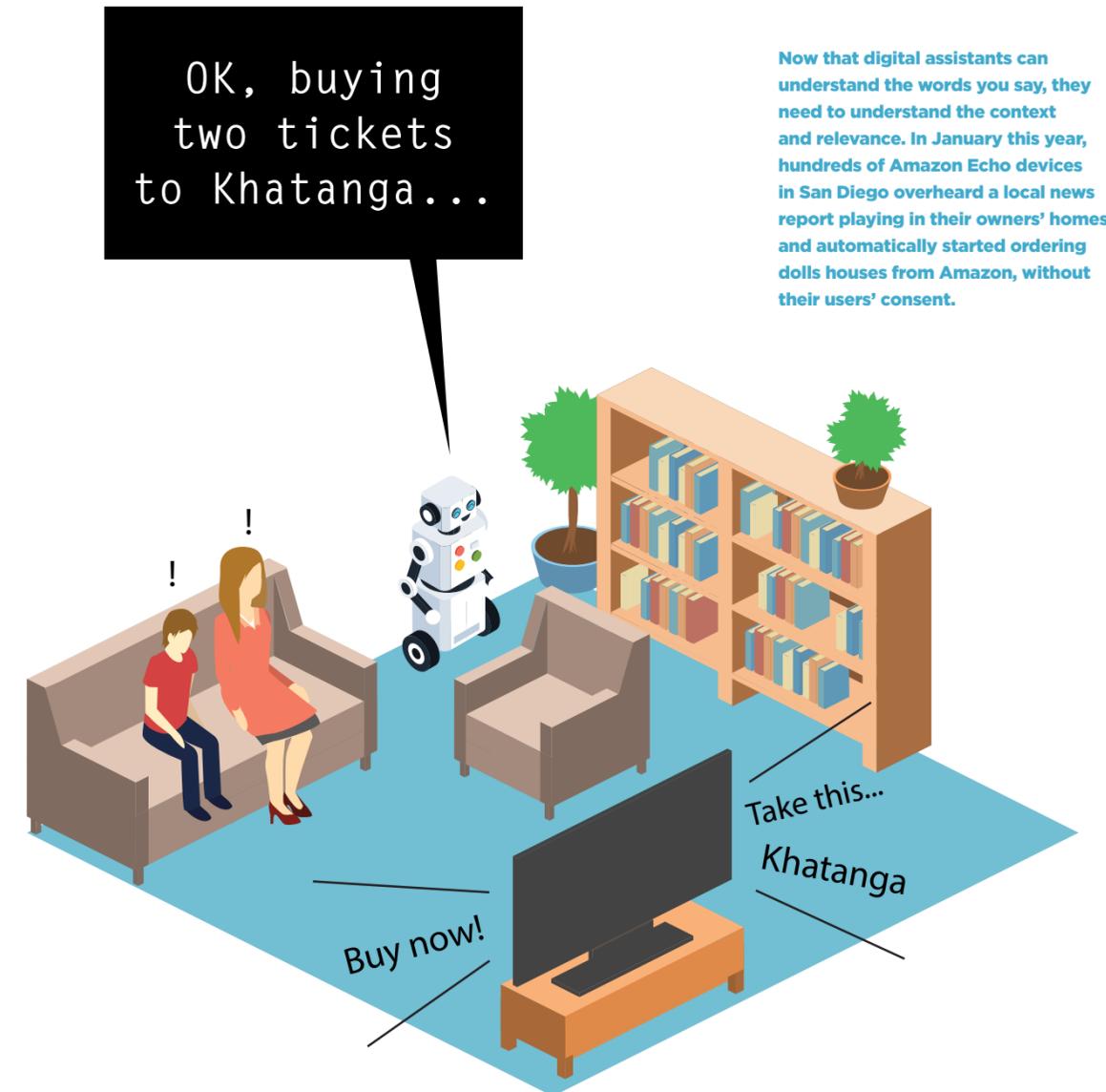
3 1/2 problems for digital assistants

Digital home assistants promise to make life easier and happier. But a few problems stand in their way

Imagine asking your Alexa to suggest geographically-relevant restaurants for lunch with your colleague while you get the kids off to school. Or think about being able to shout to Google Home, "hey, is my flight on time?" and having the response shouted back. Your restaurant reservations? Your favorite doctor 'dropping by' virtually to check on a lingering cold? Ask Microsoft's Luis.

All of these functions are either already in existence, or soon to be. They are part of a globally-in-demand

focus on digital home assistants like Amazon's Alexa and Echo, Microsoft's Luis and Google Home that make life easier and more streamlined. But that doesn't mean that it's all smooth sailing in the world of AI as it applies to making a household run more efficiently. The proliferation of voice-capable digital devices on the market has brought to light a few glaring problems within the sector. And it's in the solving of these issues that the future success of digital devices lies.



Sorry, I didn't catch what you said

Stories of voice recognition gone wrong abound - as in the case of one woman whose spoken text to a depressed friend to "Heal yourself" translated as "Kill yourself." (Thankfully, she didn't.)

"Consumers are becoming more comfortable with voice assistants because of their ubiquity," said Ashish Aggarwal, a principal at Grishin Robotics, a San Francisco-based venture capital company which funds start-ups in this arena. "More and more devices are being built with voice capabilities. The understanding of the infrastructure is getting better and better and multiple languages are being understood."

Naturally, technology has to be at the forefront of that. Examples include Snips, a leading European AI and voice platform company that aims to revolutionise voice comprehension in digital devices; a recent study conducted by the company found that the platform was able to understand seven times more varieties of queries than its better-known counterparts. It runs independently from the cloud, is resilient to internet outages and allows both makers and enterprise

hardware companies to enhance their connected devices through a voice assistant with full anonymity. The Snips Voice Platform runs on simple Raspberry Pi devices and offers both ASR (Automated Speech Recognition) and NLU (Natural Language Understanding), being able to comprehensively handle both English and French on ASR and English, French, Spanish, German and Korean on NLU platforms.

OK, buying two tickets to Khatanga

Voice recognition is one thing. Nuance, quite another. Everyone has a story of purchases being made unbidden, or random phone numbers being dialled. Simple common sense, say experts, can avoid some of that - at least until these devices can replicate human thinking.

"Use as few words as possible," said Alysa Kleinman, founder of the Smart Home Solver blog. "Instead of, 'Alexa, turn on all of the lights' just say, 'Alexa, lights on.' Another trick: study the exact phrasing listed in the skills installed in the device: it will tell you what phrases will work most clearly. It's not as user-friendly a solution as it should be, but that's what it takes.

Why am I here?

If these devices were human, they would be in the throes of an existential crisis. After all, there is no end of apps and cloud-based capabilities that can do all the things an Alexa can do. So who needs a device? The question can be answered with another question: why use your hands when your voice will work just fine? That's the view of Andrew Selepak, professor in the department of telecommunication at the University of Florida and director of the graduate program in social media. "My Google Home sits in my kitchen which is right in the middle of the house. If I come in through the front door or the backdoor, it is close enough for me to say, "Hey Google, turn on the living room light," and suddenly there is light in the house. Of course, I also have an app on my phone that can do the same thing. But sometimes I am coming into the house with my arms full with keys, groceries, luggage, or other purchases and I can't grab my phone, open it, and turn on the lights with the

app." His device, he said, is also his music center; "I could use an app to play music, and then connect my phone to a wireless speaker. But with Google Home, I just tell the device the music I want to hear and it plays without me having to touch a button."

There are also niche outgrowths: US-based Intuition Robotics, helmed by entrepreneur Dor Skuler, is soon to bring to market Elli-Q, an artificially intelligent 'aging companion'. The sleek, attractive device is designed to be intuitively easy to use for older adults who may be confused by the wealth of technological options around them. Call out to Elli.Q to get a family member on video chat or to hook up to online games. The device, having tracked the user's particular interests, might suggest a TED talk, offer a piece of music or audiobook and remind the user to take a walk after dinner or prompt them to take their medicine - and it feels a lot more tangible than an app.



The biggest problem facing digital assistants; most of the things they can do can also be done by the smartphone in your pocket. Do digital assistants have any applications that are unique and indispensable?

A device that is always on and always listening to you in your home creates obvious privacy concerns. However, the almost complete ubiquity of social media demonstrates that most consumers value convenience over privacy. So, maybe privacy concerns will have no effect whatsoever on the uptake of digital assistants after all.

Don't look now!



Don't look now

All this ubiquity brings up another real concern; privacy. Does everyone want a device listening in on their every conversation? Amazon Echo Show, for example, will have a new 'pop-in feature' that will allow specified friends and family members to 'stop by' anytime they like for an instant video chat. "This feature for some families will be very beneficial," said Jess Tiffany, president at the Marketing and Networking University of Normandale Community College in Minneapolis. "The rest of us will just think it's creepy and have the feature disabled."

