

uh yeah so the this article first of all we're writing is not for bloomberg this uh is a sort of document on my site product like because we've been you know data himself has been a a global higher education enthusiast and leader and practitioners and i'm in a sense really just a student of him working with him to study all of this and because it's very interesting and bloomberg is my day job where we have a new franchise within bloomberg bloomberg new economy uh you know it's kind of the idea is to bring the west and east together uh with the with the focus on asia because in latin america as well because we feel like the the world economic forum and davos uh has been focused too much in you know the western hemisphere and there deserves a greater attention from the eastern side of the of the globe so since 2018 mike bloomberg founded this thing called the bloomberg new economy forum and it's almost like a small scale but of the same caliper of kind of davos level convening but instead you know we do it in singapore in beijing and uh singapore yeah last last november right who is the point man there you're looking at him

that's right but but you're in canada right i am based in canada we have about 15 uh team members in new york and three in china that's you know throughout the year this is the size of the bloomberg new economy team but during the event because this is sort of the flagship of bloomberg event we actually kind of bring our whole event team together to to make this happen so just for last year in 2021 we flew uh almost 350 staff to singapore to organize this event and this event actually only have about 300 participants so it's actually quite a small scale event and yeah so that's all right thank you very much that that's very useful but with regard to this article you're writing you could tell me more about the readership yeah first of all let me tell you how we had this idea you know in the last uh from 2000 uh and 2008 until 2017 i spent my time in asia as you know um and uh i i personally observe the rapid rise of higher education in in asia pacific uh especially the rise of nus

if you believe ranking at all you know yes clearly the ranking has changed significantly from 2000 until now uh and anyway that after i returned to the u.s uh in four years ago i was uh sort of alarmed that the west essentially have no idea that this there's this rise of asia higher education not surprising well people you know people who are deeply involved in education may know but generally they have no idea and you never see any articles or writings about asia higher education in general yeah and i thought that nus is such a such an interesting case study uh first of all um i think that the leadership of nus clearly have made a tremendous transformation of the university in the you know the three presidents that you had in since 2000 uh you have interviewed them all i guess well they're all my friends so you know they're willing to let me interview them yes i i hope to house jun fong trin phong is doing great he's but he's stuck in beijing of course you know yes i understand yeah the last time i met him was in in some way in nus but i know he's in beijing yeah that's right he's in beijing and he try as much as possible to keep a low profile because of his as you know his family connection yes i know okay so he he doesn't want people to think that he he's leveraging that family connection but anyway uh i we had a long talk with him which he was very helpful and then i had to talk with chur tron whom i don't know as well as a right as you know uh trend phone trendful happened to be five days older than me really yeah but i didn't know that more important is that when he and i finished our sec four in 1960 [Music] he went to poly yeah he went to poly and so did i oh i see

you went through the route as well neither of us neither of us wanted to be uh to go to university like smart kids like you you know but in the 60s things were different yeah yeah well anyway we we just said you know what why why do we want to go to university where i'll probably never get in um and anyway so we did not go through the pre u1 and pre u2 we went to he studied mechanical engineering and i studied civil engineering and uh and after a few years we by the way we didn't we never knew each other uh he just decided that this was not for him and so did i so he went somewhere you didn't know you had a civil engineering background of two years so i yeah that's right and so he went to mcgill and i went to us and you know the rest is history yes uh but we first met in 2016

in kl's airport because both of us were asked to be board members of university technology patronus i know that university i'm also an external examiner i think okay well i got into kl and the guy who who received me said you know you have to wait a while because we have another guy that's coming in uh so we wait in the coffee shop and the other guy turned out to be trend phone and so as we started to talk and we found out that gee you know how come we never met uh we have so many similarities you know uh and anyway so we became good friends right uh the fact that he's five days older he kept on referring to me as his younger brother but petronas hasn't improved patronus has not improved yeah yeah well anyway we neither of us are with patronus now uh so i uh so so the fact that we i thought that nus is such an interesting case study uh i talked to max about this and he concurred so we said that let's interview all the presidents once we've done that we have a better understanding of nus how it became what it is but we also said that look university presidents are too too high up you know i mean ordinary people don't think that they are real yeah that's right that's right we need to talk to students and we need to talk to faculty members and so we actually went and we had the interview i have my friends in singapore my high school friends in singapore who found me students and alumni of nus various branches we have six or seven people we interviewed extensively then we said we must also talk to the faculty yes and i'm ordinary now yeah yes well you know ordinary is not the right word but you are faculty okay yes uh we also talked to i we also have just talked to bernard um

