UNIVERSITY OF AUCKLAND
INVESTMENT
CLUB

INVESTMENT BULLETIN

STUDENT WRITERS · STUDENT OPINIONS

THE CREATURES OF WIRE AND METAL

BY ISABELLA HO

+ MORE ON:

INDUSTRIAL ACTION AND THE US MIDTERMS
THE FUTURE OF NZ'S CURRENCY

& CONVERSATIONS W/ UAIC ALUMNI:

JONO CHISHOLM

27 SEP 2022 | ISSUE NO.43
SUPPORTED BY: myob & FORSYTH BARR

The University of Auckland Investment Club
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An update from the fund

A RUNDOWN OF THIS WEEKS PITCHES WRITTEN BY OUR INVESTMENT COMMITTEE ANALYSTS

AUSTRALIAN VINTAGE LTD

AUSTRALIAN VINTAGE (ASX: AVG)

Australian Vintage is a leading vertically integrated producer of wine in Australia and distributes its products domestically and internationally.

Australian wine is internationally recognised, and the country is the 5th largest exporter in the market. The wine industry is large and mature, and the capital-intensive nature of the industry provides a solid competitive moat.

Four award-winning pillar brands dominate AVG's portfolio: McGuigan Wine, Tempus Two, Nepenthe and Barossa Valley. The business' strong balance sheet houses high-quality assets, such as over 2,700 hectares of vineyards in the leading winemaking regions of Australia and a newly constructed world-class winery in Buronga Hill. While a large portion of the business's sales is domestic, the company focuses on expanding its presence overseas.

A good dividend play, low PE ratio and debt levels, and a track record of growth in top, bottom line, cash flow and earnings are promising signs of AVG's continued success.

The Investment Committee passed AVG to the valuation stage by a vote of 7/12. Michael Smith, Freddie Clementson and Daniel Yang will run the valuation.

> *A premium wine for a premium fund*

- Michael Smith & Freddie Clementson

TECH

Optimus: Breathing life into wire and metal

BY ISABELLA HO

From Metropolis to Ex-Machina, human-like robots have been a muse for storytellers across the ages. Now, humanoid robots have sprung from the pages and cemented themselves into the real world. For Tesla's AI day on the 30th September 2022, Elon Musk is expected to unveil a prototype of the Optimus robot, a new addition to the world's humanoid family. However, doubt remains over whether or not Optimus will show the advanced features required for it to thrive in factories, homes, and other human environments.

Musk first introduced Optimus during AI day 2021, a "general purpose, bi-pedal, humanoid robot capable of performing tasks that are unsafe, repetitive or boring." At 1.73m tall and weighing 56 kg, Optimus can carry up to 20 kg and deadlift up to 68 kg. It is not surprising that Tesla subsequently went on a hiring spree for engineers, since both Tesla's artificial intelligence and autopilot teams have been working on Optimus. What is surprising, however, is that Musk described Optimus as the "most important product development" this year. Many simply saw Optimus as a recruitment tool for Tesla's full self-driving system.

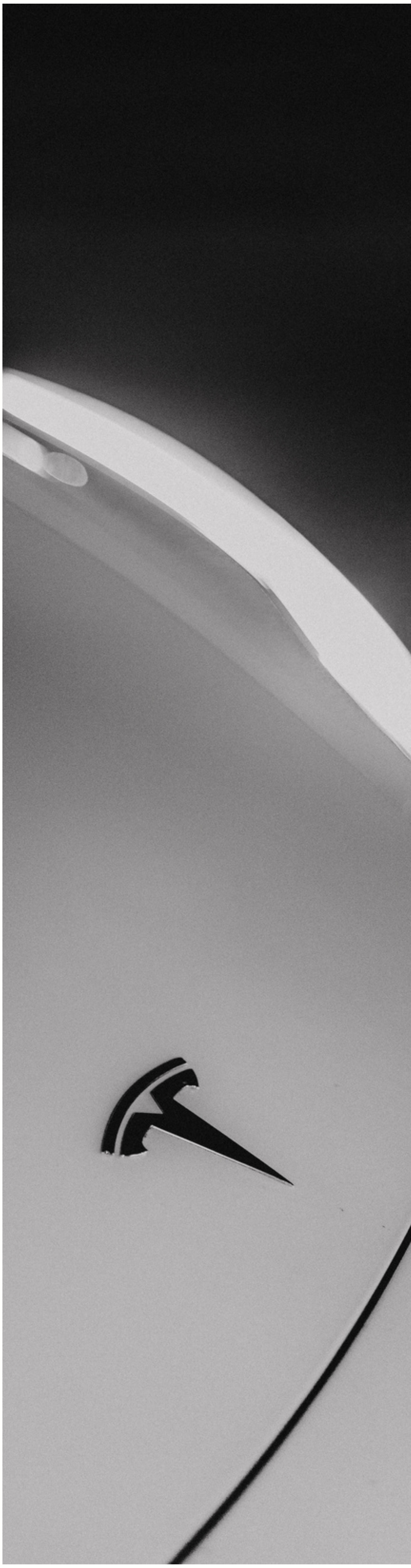
It all comes under Musk's ambitious vision for the future of the labour market. In his China Cyberspace magazine article, Musk explains that Optimus is initially designed for factory work to curb labour shortage issues. For example, Optimus should be able to respond to an instruction to "pick up that bolt and attach it to the car using that wrench." However, the long-term goal is for Optimus to "serve millions of households, such as cooking, mowing lawns, and caring for the elderly." In other words, for Optimus to become a unit of society.