If you're going to have an online presence, or communicate electronically, privacy is often sacrificed, said Aggarwal. "Companies are capturing all this data and using it to make their current models more accurate," he said. "But the systems are not private by design, and we end up sharing a lot more data and details than we anticipated."

Those who value their privacy have every right to be concerned. Paul Bischoff, privacy advocate at technology review site Comparitech.com, says that privacy needs to be sacrificed for the benefit of convenience; "Users need to realise that their Echoes and Homes will record and store every query submitted to them on cloud servers owned by each respective company," he said. "This is done

for two reasons. The first is personalisation. In order for voice assistants to improve their effectiveness, they need to learn. And to learn, they need to identify patterns. The user's location, frequent topics, accent, habits, and more can help generate better results. The second reason is to make a profit. The information gathered by these companies is often aggregated or de-identified and used for advertising and promotional purposes, such as product recommendations on Amazon."

Still, it's not all bad news, said Bischoff. "While these devices are technically always listening, they aren't always recording," he said. "They listen in short snippets until the trigger phrase is recognised (Hey Alexa). Only then will it save a recording and upload it to the cloud for analysis. These transmissions are encrypted so they cannot be intercepted and deciphered by anyone on the network between the end user and the company servers." Nonetheless, it always pays to be mindful, especially until the time that these devices are advanced enough to recognise specific voices. Until then, anyone entering the home can make purchases or access personal information. "Yes, (they) are always listening," said Selepak. "But it wouldn't do what I need it to do if it wasn't."

DESIGNING AN AI THAT CARES

The breakthrough that could change AI from being a plaything to being a playmate with which humans can have meaningful interactions may be about to come from a seemingly unlikely source

The trolley problem is an age-old ethical thought experiment that will be familiar to any undergraduate philosophy student. It goes like this; you are standing beside a railway line and notice a runaway train heading down the tracks. Ahead of the train you can see five people tied to the tracks. They are unable to escape, there's no time to untie them. Luckily you are standing next to a junction on the railway line where there is a lever that controls a set of points. You can pull the lever, redirect the train down the other line and save the lives of the five people. But wait! You realise that tied to the other line there is another person, in saving the five people, you will condemn the sixth to be run over by the train.

So what does this have to do with AI?

As more car manufacturers join the race to produce self-driving cars, an ever growing cohort of designers are engaged with a real-world variant of the trolley problem. Should the self-driving AI be taught to swerve to avoid a dog if it increases the chance of hitting a pedestrian? Should the AI swerve off the road, destroying itself and injuring the car's occupants in order to avoid collision with a schoolbus? In which case, who bears moral and legal responsibility; the car's owner or the person who programmed the AI? Can the AI itself bear responsibility, or is it ridiculous to hold a set of algorithms morally culpable for its decisions? Before any AI can take to the road, all of these questions will need workable answers.

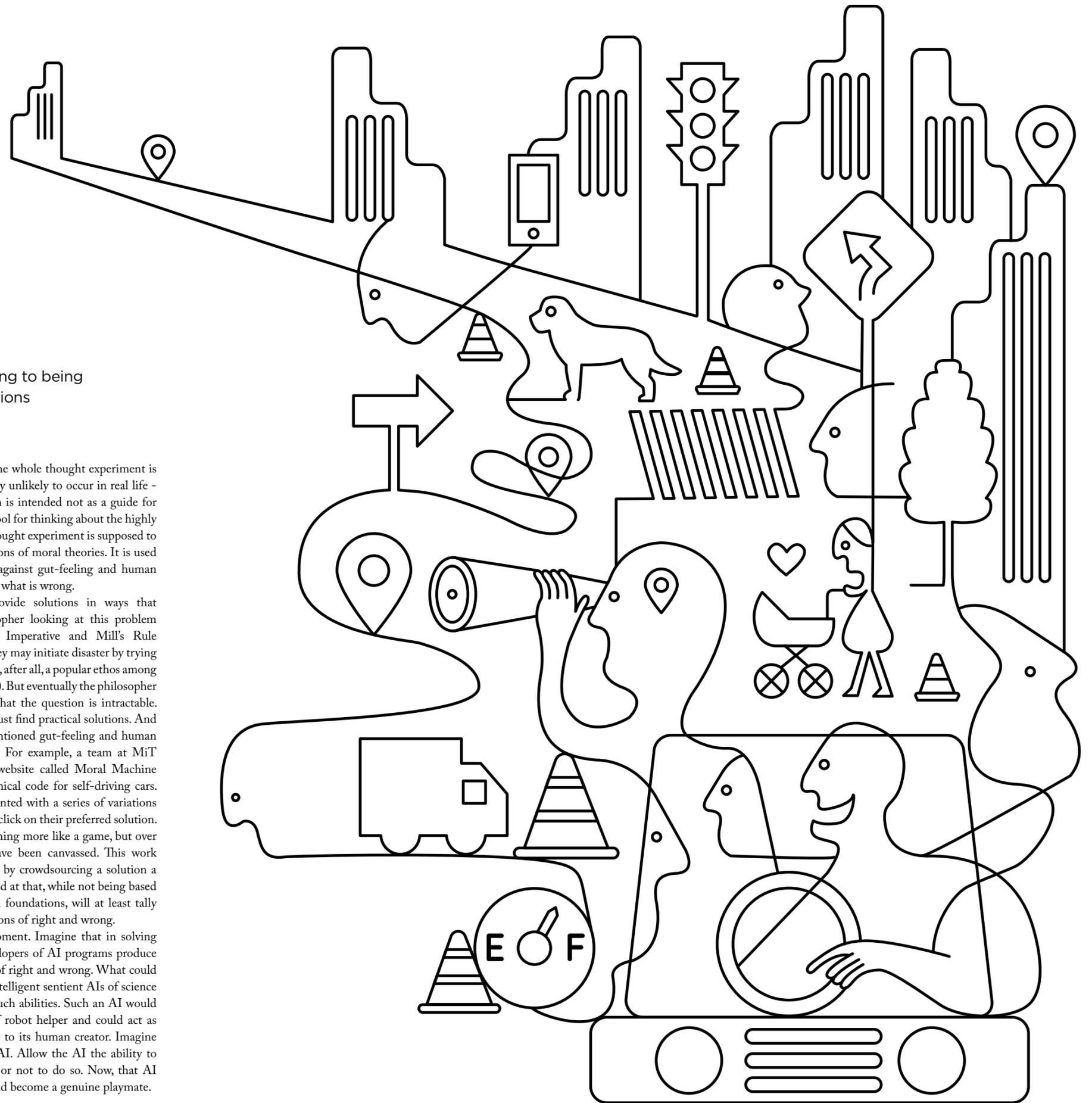
The implications of programming an AI to deal with ethical dilemmas are broader than may at first be apparent. Giving an AI a set of morals goes beyond autonomous vehicles, as AI begins to take control of more and more areas of human life.

In the case of the trolley problem what is the most ethical choice? If you do nothing, five people will die, but you will not be directly responsible, even though you could have prevented the deaths. If you pull the lever, you will save five lives, but will be directly responsible for killing one person who would otherwise have lived. Is your decision altered if saving five lives will cost four lives? How can your decision be rationalised? There are countless variations on the thought experiment, all of different

degrees of absurdity. In reality, the whole thought experiment is absurd; this situation is extremely unlikely to occur in real life - and that is because this problem is intended not as a guide for moral conduct in itself, but as a tool for thinking about the highly abstracted field of ethics. This thought experiment is supposed to be used to test out the implications of moral theories. It is used to compare theoretical models against gut-feeling and human instincts about what is right and what is wrong.

Designers of AIs must provide solutions in ways that philosophers cannot. A philosopher looking at this problem will apply Kant's Categorical Imperative and Mill's Rule Utilitarianism. In desperation they may initiate disaster by trying out Rand's Objectivism (which is, after all, a popular ethos among Silicon Valley tech entrepreneurs). But eventually the philosopher will leave the library knowing that the question is intractable. Designers, on the other hand, must find practical solutions. And designers are using the aforementioned gut-feeling and human instinct to find those solutions. For example, a team at MIT Media Lab have developed a website called Moral Machine that aims to crowdsource an ethical code for self-driving cars. Visitors to the website are presented with a series of variations on the trolley problem and must click on their preferred solution. It turns the problem into something more like a game, but over time, thousands of opinions have been canvassed. This work is ongoing, but the hope is that by crowdsourcing a solution a version of AI ethics can be arrived at that, while not being based on solidly rational philosophical foundations, will at least tally with most people's intuitive notions of right and wrong.