they're retired

uh what is this

the ex-business school dean that's right that's right he's the yes he and i he was introduced to me by uh trinh phong okay right uh so in fact trent said he was the one who recruited him to come to nus yes he's from hong kong originally so so

i i hope that we are coming to an end of all these interviews uh and you're probably very close to the end and i thought that i really would want to talk to you because your your long association with nus as a administrator and as an active researcher and a currently still active researcher and and you have seen the transformation by the way uh you went to oxford or cambridge as an undergraduate is that right i went to cambridge as an undergraduate officer for my phd so you know yeah but you never studied at any u.s no but i'm considered an alumni

because i've taught that for 30 years [Music] well i'm sure but you were never in class like a student i i like in chai or channel

my history if you like to know yes why don't you tell me yeah okay in 1980 when i finished my a levels i got a pse scholarship which at that era time all of us young people would apply because we we couldn't afford to go overseas and of course i took a uh what is known as an overseas merit scholarship to study in cambridge and in singapore it's very well connected to ops bridge at that time nowadays descend more to the u.s so i did my bachelor's in cambridge and i was to come back and serve an eight-year bond as you know but i had to finish my national service as well but during my national service psc somehow got an advertisement from the roads uh house uh and saying um uh get your people to apply for the rhodes scholarship and singapore has one place a year so um to the detriment they asked me to apply and i applied and got it so i told psc uh well you got me into it uh so can can you let me go to do uh d field in ph so they had to let me go so uh i am an accidental academic because i was meant to be a teacher in our schools in fact i taught for one year before yeah i was supposed to have an idea born and so so i went to oxford to do my uh d field and strangely it was in the chemistry department because uh the physics department didn't do surface science yup and tan kwang li whom you might know yes yes he recently in physics department uh acquired a nice ultra high vacuum vgs lab in 1986 and he advised me uh do something in this area so that when you come back somewhere someone i mean nus was a teaching university at that time so so someone could look after this so hence the my choice of area in 1990 i came back and physics department under bernard bernard town was the dean of science unfortunately physics department took me in in although my i had a very multi-disciplinary background and not a conventional route so i joined the physics department in 1990 and that was in 1991 was the beginning of the national science and technology plan so i observed through my career a transition from a teaching to research university because when i first came back i had no even even before uh

transformed yes yes i mean that there were pockets of of funding but the the coherent national science plan started in 1991 if you read history and max probably read the history then there were five year plans after that from 1991 to 95 and we are into rie 2025 so we have come a long way and when i first joined i had nothing no phd students no startup nothing and but i had done this lab so i did things myself and played around and in 1994 when the science national science and technology plan had some funding i applied for grass i got my first grant in the mid 90s i got my first phd student around there i started to build my own equipment and my lab and fortunately the time gap between my phd and this funding was not too long because before me all the the professors became teaching embedded in their mindset was teaching so my generation was the first to become research active and i have seen this transition yeah of course it's totally different now i became dean and i was involved in the whole recruitment efforts and so on so that's my background and feel free to ask me anything from my anytime were you an ri graduate like like oh yeah no i was from ats oh okay well that's that's also good enough

were you chinese thai no i actually went to chinese schools i i graduated from lihua olihua okay right yeah um it's very uh it's doing very well uh now they have a six-year program yep and of

course everything has changed in the in education landscape singapore has completely changed yes yes

that's good i think you have given us already a glimpse of a faculty that literally went from an institution that embedded in teaching into one that is teaching and research uh yes in fact chai joined me joined one year before say he himself has gone through that and church one probably um similar because chochan need medicine so he took a longer time so they would have had a similar experience but being in the upper stratosphere now they probably talk to you about different things yes yes so um max do you want to ask a question now yeah oh totally i mean as a complete outsider i was educated you know before university i was educated in china all my uh higher education were received in canada so which part of china may i ask so it's a very uh densely populated province yes i've been there yeah right right it's uh is it uh what's the capital city i forget