A general purpose humanoid is perhaps easier said than done. A key challenge for creating humanoids is the replication of human intelligence. For example, suppose a robot receives a range of sensory inputs about a leaking bottle. In that case, it must be able to integrate those inputs to understand that there is a leaking bottle and then decide how to respond to the situation. This cognitive learning process is even trickier when the robots must adapt to the range of different environments where humans live. Either way, AI day spectators will be expecting Optimus to do more than demonstrate simple actions such as walking or dancing, which have already been achieved by competitors such as Xiaomi's CyberOne humanoid robot.

Yet, there are a few motion-related features in Optimus that could impress investors if shown in the upcoming or future prototypes. According to Dr Will Jackson from Engineer Arts Ltd, one such feature is hand dexterity such as in sewing a stitch, rolling a ball in its fingers, or gently touching a surface. Already, Italy's iCub humanoid has sensory pads attached to its hand, like touch screens, to feel and learn from its environment.

A second feature to look out for is a smoother gait for walking. "We do not yet have motors that can perfectly recreate the efficiency of human muscles… or an algorithm that solves the problem of walking more generally," says PAL Robotics engineer, Luca Marchionni. According to Arizona State University engineer, Nancy Cooke, Optimus could also awe the crowd by performing multiple unscripted actions.

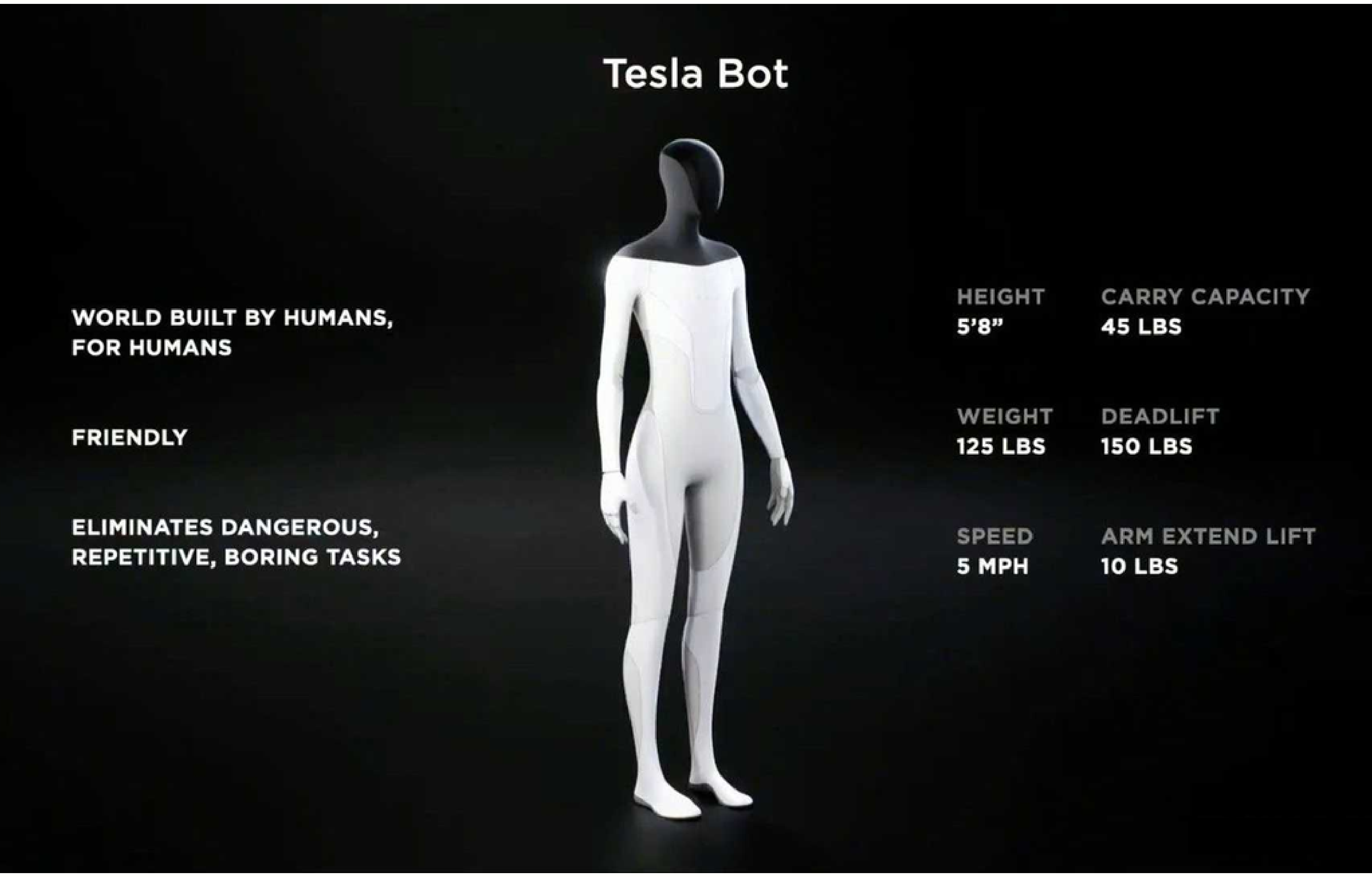
Of course, any thoughts about the widespread use of humanoids ushers in a flood of ethical