So, let us speculate for a moment. Imagine that in solving these design problems, the developers of AI programs produce an AI that has a genuine sense of right and wrong. What could be said of this AI? Even hyperintelligent sentient AIs of science fiction are rarely credited with such abilities. Such an AI would be able to transcend the role of robot helper and could act as a real companion, an equal peer to its human creator. Imagine playing games against such an AI. Allow the AI the ability to cheat but let it decide whether or not to do so. Now, that AI would cease to be a plaything, and become a genuine playmate.



Technology as the solution

For anyone eager to explore the essential role that design innovation and technology play in improving our modern lifestyle and shaping our shared future, this exhibition is a must-see

In collaboration with Red Dot Design Museum, the exhibition *Homo ex Data - The Natural of the Artificial*, hosted at HKDI Gallery, will show how technology use has become second nature to us. A date for the diaries of lovers of technology and design, the opening and lecture on 24 November will demonstrate how the normalities of modern life are intrinsically linked to technology, suggesting that we can no longer survive without it. The exhibition centres on the idea that the solution to our problems is not having less technology, but improving our current technology with better design. Design puts new technology in a form that is socially compatible, creating connecting systems of layered technologies.



reddot design museum

Homo ex Data - The Natural of the Artificial

25 Nov 2017 - 27 May 2018

HOVER CAMERA

Zero Zero Robotics Inc., Beijing, China

The Hover Camera is a new kind of drone that specialises in selfies. Embedded with an AI technology that enables facial and body recognition, the drone can operate autonomously. The closed and compact construction of the design ensures safe and easy usage.



MI ELECTRIC SCOOTER

Xiaomi Inc., Beijing, China

The Mi Electric Scooter with its high-performance characteristics, minimalist design and a range of up to 30km allows this scooter to take on various different tasks including transporting small amounts of cargo.



SKINNERS

Skinners Technologies, Brno, Czech Republic

Described as both a sock and a shoe and yet neither, Skinners are designed for travellers and sportspeople as well as everyday users. Pocket-sized, they can be worn inside shoes or on their own, thanks to their durable rubberised outer sole. They are antibacterial, which minimises smells and are as tough as old boots.



PUDDING BEANQ

Intelligent Steward Co., Ltd., Beijing, China

The Pudding BeanQ is an intelligent and interactive robot designed for small children in China. The bean form represents the concept of a bean waiting to sprout with curiosity. Its colourful aesthetics and cute voice design finds a whole new child-friendly form for a robot. Its smart functions allows the robot to video-chat, play games, educate and instruct the children users.



SYSTEM-ELECTRIC GREIFER DMC VARIPLUS

Otto Bock Health Care Products GmbH, Vienna, Austria

Picking up and holding objects requires an intuitive yet complex set of natural movements that recipients of prosthetic limbs must learn anew. The System Electric Greifer DMC VariPlus provides reliable support for wearers of hand prostheses, helping users achieve a precise but powerful grip. The system also provides tactile feedback, making manipulation of objects easier still.



TICTACTILE. SYSTEM

ruwido austria gmbh, Neumarkt, Austria

This set-top box and remote control are designed to create an intuitive tactile experience for the user through an interaction mechanism that feels as natural as possible. The user's interactions with their television become a smooth experience that is visually and emotionally pleasing.



KRIVDA

MDM Light, Mytisch, Russia

The asymmetrical contours of this LED pendant luminaire creates a unique lighting effect, causing the lighting to differ depending on the viewing angle. It was chosen for its sculptural elegance, dynamic design and contemporary use of low-energy consumption LEDs.



CHALEUR LOUNGE

AWT Alpha Industries BVBA, Hasselt, Belgium

Based on an organic aesthetic, the user-friendly design and high-grade materials used for this infrared sauna allow users to maintain a relaxed posture in a warm calming space.



Silk from the past to now

A collaboration with the largest silk museum in the world, this exhibition will explore the world of silk and contemporary fashion.

A colourful exploration of silk and contemporary design opens at d-mart. A collaboration between China National Silk Museum and HKDI's Department of Fashion and Image Design (FID), the exhibition will feature ancient Chinese silkwork designs and a selection of work by contemporary Chinese fashion designers, telling stories about the evolution of fashion in China in the contexts of history, culture and craftsmanship. The opening on 29 September will coincide with the opening of the Fashion Archive by FID. A multimedia installation illustrating the history of silk, textile design and production will be on display.

In Praise of Silk: Fashion from China National Silk Museum Across Time
 30 Sep 2017 - 2 Dec 2017

Contemporary Swiss Accessory and Watch Design

The latest innovations in jewellery, watch and accessory design from Switzerland

Don't miss this chance to see the latest innovations in jewellery, watch and accessory design from students of Geneva School of Art and Design (HEAD-Genève). This September, over 100 pieces of jewellery, watch and accessory design will showcase the long-standing Swiss tradition in Watch and Jewellery Design education that has produced some of the best designers in the world. The exhibition will also be a celebration of the creative and academic exchanges between HKDI and HEAD-Genève.

Swiss Accessory and Watch Design
 by HEAD-Genève
 9 Sept 2017 - 7 Jan 2018



SPACE TO BREATHE

Green, edgy and playful, Oslo's new architecture brings joy in a city where nature has a profound effect on life, attitude and building design.

Upon hearing their country had topped the 2017 World Happiness Report, the citizens of Oslo, capital of Norway, had plenty of space to go outside and celebrate, if that's what brought them pleasure. With fewer than 950,000 people inhabiting an urban area of 633 square kilometres, Oslo is packed with green spaces and few high rises, framed by forested hills and has the calm waters of Oslofjord lapping a revitalised, accessible waterfront. This is an outdoorsy city in a country where communing with nature ranks high on everyone's to-do list.

In Oslo, nature, recreation, design and culture coexist in harmony. The park at Frogner, near the city centre and the biggest in the country, displays more than 200 sculptures by Gustav Vigeland. Among the other sculpture parks, the one at Ekeberg in the southeast stays open all night. Museums – some 50 of them – are another source of art and pride. International music festivals sway huge crowds in the parks in summer and as the home of the Nobel Prize the city has a literate, intellectual vibe.

The Bygdoy peninsula to the west neatly encapsulates



Oslo's futuristic airport express

Oslo's appeal – greenery, cycling and walking trails, beaches, museums and wealth. It is one of the most expensive districts in a city that hovers around the top 10 of another much hyped world list: the highest cost of living.

The discovery of North Sea oil 50 years ago propelled Oslo from a sleepy, fish-export-dependent backwater and the new-found riches have been fairly evenly spread in this egalitarian society. The old geographical division of the haves in the west of the capital, and the have-less in the east, has been blurred by rising living standards and smart city planning. There's excellent public transport, free education and practically-free healthcare. And productivity is high. Bars open until 3am in summer in the land of the midnight sun. No wonder everyone is smiling.

For many Norwegians, one of the delights of heading the World Happiness Report was topping their Nordic counterparts; Denmark (the previous champion of blissful living) and Sweden, with whom they share the Scandinavian Peninsula. Norway and Sweden also share similar values – happiness is gleaned through family and community activities rather than material gain – and a love for log cabins in the wilderness.

An area in which Sweden and Denmark have traditionally bettered Norway in the eyes of the world is design. While Norway is still to produce a brand with the international reach or recognition of Ikea or Bang & Olufsen, it is no longer the design-poor Scandinavian cousin. Jan Stavik, managing director of the Norwegian Design Council, attributes their slow start to an initial lack of money and resources. "After we found the oil we started to prosper into making finished goods," says Stavik in a 2016 interview with Monocle. "80 per cent of all new jobs in Norway now are in services, and that's where service design becomes important. The process of service design can create tremendous improvements for the people living here."

Stavik cites a collaboration between designers and the Oslo University Hospital, which has reduced waiting time for cancer diagnosis by 90 percent, as an invaluable service design project. A sleek graphic design project for the high-speed Oslo Airport Express Train also impressed the community. Of the design disciplines, though, it is architecture that has made the biggest impression on the city, says Stavik, affirming: "We're into a very exciting decade now for architecture."

The Oslo Opera house, completed in 2007, was a remarkable first step. The building was designed by Snohetta, probably Norway's best known design firm, following an open competition. Snohetta have developed a reputation for involving public workshops in their design process and combining traditional craft with cutting edge technology to develop innovative design solutions. The expansive building oozes contrasts and contradictions. An angular stream of Italian white marble emerges from the water's edge to wrap the edifice. Visitors amble up the marble path onto the roof to enjoy a naturalistic art form: the splendour of the fjord. Snohetta project director Jette Hopp notes that one design goal was to take a precious material – marble – and give it back to the city.