sorry i haven't beaten it it's a massive massive it's a famous city there it's called kaifl right i haven't been there i'm sorry i've been to many parts of china but my memory fails me because i haven't been to china for two years well and i hope to get go to china this this year but it depends on the leadership i'm sure all of us are hoping the same yeah so yes okay go on please i i interrupted don't worry so feel free to interrupt at any time so looking from an outsider and just looking listening to your history it's quite intriguing one thing that i found particularly interesting is you not only saw the whole transition from a team sorry max i interrupt you when you were introducing yourself how did you get to canada oh well uh my parents sort of like you know i was not really a good student so i i never really performed very well because it's really hard to focus uh so they they kind of look at me feel like hey if you go through that golf call path which everyone's taking you probably not never going to make out and as darshan probably know huna is not very good at higher education gonna have one school that's kind of okay and it's very competitive and they feel like hey you might have a better you know you might have a better opportunity if you go overseas so i ended up attending an international high school in and uh ended up coming to canada and that's awesome university uh i studied at the university of toronto so i did mechanical engineering as my undergrad and i did computer engineering as my master and that's when i met dashrain he was giving a talk at uh at our in our school but not engineering but he was giving a talk about our global affairs school on the belt and road initiative and although i was an engineering student they didn't see it they didn't say i cannot register so i went anyway i think dr i was probably the only engineering student in there anyways so we kept in touch afterwards and i was supposed to you know i was going i i got into the phd in u of t i started kind of halfway but uh my other mentor and ashram collectively brought me out of that so i'm on sort of a different trajectory now yes you have very interesting history yeah thank you very much i mean it's a total switch of you right yeah it's a total switch up field because one thing i realized you know when i studied uh computer engineering and and the field i was studying is kind of wearable computing and human computer interaction it was a pretty popular field actually that probably has a lot of connection to surface size yes well i i guess so we are working on 2d materials and flexible devices unfortunately it wouldn't i wouldn't see any commercialization in my lifetime as you know right i mean but then you know i i all the fundamental research that's actually propelling us forward right but then the fact is when i was in

computer science computer engineering school i see the smartest chinese american canadian working in the field like you go to computer science you see the smartest brain you go to facebook you go to google their concentration hey one of inside kids is working at google their concentration of intellectual it's so high and it feels like hey you know i can probably get a job at google but then it's like and maybe there are better things for me to do so that's when i attended darshan's talk i realized hey and i started to pay some attention to popular media to general media and that's where i realized uh this is a field that's very critical to everyone's life because it shapes your narrative it shapes your view it shapes how you see another group of people who you never met right it shapes your perception of a group that you're not related but then it's such an important field but then there's like not enough people working on it or not enough people who can see sort of both side of the spectrum to do work on it so given that i feel like i do understand and appreciate both the chinese which is kind of the oriental cultural and history as well as the western lifestyle value i i want to do something to try to bridge the connection bridge and we need more people like you today hopefully right so that's what i'm trying to do it's it certainly doesn't make does help me to earn as much as i otherwise might have if i go to google but i certainly feel like it's it's it's challenging it's meaningful and so far i'm enjoying it okay thank you very much i understand i think we should all make an impact wherever we are best suited for and i think you have chosen the right career path just as tashan has himself through the many many different careers he's been through only people like me remain in one job because we have no options no no no because you're good at it no i mean everything you said it sounds easy but becoming a world scholar getting a doctor of philosophy from uh from from from oxford none of that is actually easy so you just made it sound easy no no no but but but uh well i guess we all have our different uh roles in life so uh let's get back to the issue of nus right right what why do you think you know of course you can say the good good leaderships and singapore's change what is the fundamental reason i mean after all there are many many uh universities in in southeast asia and um they exist in different countries and so on uh of course in singapore there's also ntu but somehow nus gave people the perception and hopefully it's the reality that it is able to penetrate through many many of the layers that is imposed on it to become what is intellectually so strong why why do you think that happens okay that's a really big question but if i may um answer it from a bigger context first before i get to nus great because i'm sure uh georgetown and in child would have told you a lot of already but in my my opinion nus ntu and all the singapore universities did well because of singapore's policy singapore's orientation and we are riding upon the national policy or national so so i think you know our national leaders we have moved from manufacturing to innovation and a few they were well advised up there to say that we really need to invest in education research innovation and hence we have we nus has done well because singapore has made available a lot of funding it has given us the right environment to thrive of course there are constraints in singapore but um i think you find that the leadership in nus and ntu they are wise and we can make a university thrive in spite of constraints their ways of getting around it and we have basically done well because because singapore has done well and and that is my big picture answer but if you want me to go to specifics i can yeah yes specific which is great right so nus now uh the presidents have always obviously told you something and that's absolutely correct and of course their presidents but as an ordinary person as you saw in the beginning of my career there was the first national science and technology plan gave 2 million singapore dollars