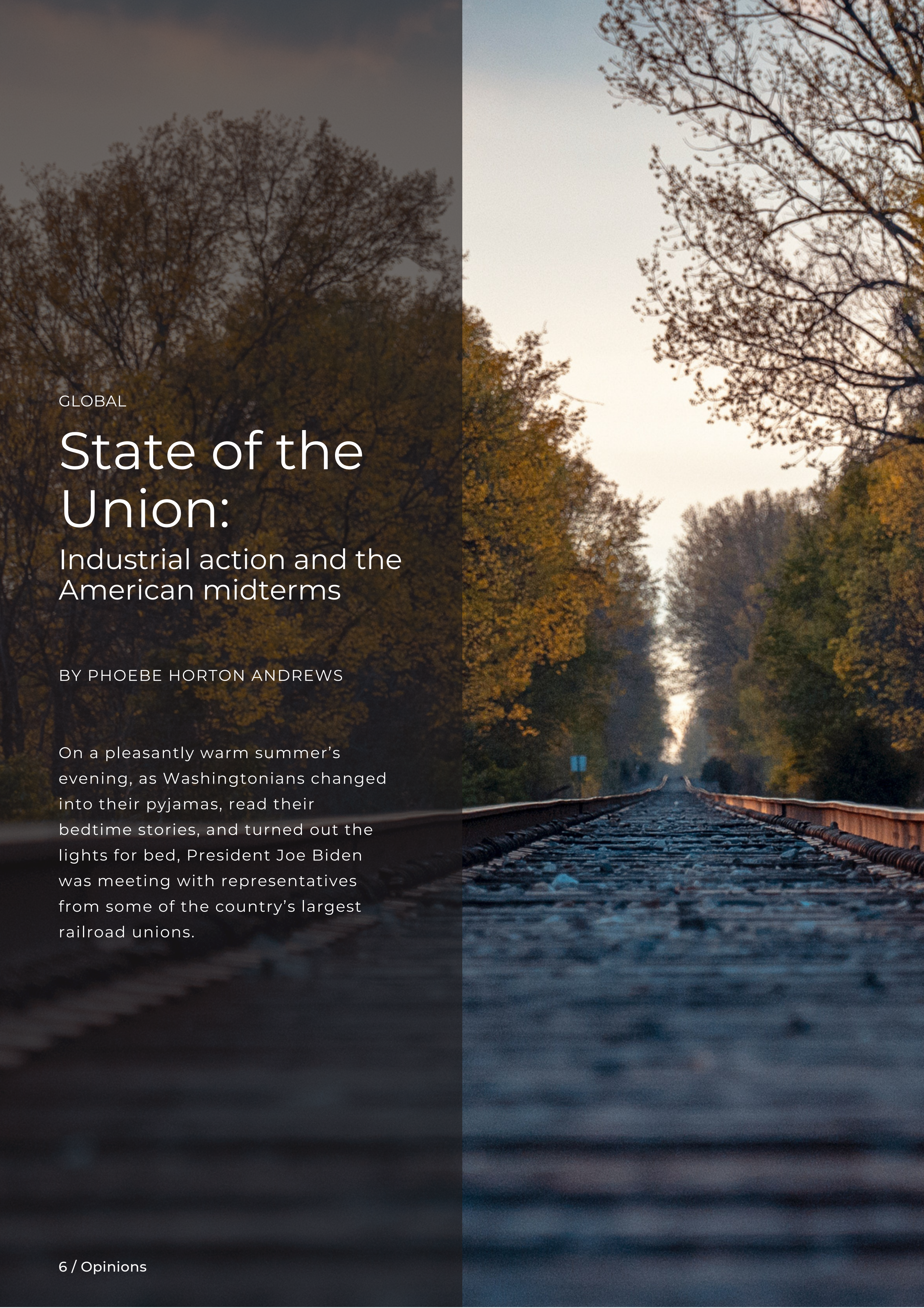
questions, especially when humanoids move beyond factories and enter domestic settings (noting that this is a question of when, not if). For example, there are issues around the protection of privacy at home and decisions based on discriminatory biases that the robot has learnt. I would be interested to see if Musk's robots ever enter the "uncanny valley."

Given that Optimus has a screen for a face, Musk seems to want to address the dynamic aspect of robots, which describes how the robot moves. The "uncanny valley" relates to the static aspect of robots, which describes how the robot looks. This aspect may be important if robots are to care for the elderly as Musk suggests. The robot-elderly care market is already well underway in Japan. MIT Media Lab research specialist, Katie Darling, says that the future anthropomorphism of robots and the emotional attachment that comes with it may create a need for consumer protection laws. For example, is it okay if your grandparents' robot companion caretaker suddenly requires an expensive mandatory upgrade?

It might be a while before we witness a fully functioning general purpose humanoid, much less a population of them in our kitchens or on our lawns. Few existing humanoids, if any, have managed to create a viable market beyond being showcased at events. Since humanoid robots are so diverse, ranging from entertainment robots like NAO to jumping robots like Boston Dynamics' Atlas, it would be interesting to see hints of how Optimus might function on AI day. But for now, the anxious amongst us may be assured that if Optimus ever appears on our doorsteps, it is designed to be slow enough for us to run away from it!



The Tesla Optimus Robot / InsideEVs



GLOBAL

State of the Union:

Industrial action and the American midterms

BY PHOEBE HORTON ANDREWS

On a pleasantly warm summer's evening, as Washingtonians changed into their pyjamas, read their bedtime stories, and turned out the lights for bed, President Joe Biden was meeting with representatives from some of the country's largest railroad unions.

Working into the early morning, the parties penned a provisional promise to avoid pandemonium, or large-scale industrial action across the country's rail network, which would have imperilled its convalescing economy.

But why is rail so important to the United States, and how did things get this bad? To understand, we'll need to take a step back in time.

The 1800s were a pivotal moment in American history. As Columbia manifested her destiny westward, steam trains carried the resources, people, and opportunities necessary for development and expansion. As the nation grew, it relied on railways to connect disparate towns with cities, and products with consumers.

In modern times, the United States' freight rail industry is a duopoly shared between two parties: Union Pacific, one of the original firms behind the transcontinental railroad; and BNSF, a wholly owned subsidiary of Berkshire Hathaway, the diversified conglomerate run by the Oracle of Omaha himself.