The Opera House's unusual, ambulatory exterior, according to Hopp, was inspired by Norwegians' premier sport and pastime: it's a ski run set on a (marble) glacier. "The building concept is more related to nature rather than to architecture. It's also related to the Nordic set of values," says Hopp [speaking to Monocle in 2016]. "We have a right to roam that is kind of embedded in our culture ... so we are taking these values into the building and how we deal with public space itself, and how we turn it into public ownership." With The Oslo Opera House, we see architects working to everyone's benefit by taking advantage of the elements of Norway's culture that are

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No wonder everyone is smiling



Above left: Vigeland Sculpture Park; Above right: Bike racks in Oslo; Top: The Barcode Project

already brining happiness to the populace.

The Oslo Opera House is a prime example of landscape elements being reflected in the art of a building. Landscape architecture, naturally, thrives in this city of open spaces, all carefully designed to achieve environmental, social, behavioural and aesthetic benefits. The waterfront at Aker Brygge was recently redeveloped as a 12-kilometre promenade connecting the city's east and west. Generous open space increases visual and physical contact with the fjord. Landscape architect LINK Landskap used granite paving stones in three different patterns, inspired by ancient Rome, yet configured to withstand the city's extreme winter. Street furniture that encourages social interaction was custom-designed with Norwegian company Vestre and furniture designers Lars Tornøe and Alte Tvi. The redevelopment project earned international acclaim for Oslo designers, claiming the 2016 WAN Waterfront Award.

Redevelopment of the city's old docks and wharfs

has courted controversy, as high-rise buildings have encroached into a predominately low-rise city. The gleaming office towers – averaging around 17 stories high – of the Barcode Project, part of the planned new Central Business District, have been accused of casting a dark shadow on Oslo's aesthetic harmony and breathing space. The most interesting of them, though, get props for incorporating green values into an avant-garde appearance. The Carve, a 15-storey, pixelated building designed by A-Lab, has a hollow centre in the upper levels to achieve terraces and gardens.

Oslo's contemporary furniture and product designers have yet to reach the heights of their architectural counterparts, but a spirit of optimism is growing among the young generation as they strive to emulate the Norwegian design icons of the mid-20th century. The likes of Hans Bratrud, Birger Dahl and Grete Prytz Kittelsen, with their minimalist chairs, lights and bowls respectively,

helped to launch the Scandinavian design movement.

Although the oil boom of the late 20th century boosted levels of wealth and joy, it had a negative effect on Norwegian design. A generation of professionals looked for careers supplying the lucrative oil and gas industries rather than local manufacturing. Now, with changing sensibilities in the 21st century, and a slump in oil, the designers have returned, keen to make their mark.

"In the '50s and '60s [Norwegian] designers were part of the Scandinavia design period so they were equal to Danish and Swedish designers ... [but] we were kind of starting from zero – or maybe from five," says Runa Klock, a member of Klubben, a union of new generation furniture and product designers.

"There wasn't such a refined [design] language as in Denmark and Sweden so we were very detached and had to make our own base," agrees fellow Klubben-ite Thomas Jenkins. Also designers are now working with local

manufacturers to produce functional pieces that are clean-lined; typically small-scale (lamps; desk and table-top accessories) and colourful; and embrace natural materials and craft elements. Klock's Drink Rocks series is carved from soapstone and marble. She has also designed larger items: tables for Oslo boutique hotel The Thief.

"Interior [design] is something that has come in the last five years," notes Jenkins. "There's been a real escalation in restaurants and cafes and other businesses in the city using properly skilled people to manage and plan their spaces." While the design scene in Oslo is obviously not as big as in London or New York – "there's a slower pulse you could say" – it does offer youngsters space to work and grow. "We are still looking for a little boom in manufacturing, in the furniture and product accessory world," he laments.

Award-winning local designer Lars Beller Fjetland describes his design philosophy as "Driven by curiosity, guided by nature". Past works include lamps and retro



Top and above left: Sverre Uhnger Neer Low Table (prototype) uhnger.no; Above right: Runa Klock Felt for The Thief, felt products with oak and leather details, runaklock.com



Top: Runa Klock Mountains, chopping boards, runaklock.com; Above: Kristine Five Melvaer, vases, kristinefivemelvaer.com

cold-forged silver cutlery. Kristine Five Melvaer melds product design and graphic design, working in glass, wood and textiles. Her clients include Vestre (outdoor furniture) and Heymat, a new Norwegian brand producing vibrant, industrial-quality doormats for the home. The furniture and home accessories of Anderssen & Voll also feature bright colours, reflecting a joie de vivre characteristic, perhaps, of a generation raised in a city where levels of happiness are sky high.

Kneip, a design studio whose co-founder Stian Kornrtved Ruud trained under Tom Dixon, is increasingly driven by the principles of sustainability, producing one-off or limited pieces that reflect the processes and materials that went into their making. Klubben founding member Sverre Uhnger works with local wood, crafting chopping boards and serving platters; imprints left by CNC milling become decorative features in his skilled hands.

Sustainability is sweeping the city's design world and forges its mentality. Almost 15 years ago, the Oslo Urban Ecology Program mapped a green vision for public transport and a vital city centre surrounded by water,

parks and farmland. The old National Hospital grounds were redeveloped as a model sustainable neighbourhood, Pilestredet Park, where more than 1,000 apartments demonstrate clean building design. In the green spirit, there is limited parking. The city's newly opened airport terminal extension is, according to its designer, Nordic – Office of Architecture, the world's greenest terminal. Glulam beams and recycled steel were used in construction, and winter snow is collected for summer coolant.

The United Nations' 2015 Sustainable Development Goals are enshrined in the Oslo Manifesto. Born out of the 2015 Framtanker (Forward Thinking) conference hosted by the Norwegian Centre for Design and Architecture, the manifesto serves to energise local and international designers, architects and city planners to take responsibility for putting the UN's far-reaching ideals into practice, and establish universal design standards for a new, sustainable world.

It may seem a utopian dream, but if the designers in the world's happiest capital city cannot improve humanity through their work, no-one can.

VIRTUAL WORLDS

WHEN BIG GETS TOO BIG

Computer modelling has long been used as a design tool, and big data is a massive resource on which to build these models. But when the datasets get too big for computers to handle, innovative design solutions are needed. And the urge to play has driven technology forward

It's a common science fiction trope popularised by The Matrix films with roots that go back to Descartes' epistemology and Plato's metaphysics; what if the world as we know it is an illusion? Specifically, a virtual reality simulation running on a computer. But beyond the fantasy, computer simulations - from models of systems within the human body to models of the flow of traffic through a city - have many practical applications from healthcare to infrastructure design. And beyond these practical applications lies the dream of creating a simulated brain that can match, and eventually exceed, the abilities

of the human mind - with all the unforeseeable advances that would follow. However, the virtual playground of computer games seems to be the biggest testing ground for new design ideas.

The advent of big data would appear to be a boon to designers of simulated, virtual worlds. Living in a massively interconnected world, each of us produces gigabytes of data every day whether we intend to or not. Without even realising it, every human living in an advanced economy generates data through the automatic recording of our transport use, shopping habits, telecommunications, internet use... in fact, almost every aspect of daily life generates data. All of this big data is available to be fed into computer models, making them ever more accurate, ever more precise and more detailed.

Can designers of virtual worlds handle all of this data? Ideally, every data point could be fed into a simulation to create an almost perfect simulacrum of the real world. It is tempting to think that all that is needed is more computing power to process all that data. But there is a problem.

Hitting a wall

There's a limit on what is possible. Landauer's principle, first proposed by Rolf Landauer in 1961 while he was working for IBM, is derived from the fundamental laws of nature; the conservation of energy and increase of entropy. The principle shows that there is a fundamental limit to what can be computed for each joule of energy a computer consumes. So, what does all this rather abstract sounding theory have to do with big data and virtual reality? In short, it demonstrates that a computer running a simulation of a single functioning human brain, with existing technology, would have the equivalent power consumption of a medium-sized country. For example in 2007, it took IBM's Blue Gene supercomputer to simulate 'half a mouse brain'. And this massively powerful machine was only able to simulate the brain at half-speed.

However, computers are getting better all the time. Moore's Law is the widely known rule of thumb that states that, as technology advances, the computing power that a dollar will buy you doubles every two years. There is an equivalent law, Koomey's Law, named after Stanford Professor Jonathan Koomey, which states a similar increase in computational efficiency. However, in around the year 2048, Koomey's Law will hit the impassable barrier of Landauer's Principle, and further progress will be impossible.

Even if quantum computing becomes a reality, there is a yet more fundamental limit to computational efficiency; the Margolus-Levitin Theorem, that puts a limit on what it is possible to compute; 6x10³³ operations per second per joule.

So when a brute force approach is shown to be inadequate, maybe a design solution can help.