to the entire country it wasn't a lot and we have to scratch for a few thousand each and so on but now it's uh bit in the billions so i i cut 25 billion so we have come a long way so someone like myself in the early days although we had very small grants there wasn't much competition so my success rate was greater than 50 percent right but uh having been through at my entire career now i can get grants of million dollars but my success rate is less than 10 so we are becoming like the u.s okay because things have changed changed a lot so um but fortunately i'm at the end of my career so i'm i'm not competitive compared to the young ones being recruited now so so my strength personal strategy is work with the young ones and apply for grants because there's no way i'm going to be funded because i can't keep up with the young ones but anyway i made them in my career so that's fine so um i i was uh pulled into lead and administrated positions fairly early bernatan was the dean and within four years i joined in chai i actually took over engchai's sub dean position in 1994 uh inch i went the administrative route he's a mathematician as you know his background and then it turned out that i followed engchai's root he became weinstein after that and when he became dean i became his vice dean and when he became provost uh i became the dean because i guess the in knew me i mean he was one year my senior and he's worked in me and i guess at that time he trusted me now i hope he still trusts me but uh i don't see much because he's too far away so um so i was dean at 2007 to 2014 that's the six year uh sorry how many how many years is that oh yeah it's a six year term two two three terms and so i had the benefit of seeing transformation and um as dean and and later on uh cho it was george one who was president then who put me up to become vice president of international relations since uh which i enjoyed very much because i could travel a lot and see universities all over the world from south america to china to everywhere so it gives me a good international perspective and i appreciate that but of course i've outlived my shelf life so i'm back to the department um so uh i guess uh as dean um well the first the first thing i'll mention is as you know against the backdrop of um increasing funding availability and so on and nus our strategy was again its talent of course talent is really key to any university and as dean i had to try to recruit people that will make a difference and at that time there was the nrs started the nrf fellowships program where they bring 10 i think around 2010 or so so they bring about 10 uh young people from all over the world internationally competitive give them a three three million dollar startup grant they get a faculty position in any usa ntu so we we all uh clement uh competed for these people we recruited a host of very talented young faculty from the u.s everywhere but this was when funding was available of course before that we were also recruiting the best people we could but money makes a difference to people's decisions and three million singapore dollars for a young person is a lot of money so uh we could get a startup as a startup as a startup wow as a startup and subsequently they could get more and this was nrf having a scheme um max can check out nrf fellow scheme fellowship so nrf which was founded in 2006 which was under the prime minister's office 2006 which was so so they i think they helped make a difference and it was around my leadership when they started up so they started these research centers of excellence which you heard about 150 million dollars per cent that's a lot of singapore dollars right for five years and the first center i was sort of involved aware was the center for quantum technologies arthur eckhart from oxford was he he was recruited to hate it he didn't give up his officer position but he had joined and he hated this 150 million dollar center so when you bring someone like that

he has the connections he's bringing a lot of people he's got the money now i was personally involved in the third rce which was a graphene center of course