Owing to its economies of scale, rail transport remains one of the most cost-effective methods of transportation throughout the continental US, particularly for bulk cargo like agriculture, natural resources, and physical capital.

As an example of its significance, consider this: three quarters of the cars sold in the US are moved by train. In addition, the industry-wide adoption of the just-in-time model (championed by firms like Toyota) means that, in the event of an unaccounted-for shutdown, firms like GM would begin closing some of their facilities "within a day" due to a lack of inventory.

Zooming out, the impact of a shutdown would be severe, at a cost of approximately $US2bn per day to the US economy. To stick to delivery schedules, an additional 500,000 trucks would have to appear on American roads – and there simply aren't enough in the country to make this work (especially if the places that make them have shut down).

Railroads rely on their workers to keep the trains running. And these workers haven't been immune to the COVID-19 pandemic or its economic impact. They've watched the Great Resignation unfold, as well as cost-cutting measures in their own backyard. The workforce is barely a quarter the size of what it was half a century ago, with 30% being made to leave in the last six years.

But the unions aren't just fighting against industry-wide downsizing. Punitive attendance policies have made jobs harder, leading to talks stalling over attendance and sick leave.

So, what gives? Both Union Pacific and BNSF are owned by publicly traded holding companies listed on the S&P 500. Could it be that the demands of being publicly listed are placing too much scrutiny on each company's executive team, encouraging them to cut costs below reasonable levels, leading to poor work-life balance and insufficient leave? Or is this simply a case of companies failing to consider the strategic implications of a lack of esprit de corps? There isn't much to go on here, but both causes seem inconsistent with delivering value to investors.

Industrial action at this scale is costly for all parties and bound to cause controversy. This time, it's invoked ire from across the aisle, with Republican legislators attempting to compel the unions to accept a deal from Congress on its terms. Their bill was blocked by Bernie Sanders, however, but speaks to a common sentiment across the country: that the Biden administration is "too beholden to labor unions". And it's a point that Republicans will try to amplify come state elections in November, as they make a play for the House and Senate. Meanwhile, Democrats are keen to hold onto their Congressional gains; a win for the unions to balance out the working class' economic woes is sure to help.

Following the recent expiry of a labour contract, talks at several West Coast ports have also stalled. Will this be another chance for the Biden administration to achieve a win before November, or an election sore point?

NEW ZEALAND

The past, present, and future of New Zealand's currency

BY ANDREW HUANG

What remains serves to remind us of her… Marcus Tullius Cicero said that "the life of the dead is placed in the memory of the living". Before her departure, we all paid no heed to what was in front of us. Often seen when handling crisp green notes and only graced by her presence each flip of a coin is the effigy of our former head of state, Her Majesty Queen Elizabeth II.

A BRIEF HISTORY OF THE NEW ZEALAND DOLLAR

In 1953, the same year that Queen Elizabeth II was crowned, the first ever New Zealand coins bearing the effigy of Her Majesty were minted and circulated within New Zealand. The first ever design of the effigy was produced by Mary Gillick, a famous sculptor in the United Kingdom. The design depicted a young and optimistic Queen facing to the right, as per tradition dating back to the early 18th century, wherein when a new sovereign takes the throne, their effigy will depict them facing in the opposite direction of the previous sovereign. What is notable about Mary Gillick's design is her portrayal of the Queen uncrowned.

Not long after, in 1967, New Zealand decided to adopt decimal currency. This meant that pounds, shillings and pence were to be replaced by dollars and cents. Through the decimalisation of New Zealand's currency, the Reserve Bank of New Zealand issued its third series of banknotes. The previous two series of bank notes did not feature the head of state at the time, but rather the bank notes featured Tāwhiao, the second Māori King, and Captain James Cook in series one and two, respectively. Series three of banknotes featured a portrait engraving of the Queen, with the portrait engraving based on a photograph taken by royal photographer Anthony Buckley on 19 October 1960.

As a result of the decimalisation of currency, New Zealand's coinage - in addition to banknotes - needed to be changed as well. Thus, a new effigy designed by Arnold Machin depicting the Queen wearing a tiara called the "Girls of Great Britain and Ireland" was minted and circulated. This design was quite different to Mary Gillick's depiction of Her Majesty, as the new effigy depicts a now older Queen with a tiara resting upon her head.