Good design beats brute force

SIGNED spoke to the artist Lawrence Lek. His work, which was on display at this year's Venice Biennale, involves creating complex virtual worlds and simulated environments. He explained that "There's a difference



between images that are rendered in real-time, as with computer games, and those that are pre-processed, as with each frame of a Pixar film or a Hollywood special effects sequence. These can take hundreds of hours of computing time, made using networked render farms."

To produce images in real time requires the design of clever systems, Lek explains; "In more passive media like films, there's not so much need to optimise the performance like there is in a video game. Virtual Reality formats are even more performance-intensive because of the increased resolution and higher frame-rate; 60FPS as a working minimum."

Lek uses a variety of tools including Unreal Engine which allows him to create realistic VR environments, where players can reach out, touch and interact with objects in the simulated world. Lek also employs the Unity engine, which is increasingly popular among game developers in particular.

The functions of engines such as Unreal are broken down into a rendering engine and audio engine, which generate the 3D graphics and sound and a physics engine, which emulates the laws of physics, gravity, buoyancy and so on within the virtual world. These functions will coordinate with an AI, responsible for controlling entities within the simulated world.

Lek explains; "Of course all this is also dependent on the complexity of the scene itself; a busy urban scene, with realistic lighting, explosions and animated characters is far more difficult to calculate than a simple stylised scene of a cube in a carpeted room."



Seamlessly spreading a virtual world over a number of servers allows for 'persistence'; the ability of a simulation to continue running while the user is away.

Optimisation

For a physics engine to realistically model the movement of, say, a person's hair as it flows, flexes, is acted upon by gravity and by the air around it is a complex task. To model every hair on a head requires huge processing power alone. Designers must find ways of working around such complexity, approximating the movement of whole collections of hair rather than individual strands for example. In the case of virtual worlds created for leisure - such as video games - it only has to be good enough to allow suspension of disbelief, all the VR tech in the world is useless without a well-structured story, told with skill and verve. On the other hand, virtual worlds built as practical models will have different priorities. A virtual model of an aeroplane cabin, constructed to test how the structure's occupants will fare in the case of a hard landing, will need to simulate certain properties of the human body in order to find out what happens to it on impact. However, including the aforementioned realistic modelling of each occupant's hair, would be a waste of computing resources.

Future virtual worlds

For an indication of what the future may hold for designers of virtual worlds, it is worth looking at Spatial OS. This system, developed by the firm Improbable lets users make more intricate virtual environments than ever before by combining the abilities of different engines and breaking the simulated world into manageable chunks that can be spread across multiple servers. This, in turn solves a longstanding problem; object permanence. In short, in the past designers of virtual worlds have saved on computing power by having objects within the simulated environment disappear whenever the user is not looking at them. While this helps simulations run faster, it also means that changes made to the environment by the user are sometimes lost - radically limiting the usefulness of the simulation. Seamlessly spreading a virtual world over a number of servers allows for 'persistence'; the ability of a simulation to continue running while the user is away.

There are other potential benefits to this type of arrangement. In future, anyone wishing to simulate anything in a virtual world will be able to tap into the work of other designers, saved on servers anywhere in the world, in order to add new elements to their own simulation. For example, when building a virtual world to test a self-driving AI, a designer will be able to call upon pre-existing simulations of road systems, complete with simulated pedestrians and traffic lights already waiting for them on a server. They could even add realistic weather conditions to their own virtual world borrowed from another simulation running elsewhere. And through this collaborative, ad-hoc approach, ever more complex virtual worlds are possible.



Lawrence Lek: *Geomancer*
Commissioned for Jerwood/
FVU Awards 2017

LAWRENCE LEK

The art of extension

As London's venerable Victoria & Albert museum unveils an innovative extension, English architect Andrew Major looks at the architectural challenges of accommodating the growing demand for gallery space around the world

The two requirements of galleries; to be monuments that are by their nature grand and command respect but are at the same time open and attractive, are not always aligned. This is reflected in a growing architectural disconnect between the pressure to design iconic new art galleries as cultural attractors and the museum as a repository of memory. Gehry's Bilbao Guggenheim, while it acts as the social and economic focal point of a city and allows it to function in a competitive global economy, cannot be said to have the gravitas of existing national museums.

The last two decades of the twentieth century in particular saw pressure on space from growing collections and visitor numbers resulting in an explosion of new gallery space. But rather than build from new, there has been a growth in collections around the world looking instead to extend or convert an existing building, and it is possible now to judge their success.

Possibly the most successful intervention in an existing building is the restoration and conversion of Carlo Rossi's 1820 neoclassical General Staff Building in St. Petersburg. In the 1900s two Moscow art collectors, Serge Schukin and Ivan Morosov were buying Impressionist and post-Impressionist paintings in Paris. More remarkably they were also buying Fauvist and Cubist paintings and amassed a huge collection.

Morosov commissioned two masterpieces from Matisse; Dance and Music. Appropriated by the Soviets after the revolution the collections have always been a misfit in the Hermitage Museum building. Studio 44 Architects have created a gallery for the Hermitage in the General Staff Building for 19th and 20th century art. In this respect it resembles the Musee d'Orsay that was crafted out of a disused railway station.

While the restoration and conversion has respected the historic character the architects have developed a distinctive contemporary vocabulary for the interventions. Although the principle façade is semicircular the architects have ingeniously created a grand enfilade on an axis the length of the building. This runs through five internal courtyards now roofed over with glass. The transverse blocks between them have been converted into exhibition spaces and the whole linked by enormous doors. At the same time the mosaic of cellular rooms from its previous use have been retained. In doing this they have simultaneously provided all the requirements of a modern gallery while retaining the historic culture of St Petersburg.

The equivalent London gallery is Tate Modern. In 1994 a then little known practice, Herzog and de Meuron, won a competition to convert a disused power station into a new art gallery to house the Tate's modern art collection.



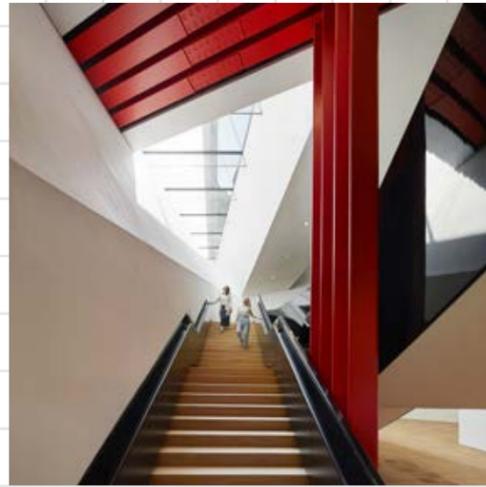
Above left: Sainsbury Wing; Above right: The interior of the General Staff Building at St Petersburg's State Hermitage Museum



The Sackler Courtyard, the V&A Exhibition Road Quarter, designed by AL_A ©Hufton+Crow



There's a growing disconnect between iconic new galleries as cultural attractors and the museum as a repository of memory



Interior of the V&A's new Exhibition Road Quarter, designed by AL_A @Hufton+Crow

Although alternative sites closer to the existing South Bank Arts Centre were proposed for the new gallery, the project was to be the single-minded creation of the Director, Nicholas Serota. Designed by Sir Giles Gilbert Scott, grandson of the great Victorian gothicist, the massive brick building with its single chimney dominates that bank of the Thames. The architects were able to draw on the rawness of the industrial aesthetic as a memory of the original use.

The genius of the design was to keep the cavernous turbine hall, stripped of its machinery, as an empty space that artists would be challenged to fill with temporary installations. Olafur Eliasson responded most memorably by doubling the height of the hall with a reflective ceiling and creating a vast golden sun at one end. Such was the impact that enchanted visitors would lie down on the hall floor gazing upwards.

Designed to accommodate 2 million visitors, in 2000, the year that it opened, there were 5.25 million visitors to Tate Modern, more than twice the number that had visited all three of the existing Tate galleries the previous year. But keeping the hall as a great void means galleries were restricted to the floors on the river frontage and once again there was pressure to create more space.

The gallery first extended into three vast underground concrete oil tanks. Devoid of natural light they allow complete control over the environment. However the raw and marked concrete walls dominate, as is currently the case with an installation in one tank consisting solely of concrete balls connected by ropes. A second darkened tank currently contains a circle of forty speakers, each one individually relaying one of the forty voices of a choir singing a forty-part motet by the sixteenth century composer Thomas Tallis, with stunning effect. It was clear from the numbers gathered within the ring of

speakers which artist had the greater appeal.

Having taken possession of the underground tanks Herzog and de Meuron were then commissioned to design an extension. This scheme pays little reference to context. It consists of a squat and truncated pyramidal tower built over the tanks and rising above the turbine hall, consequently visible from across the river, with a sloping façade of latticework brick.

With no rational derivation the pyramidal form creates vast internal circulation spaces and meandering stairs. The actual galleries are conventional and somewhat uninspiring spaces sandwiched between the pyramid and the turbine hall. The upper levels contain education and office spaces that are squeezed to fit the building's awkward geometries. More column inches have been printed about the fact there is a viewing gallery on the top level that allows visitors to look straight into the adjacent glass walled flats designed by Richard Rogers, than any of the exhibitions in the building. Herzog and de Meuron had long ago achieved the status of 'starchitect' and their aim was to create a distinctive but self-consciously iconic building. The Tate Modern extension is a distinctive design in a style that is the result of original thinking by the architects and a reflection of the period.

An earlier project to extend a London gallery failed due to stylistic preconceptions and prejudices. A competition with 79 entries for the design of the Sainsbury Wing, an extension to the National Gallery in Trafalgar Square, was won by architectural practice Ahrens Burton and Koralek. Known for their High-Tech style their design nevertheless presented a restrained modernist elevation to Trafalgar Square in scale with the existing façade. At a dinner to celebrate the 150th anniversary of the Royal Institute of British Architects Prince Charles described the design as "a monstrous carbuncle on the face of a much loved and elegant



The Louvre, Paris



Tate Modern's Switch House extension, the original Bankside gallery can be seen behind

friend." Despite the fact that the original elevation of 1832 by William Wilkins is a very weak version of classicism, even being lampooned and an object of public ridicule at the time, the immediate reaction was loss of nerve and permission to build was refused.

Subsequently, a closed competition for a new design held in 1982 was won by American Post-Modernists Robert Venturi and Denise Scott Brown. Designed to house the gallery's Renaissance paintings, the architects drew inspiration from the top lit galleries of Sir John Soane's 1817 Dulwich Picture Gallery in south London, a building that has influenced gallery design ever since. The completed Sainsbury Wing is the best example of Post-Modernism in the UK demonstrating that a building can be contextual and neither revivalist or stridently modern. However, in compromising it satisfies neither view and there followed a period of architectural conservatism of neo-Georgian designs when planning committees could be heard to ask 'would Prince Charles approve?'

Many London galleries have since used ingenuity to extend their exhibition spaces. For the Royal Academy, Norman Foster opened up a staircase at the rear of the building to give elegant access to an upper level gallery. The National Portrait Gallery traded unused space with the adjacent National Gallery to create a massive two-storey escalator link to upper levels and a top floor restaurant designed by architects Edward Jones and Jeremy Dixon.

A newly opened gallery at London's venerable Victoria and Albert Museum has been built on a site that used to be a service yard. Designed by Amanda Levete Architects, what is striking is that the gallery and the associated back of house facilities are in a cavernous space below ground. A previous design for this site by deconstructivist architect Daniel Libeskind consisting

of a tortured, jagged geometric spiral that stood in stark contrast to the 1909 building by Aston Webb, was dropped when it failed to achieve the £100 million needed to fund the project.

In its place Levete has retained the site as a light filled courtyard, paved with porcelain tiles broken only by a large oculus lighting the gallery below. The courtyard links the museum to the street, Exhibition Road, which was radically remodelled when the distinction between carriageway and pavement and the associated clutter of road signs was removed, creating a shared surface giving priority to pedestrians. Road and courtyard are separated only by a screen of brick columns, part of the original Webb design.

Levete is of course not the first to have gone below ground. While the scheme did not directly create more exhibition space, in 1989 IM Pei linked the three wings of the Louvre in Paris with an underground entrance with access through the famous glass pyramid located in the central courtyard. Initially hugely unpopular, the then Director of the Louvre resigned and up to ninety percent of the population of Paris was said to be against it, saying the plans disfigured the French Renaissance architecture of the Louvre.

Although the Levete design is only the subtlest of intervention in the Webb elevations and the Pei pyramid is a grand statement on the axis of the Tuileries, and is now as much a landmark of Paris as the also previously reviled Eiffel Tower, what these schemes have in common is that they have both made monumental buildings that contain a repository of collective memory and history more open and accessible. This seems to be a recurring theme where pre-existing buildings have been extended or adapted, providing the grandeur that commands respect, while at the same time being modern and accessible.

PICTURE CREDIT: IWAN BAAN

Emerging Design Talents

Six projects by HKDI graduates made outstanding appearances at the Emerging Design Talents Exhibition 2017 with projects that engage playfully and creatively with technology

Plastic Surgery

Chu Hoi Lam

Fashion Design graduate Chu Hoi Lam's collection *Plastic Surgery* was showcased at the NEW FASHION FORCE show during Emerging Design Talents 2017. *Plastic Surgery* explores the human desire to redesign the self. Taking inspiration from the phenomenon of plastic surgery, Chu's 'changeable' design focuses on the wearer's ability to constantly transform themselves to reach their own aesthetic ideal. The garments are made of individual puzzle pieces that fit the human body. Every seam in his collection is constructed from buttons, making it possible for wearers to mix and match different sections and colour combinations according to their whims or to suit the day's weather. "The buttons make all the pieces of clothing look like puzzle pieces" explains Chu. In this way, the wearer is able to personally combine their desired pieces to design their own jackets, pullovers, skirts and trousers. "You're able to change the style, pattern, colour and even the size, whichever you wish" says Chu. Chu's collection uses 3D printing for precision and functionality, a nod to the 'plastic' in the project's title. "The more holes, the more permeable the design," he says. "Everyone can be a designer of their own clothes, it's totally up to the owner, all you need is imagination."



” The more holes, the more permeable the design



Intertwined

Liu Ka Ming

A graduate of the Higher Diploma in Architectural design, Liu Ka Ming's project *Intertwined* is a nature-immersive co-working space concept designed for Mui Wo, Lantau Island. Liu saw the gentrification of Mui Wo as a sign for a growing demographic in Hong Kong who seek a more natural and open environment. "These people are freelancers, designers and artists with diverse backgrounds" he says. In response, Liu saw that the concept of a 'co-working space' was eminently suitable for Mui Wo's lifestyle. *Intertwined* is a playful space for creatives and collaborators to share ideas together. The design is divided into three parts: the top (the workspace), the middle (the production space) and the ground (the activities space). The working environment is east-west facing, bringing the sea and mountains into the interior of the building. The open co-working space is provided on the top floor where life and work of the local inhabitants have been taken into consideration. "The highlight of the design is the main three spaces around the centre which are designed to encourage connection of space and communication between workers."

” The highlight of the design is the main three spaces around the centre which are designed to encourage connection of space and communication between workers.

” This intimate space encourages eye-contact, communication and connection between those who use it



Bondary Sofa

Li Yi Wah

Bondary is a portmanteau of the words bond and boundary. Designed by Li Yi Wah, a graduate of the Higher Diploma in Furniture and Lifestyle, Product Design *Bondary* is a sofa that aims to advocate and encourage communal life by deliberately bonding the family together in one intimate space. Li Yi Wah explains, “The project conceptualises the sofa as a co-existing space: an interactive crossover between a chair, table, sofa and bed.” The multi-functionality of the sofa is able to sustain the boundaries of independent work and social play, bonding the users sharing one sofa.” This intimate space encourages eye-contact, communication and connection between those who use it. “As we get busier, obligations become heavier and communication becomes scarce,” Li Yi says “Confining ourselves to separate rooms for continuous work at home, whether that be on office projects or schoolwork, can start becoming the norm.” Li Yi

Wah sought to design a piece of furniture that could bond the family and become a productive playspace. “The *Bondary* sofa offers a solution in which family members can stay together even when they’re doing different things.” Users can face either forward or backwards depending on how the sofa is configured, and by doing so they can compose different settings in which the sofa can be used. By placing one of the benches behind the table or by removing the back cushions, family members can face each other as they use the centre table regardless of their current assignments. “Since family members doing separate duties can now do them together, the sofa can encourage higher engagement between the users.” Family members in this intimate space can express support, affection and recognition for each other, ultimately strengthening familial bonds and fostering greater communication as a whole.

Light Hockey

CHEUNG Chau Lam, LEE Chi Leong,
SIU King Yeung, YANG Kam Pan

Winner of the D&AD New Blood Wooden Pencil award, *Light Hockey*, a game designed for Hasbro, aims to reconnect smartphone users through a real-life interactive leisure activity by incorporating the smartphone into its functionality. A design team from HKDI including Cheung Chau Lam, Lee Chi Leong, Siu King Yeung and Yang Kam Pan invented a simple game with straightforward engineering. *Light Hockey* is an easy-to-play ball game that uses smartphones as a control medium. The team explains, “An electronic toy shaped like a hockey puck can be controlled by the torches from smartphone lights.” The puck is equipped with a light scanner that reacts to different commands according to the brightness, colour and movement of the players’ smartphones. When the light scanner detects a light, the motor will be activated, propelling a ball wheel that ultimately moves the puck. The idea is to move the puck around until the time limit shown by indication lights, the time limit is extended after a successful fight back. “While the aim of the game is to push the puck towards your opponent the real intention is to create a device that can force interaction between those who use smartphones,” explain *Light Hockey*’s creators. To connect people by bringing them away from their smartphones is the core intention of this engineered design. After all, participants cannot exile themselves into the solitude of their smartphones if they are using it to play *Light Hockey* instead.