By series five of New Zealand's banknotes, the Reserve Bank of New Zealand had decided to move forward and replace the $1 and $2 banknote denominations with coins. These new coins would bear the 3rd generation of Her Majesty's effigy, which was put into production in 1986. The 3rd generation effigy was designed by Raphael Maklouf and depicted a clearly older Queen wearing the "George IV State Diadem" crown. As for New Zealand's other banknotes, the reserve bank opted to remove the Queen's portrait from all banknotes besides the $20 banknote in favour of more New Zealand-themed engravings.

PRESENT DAY

In the present day, New Zealand has moved onto its 7th series of banknotes and its 4th generation of coins depicting the Queen. One major difference compared to the past is that the portrait of her majesty is now generated by computers rather than engraved by hand.

From digging into the *Coin mintings* data file that was released on the 1st of September 2022 by the Reserve Bank of New Zealand, it appears that from 1967 till 2022, over 3 billion coins have been minted. If we subtract the sum of the now uncirculated one, two, and five cent coins, we're still left with over 1.5 billion coins bearing Queen Elizabeth II in circulation.

Further digging into files released by the Reserve Bank of New Zealand shows that there are also over 1.3 billion banknotes within New Zealand bearing the image of the Queen's portrait in circulation.

THE FUTURE

From the replacement of sovereign Queen Elizabeth II to King Charles III the Reserve Bank of New Zealand has stated that all existing coins and $20 banknotes in circulation featuring Queen Elizabeth II will remain legal tender.

The Reserve Bank of New Zealand has also stated that they are now currently working alongside other commonwealth countries to prepare a new effigy depicting King Charles III. It is also stated that transitioning to new imagery will take several years, with the introduction of $20 banknotes depicting King Charles III only being introduced once the current stock of $20 notes are exhausted.

Leaving some food for thought regarding the future of both New Zealand and its currency - in the event that New Zealand does become a republic, how will this influence the look of New Zealand's currency?

CONVERSATIONS WITH UAIC ALUMNI

JONO CHISHOLM

Associate | BGH Capital
UAIC Investment Committee Chairman 2018
BCom/BSc Conjoint - Finance, Mathematics and Statistics

Recently, as part of the *Conversations* series, I chatted with Jono Chisholm, an Associate with private equity firm, BGH Capital, in their Melbourne office. A former UAIC Investment Committee Chairman, Jono graduated with a Bachelor of Commerce and Bachelor of Science in Finance, Mathematics and Statistics in 2018. I am excited to share Jono's insights into the world of investment banking and private equity, as well as words of advice for younger students. On behalf of the club, I'd like to extend a huge thank you to Jono for participating in our *Conversations* series.

INTERVIEW BY TIM CROSS

ABOUT JONO

Like myself, Jono is also a Cantabrian and grew up in Lincoln, a small town just outside Christchurch. A familiar face around the business school during his time at university, Jono served as an executive committee member for both Management Consulting Club (now UACC) and UAIC.

"I first got properly involved in the Investment Club halfway through my second year, joining the Investment Committee as an analyst. We met weekly to discuss investment pitches, work on valuations and report back to the general club. In my final year, I carried on as the chairman of the Investment Committee. My involvement on the committee piqued my interest in investing and has undoubtedly contributed to where I am now."

WORKING IN FINANCE

Jono started his career as an intern and then as an analyst with New Zealand investment bank Craigs. The next step in his career saw him land initially as an analyst and then as an associate in the Investment Banking division of U.S. bank Morgan Stanley. At Morgan Stanley, Jono worked with the Financial Institutions Group team, and after 18 months, joined Australian private equity firm BGH Capital, working as an associate in their Melbourne office.

Very few people around our age have worked in both Australia and New Zealand investment banking, so Jono was able to provide some unique insights into the differences between working in these two countries.

"In New Zealand, the investment banking (IB) industry is very small; the banks normally hire about 10 new analysts a year in total. In comparison, some Australian banks will hire 10 analysts themselves every year. As a result of being in smaller offices, junior bankers tend to work across a broader variety of industries and get better exposure to senior bankers than in Australia.

"However, as a result of working at a global bank like Morgan Stanley, you have the opportunity to work on multinational deals and work with some of the best operators around the world. In a smaller market such as New Zealand, the deal flow can be quite sporadic. At times, New Zealand IB can be hectic and, at other times, quite slow. The Australian market is much larger, and the deal flow is much more consistent. The final major difference between the two is the nature of the work itself. The New Zealand market tends to be quite advisory focussed, whereas the larger balance sheets mean you get exposure to more product transactions in the Australian market."