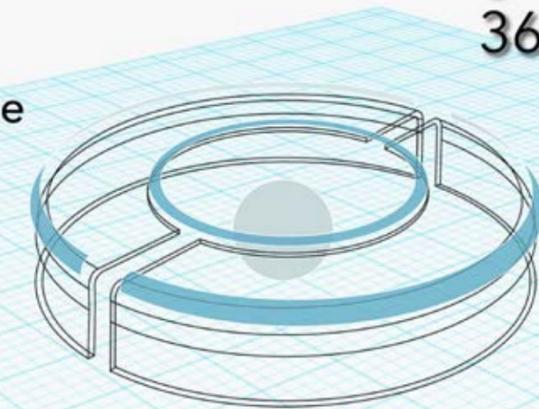
360° Image Scanner 360°感光器

Detect and Define
偵測和分辨

Different Colours
不同的顏色

Different Directions
不同的方向

Brightness
光源



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While the aim of the game is to push the puck towards your opponent the real intention is to create a device that can force interaction between those who use smartphones

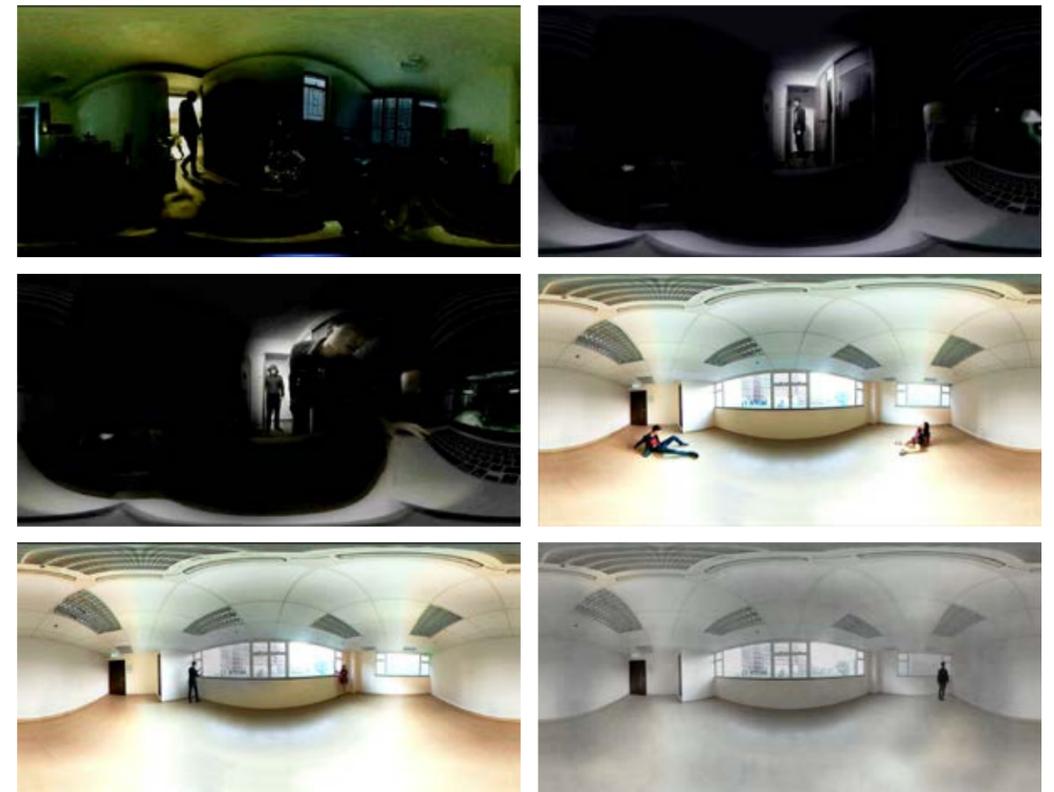
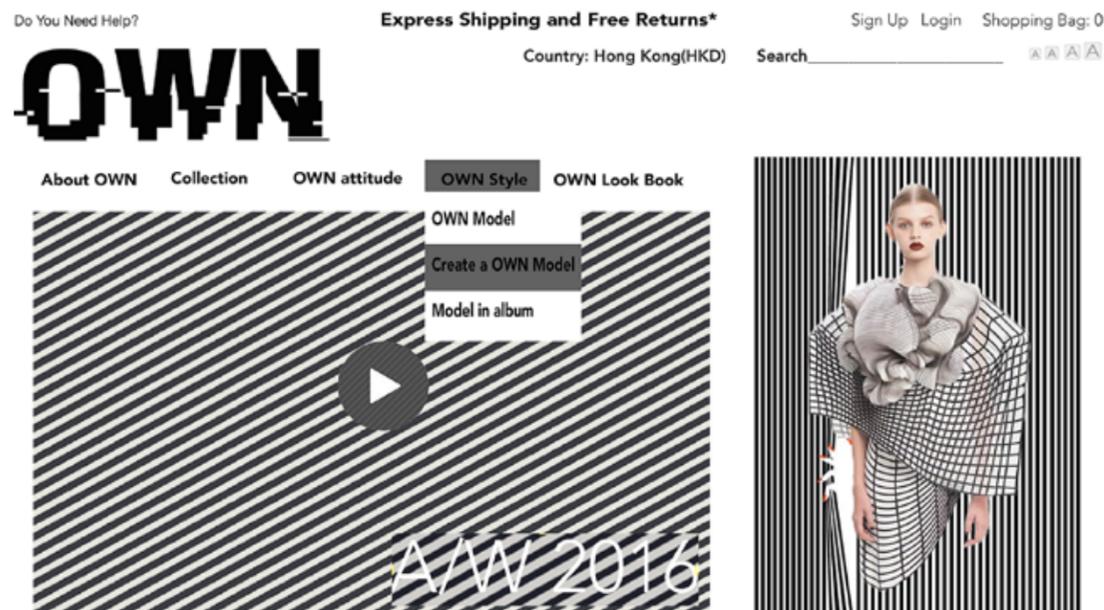
O.W.N.

Yip Sen

Yip Sen is a graduate of the Higher Diploma in Fashion Branding and Buying. Her project *O.W.N.*, stands for “Obey Weight Never.” *O.W.N.* is a website that allows users to design an avatar based on their own body size and shape. The website can then suggest suitable clothing pieces from a library of clothing styles and sizes that fit the figure and style of the user’s avatar. The website functions as a personal stylist catered to the user’s measurements. Sen explains that “The website will intelligently select clothes that highlight their favourite features while covering parts they do not favour.” The aim is to encourage ladies to not shy away from embellishing their fashion style regardless of their insecurities. *O.W.N.* tells ladies to “never obey to their weight” and to realise that everyone regardless of body shape is capable of reaching their fashion ideal.

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Intrusion

LO Ka Tim, MO Chuen Kam,
CHAN Faan Hin, WONG Hiu Tung

Intrusion allows visitors to experience an immersive 3D adventure on the HTC Vive platform. A game created by Higher Diploma of Transmedia graduates Lo Ka Tim, Mo Cheun Kam, Chan Faan Him and Wong Hiu Tung, the project delves into how we can use virtual reality to cross worlds. “With *Intrusion*, you are able to explore different dimensions and experience a different life.” The goal of the project is to allow users to not only explore different experiences but to cultivate new perspectives, ideas and knowledge in the process. The user wears the HTC Vive

headset for approximately 10 minutes, during which they venture through a variety of VR games and immersive 360-degree videos. “We hope our audience can realise that there is a fascinating world out there and that we are only humans, a tiny fragment of the universe.” The *Intrusion* project hopes to bring users out of their current bubbles or comfort zones by breaking the barriers of time, location and even culture to do so. “Don’t stay in your own world, the world is a big place, let *Intrusion* help you explore the beauty unknown.”

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Don’t stay in your own world, the world is a big place, let *Intrusion* help you explore the beauty unknown

HONG KONG'S HOMEGROWN ZOMBIE INVASION

HKDI alumni Nero Ng Siu-lun and Alan Lo spoke to SIGNED about their recent film *Zombiology: Enjoy Yourself Tonight* to give us an insight into how they broke into the world of film

HKDI alumni Nero Ng Siu-lun and Alan Lo have turned heads with their Zombie movie, *Zombiology: Enjoy Yourself Tonight*. Far from making a movie that simply apes familiar film tropes, the pair have allowed Hong Kong's culture and politics to seep into their work. While they are still early in their careers, Nero and Alan didn't go straight from school into writing and directing a feature film. Their success is the result of years of hard perseverance. SIGNED spoke to the writer and the director to find out more...

Signed: Could you start by explaining what *Zombiology: Enjoy Yourself Tonight* is all about?

Nero Ng Siu-lun (screenwriter - *Zombiology: Enjoy Yourself Tonight*) The film is a (very loose) adaptation of the graphic novel *Z for Zombie* by Yu Yi. It's about two eccentric and hot-headed young men, Lung and Chi-Yeung. They think of themselves as heroes, but they're really just slick-talkers. When a mysterious monster starts transforming people into zombies chaos breaks out. Lung, decides to stop being a coward and risks his life to break into the infected district to rescue Chi-Yeung and his dream girl. And a lethal battle against zombies becomes inevitable!

Alan Lo (director - *Zombiology: Enjoy Yourself Tonight*) The movie turned out to be very different from the novel. *Zombiology* talks about overcoming fears. The Zombies in the movie are merely a plot device - not the scariest villain. You are your biggest enemy. The ultimate challenge is to conquer your own flaws and fears. Our protagonist's biggest flaw is his tendency to avoid reality. But once he faces his fears that is when he becomes the most powerful.

How did the project come about?

A In 2012, Nero and I produced an east meets west online short called *Zombie Guillotines*. The production company looking to make a movie of *Z for Zombie* saw the film and invited us to work with them. It was my first directing job, so we were excited to accept the opportunity.

What did you hope for the project at the outset?

N Just for Hong Kong audiences to approach *Zombiology* with

an open mind. It is not an ordinary zombie film - it doesn't heavily reference the occult, nor is it a big-budget production. Rather, we incorporated a lot of local culture into the film. The zombies in *Zombiology* are not straightforward villains, they are a reflection of our human wickedness, our greed, our ego and our weaknesses. We want our audience to see that.

A Another message I wanted to highlight through the movie is independent thinking. Hong Kong has gone through a lot these past two years. There's been so much negativity built up in our society and so much anger - and a lot of times the anger causes us to lose our independent judgment. We hear something often enough; we blindly follow. The zombies in *Zombiology* are metaphorical in this respect.

Where does your interest in zombie films come from?

N Zombies have been around as long as I can remember. I used to play *Resident Evil* (known as *BIOHAZARD* in Japan) when I was younger and the trend is still on the upswing in pop culture, *Walking Dead* being the latest iteration. Yet there haven't been many HK produced zombie films apart from *Bio Zombie*.

A Zombies are universal. Everyone knows what zombies are - there's almost no language barrier. It's a versatile genre, zombie films can be action, disaster, romance even comedy. I wanted to create something which no HK movie has attempted before. I wanted to make a novel/movie/comic mash up.

Zombiology has been recognised with several awards and nominations - what accounts for this success?

N Quite frankly, a lot of the Hong Kong audience didn't take to the film, many even bashed it. As I said, *Zombiology* is not your usual gore-packed zombie film. But I am glad that it was able to reach an international crowd, and that the panels spotted our uniqueness and recognised our efforts.

A It's difficult to measure the success of a movie. Of course I was encouraged by the nominations, but I don't know if I'd regard *Zombiology* as a successful movie. Having said that, this was an important project for me. As I said this was my



Nero Ng Siu-lun



Alan Lo

very first directing experience. It's a big thing for me! I spent many sleepless nights working on it. I felt like a student again - as if I was working on my final year project and I've now graduated from *Zombiology*. What I find interesting though, is when I was in New York a week ago for NYAFF, some of the audience approached me after the screening. Their interpretation of the film was completely different to what the Hong Kong audience observed. I was so intrigued by the fact that audiences from different cultural backgrounds see things so differently.

Does setting this film in Hong Kong differentiate it from other zombie flicks - what makes this film unique?

N The film is more than bloodshed and monster slaying. It discusses ethics and moral standing, family dynamics and regional concerns. Hong Kong people are a mischievous bunch. We may be money-driven, but we treasure our relationships more than our money. Especially our family. This has a lot to do with our geographic density - a huge population with very little land makes a tight community. I think this is what differentiates our zombie film from others. It may seem weird for anyone to still stay with their parents above the age of 30 in America, but this is very common in Hong Kong.

A I think, given that the story is set in Hong Kong, it's inevitable that elements of local culture will be portrayed in the movie. It wasn't really deliberate, it was just natural. Place any story in Hong Kong and you'll get a few local elements slipped in.

Who was your favourite character in the film?

N The delivery boy, played by the talented Alan Yeung (Yeung Wai Lun, "A-Lun"; Best Comedy Actor for The 24th Hong Kong Drama Awards). He's an amazing theatre veteran and a

movie star-on-the-rise. I've always admired Wai Lun and I am so glad that he took this role. The character he plays is deeply in love. My favourite line in the film is from the scene when the delivery boy reassures everyone that he is fine after being bitten by a zombie - "Everyone, I'm alright! I bit him back!". I guess he's my favourite because of the great affection that he has for those he loves. I think I could learn a lot from this character!

A I see a lot of myself in Michael Ning's character, Lung. Or perhaps I should say, when I crafted his character, I gave him a bit of my own. Again, this is natural. It wasn't deliberate, it's part of the creative process. You always reflect a bit of yourself in your work. Lung's downfall is his tendency to avoid his problems. And it's usually too late when he actually confronts them. He wants to achieve great things, very ambitious dreams... but he doesn't think nor plan how.

How did studying Digital Film and Television at HKDI help you grow as a filmmaker?

N Completing group projects with classmates has taught me that movie production is all about team spirit; and team dynamic building is never an easy task. I actually met Alan at HKDI, we were classmates. You may share the same interests as other team members, but there will be little flaws in everyone that we must learn to accept. If you are passionate enough for what you're working on, this part will be easy.

A I would describe my HKDI experience as an enlightenment. I guess what I'm trying to say is that creativity cannot be taught. What I learnt from my teachers was more formative, rather than anything technical, theoretical or academic. When you graduate, you might realise what you've learnt in HKDI was merely the basics, but the basics are the firm foundation you need to build on. Your teachers won't teach you how to be creative as that simply cannot be taught, but they will teach you how to transform your abstract ideas into tangible pieces.



Nero's new movie *The Sinking City Capsule Odyssey* will be in cinemas this September. Alan has already begun work on his next project.

What is your favourite film project that you have completed so far?

N Hong Kong will be destroyed after 33 years; I didn't give it much thought when I put the short film online and it took a good few months before it found an audience. Then suddenly the views skyrocketed. Many commented below that my story resonated with them. I never expected such a positive reaction from such a large audience. I've since

then learnt to have a little more faith in myself and in my work. It's just a matter of time before your work will be discovered.

A Like I said, *Zombiology* was my directorial debut, which makes it special for me. I devoted a lot of my youth to it. There was a lot of pressure, but when the movie was completed and I caught my breath, I felt a glow of satisfaction.

From where do you get your inspiration from?

N My nutrients are the tvb soaps of my generation, Japanese anime and manga and wuxia/sci-fi novels by Jin Yong (Chinese wuxia novelist) and Ni Kuang (Hong Kong-American novelist and screenwriter).

A My inspirations are my surroundings and foreign films. I have a strong interest in various social issues, but I like to present these ideas figuratively, in an otherworldly fashion. The passion for film has been with me since childhood, my mother used to rent DVDs every weekend which sparked my interest in film at young age.

What challenges did you encounter getting into the film industry?

N My earlier days as a screenwriter, or should I say, an aspiring screenwriter, were very difficult. There just weren't a lot of screenwriting opportunities for a fresh graduate. Nobody knew who I was and I had no connections with anyone in the industry. I spent the first few years of my career doing side projects with my friends and old classmates. I directed a few films, wrote a few scripts. Most of those projects I did just for fun, but slowly viewers started to show their appreciation for my work. Slowly some of those in the film industry began to recognise my name. Slowly I got on track with my screenwriting career. So don't be afraid to side-track a little. Persist, and things will fall into place for you over time.

A I'm one of the lucky ones that had the opportunity to learn from mentors from different fields who are all very willing to teach. Not everyone has this privilege, especially fresh graduates, to learn from mentors who genuinely want to help.

What is your advice for HKDI students?

N Be more active! Approach more people! As I said, the movie industry relies on teamwork - and we need new blood. So get out there and approach your seniors and alumni. See it as a cultural exchange opportunity between generations.

A I actually went to the end of year show just recently. It was quite sentimental. It reminded me of my own final year project and why I wanted to make films. Whatever path you choose after graduation, always remember your original goal. Remember, and you will never feel lost.

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Nero Ng Siu-lun and Alan Lo's *Zombiology: Enjoy Yourself Tonight*



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