A common exit out of investment banking is private equity. Jono talked about the differences between the two and why private equity was a natural fit for him.

"A lot of the qualitative and quantitative work you will do in

private equity (PE) and IB is not too dissimilar. The differences between the two lie in your role. IB is a client-facing role with the client being your principal decision-maker. At a PE firm, this is flipped; you're now the principal decision-maker. The remuneration model between private equity and investment banking is also very different. Banks get paid advisory fees, whereas PE firms get paid to make good investment decisions. I find my skill-set better suited to that as an investor, and so PE was a natural fit."

The Australian private equity market is quite complex, with a variety of actors represented both domestically and internationally. In this snippet, Jono was able to provide a high-level overview of the industry.

"Private equity is more developed and globalised in Australia than NZ, but still far less prominent than in the US. There are several large international funds, such as Blackstone, Carlyle, Bain and TPG, who typically have small Australian teams looking to make one large ($300m+) investment every 1-2 years out of an Asia-wide fund. There are also a number of active Australian firms, such as Quadrant, Crescent, Adamantem and Mercury, who are quite active but typically make smaller ("mid-market") investments ($50m - $250m). Exceptions to the rule include KKR, who have a bigger and more active local team than their global peers, and Australian houses BGH and PEP, who have large ($2.5bn+) funds and hence compete for larger deals with the global funds."

Private equity recruitment is notoriously hush hush and Jono was able to provide valuable insights into his experience navigating the waters.

"The PE recruitment process is very opaque - you won't see jobs advertised online. The process tends to be very recruiter driven, with several recruiters recruiting talent for these firms. The recruitment cycle is also a rolling timeline - PE firms don't always hire at a certain time every year. They hire to fill vacancies. This is far different from investment banks, which advertise their roles heavily and hire large numbers of analysts at a certain point every year."

Having lived in both Melbourne and Sydney, Jono shares his thoughts on the two cities both from a work perspective as well as a personal one.

"From a work perspective, Sydney is a much larger financial hub in terms of the size of the investment banking offices, whereas consulting offices are much more evenly split. Melbourne has a more 'New Zealand' feel, with smaller and more close-knit offices - Sydney can feel quite big. The cities themselves are quite different. Sydney has a lot of natural beauty and is well-positioned on the waterfront with nice beaches, gardens and weather. Melbourne is well designed with lots of good bars and restaurants and obviously has the fantastic sporting events like Formula 1, the tennis, cricket, and AFL."

Finally, it wouldn't be a UAIC Conversations series without some advice for students entering the workforce.

"Don't let work dictate your life. Make sure to keep up your hobbies, such as sport, exercise, arts and music. At the end of the day, it's important to have activities outside of work that you enjoy."

Some of Jono's quotes have been edited for clarity. This interview was conducted via Zoom on the 14th of August, 2022 by Tim Cross and Andrew Meng.

MYOB Column

SME Success Report: SME Wages

Many small and medium sized enterprises (SMEs) are grappling with labour shortages and cost of living pressures, which in turn naturally leads to a conversation about wages.

Research indicates that, in spite of current economic challenges, more than half of SMEs surveyed increased wages in the past year, and increasing wages is a priority for 84% of respondents.

However, the data reveals opportunities for improvement. The gender pay gap measures the difference in male and female earnings on average, across their industry and the SME sector.

The data shows a 7.5% gender pay gap for SME workers in favour of men. And women faced disproportionate challenges during the COVID-19 pandemic, according to recent findings from MYOB.

Read the full report here.

Forsyth Barr FOCUS

An interview with David Mair - CEO of Skellerup

For most people if they know anything about Skellerup at all it's that they make the iconic Red Band gumboots. There is, however, a lot more to the company.

Skellerup designs and manufactures components and products that are used in a huge array of industries including water, construction, marine, sports fields, healthcare, automotive, dairy, and forestry, just to name a few. The company has operations around the world including New Zealand, the United states, China, Vietnam, and Europe.

Over the past few years Skellerup's share price has been one of the strongest performers on the NZX. We talk to CEO, David Mair.

Read the full article here.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