research centers of excellence okay you can check nrf website and look at the history and all that so um at the young level there was a fellowship at a high level there was the centers of excellence now there are they are maybe of the order of ten yeah so the idea is to embed them in a university but bring pockets of excellence initially they were started in the prime minister's office so the article didn't um report to to to uh george one he reported to um nrf but but eventually um nrs intention was the university should absorb them so uh someone like um of course uh can't change his stripes and he was not too happy but they've changed it because at oxford you can do what you want right you can do basic research and of course there's always fighting against the the national bodies about who want who wants uh applications of quantum technology singapore was ahead of his time in the sense but we started as a basic research because of leadership and you look at all the people there the early people they are all basic scientists but now you look at the people they are all sort of applied people because the leadership has changed and the pressure from nrf is different and the oh god i guess it has done some good it has strengthened the physics department it has helped some people in government to appreciate the basic science is important but the singapore stand is always that other people can do the basic science and we can do some basic science but just to maintain a pipeline but we shouldn't invest too much you know i mean i mean there's always an amount which is good in the ria you always sign 20 or 10 percent for basic science or manpower but it's always a small amount and the big application areas are where most of the money goes in so i was involved in the graphene center which was the third uh which was a later rce that was founded in 2010 during my deanship i personally recruited professor antonio castro natto from boston university so he was he was the theorist who worked with um who worked the guyman offers a lot of the two who got the nobel prize right he was the theorist the theorist doesn't get the noah prize but nevertheless he knows everybody right so i recruited him to start a graphene center in 2010 we were the first graphene center in the world right of course at that time no one knows what graphene is useful for so uh we started the center and and and uh antonio helped us bring good people in and because uh we had some funding from nus and elsewhere and so so so we could do that we could i i could build a clean room and so on and so forth um and the center had reinvented itself became a center for 2d material advanced 2d materials and then i left my dean ship and today the center still exists but since 2008 i was trying very we were trying with antonio to recruit kostya novosilov who was one of the nobel laureates who was the university of manchester i know him very well by the way oh yes yes i know him very very well i'll tell you a little bit sorry later on about okay yeah i know he goes to china a lot he does calligraphy and so on and he has positions all over the world yeah i know him very well as well so so but i was uh with antonio who knows him personally in 2008 we tried to recruit him but in 2010 he got a nobel prize so therefore he will not leave because he was god he got a knighthood from the uk and he got a lot of money from uk 60 million pounds to start the right novice love center in and so on but of course that all dried up and and last year we managed to get him so so we started it but i couldn't complete it because of the circumstances then but nus now has its first nobel laureate who's i think about 80 here people don't realize that we we started the work uh 10 years ago but finally came to fruition and he he has got the most recent

rice not on 2d materials on intelligent materials so okay because of him we got another hundreds of millions of dollars right and um the center for 2d materials is being morphed or at least a separate center has formed intelligent materials the 2d materials is linked to it and antonio is also involved in the intelligent material so um and he has brought a lot of people with him uh one of the persons that was involved in that is gui bazan from uh from ucsb and uh he is one of the key people and he's some he's someone uh who works with the nobel laureate in in in flexible electronics or polymer electro i can't remember ellen higuier yeah oh yeah conducting polymer yes yes he was uh one of the ucsb ucsb that's right yeah yeah but he goes and in fact in the in around the time in the 2000s i did visit ucsb because bazaar i knew bazan since then and he was young and i was the dean of faculty of science and we held a joint a bilateral symposium with santa barbara even at that time we were trying to build international networks it was the early days so many of these things turned out to be one-off so it wasn't followed up but nowadays uh if anyone does things to nus it is not one-off anymore so things have moved but i have left so uh so maybe i should stop now and ask you to well i i think you have given us a um you have portrayed the growth of nus from a faculty point of view uh from the uh from the fledgling days where you're talking about you know uh thousands of dollars of grants yes uh and then millions scale up to now millions which is you know several orders of magnitude higher and by the same time uh as the money goes up in in quantity the mindset changes too as you have i've said that you need more and more people not just smart people you just need a lot of smart people uh critical mass a critical mass and also bring in people of high visibility such as this russian guy

yeah i think that um you know especially bringing he is so let me tell you a little story about i i i have a good oh you know andres he's a good friend of him yes of course when i was in my house he's still here he's actually not far from me he's about three miles from my home oh really yeah he's now very active working with the russian he just got a huge russian prize from the russian government oh very good for his research anyway nanotechnology in in nanotechnologies

he when i was in macau he introduced me to casa said and so i wrote to him and said invite him to come he said i will come and i'll tell you which day i will be there i say which day is that they say oh it will be um it will be a december 24th um and i want to give a talk on december 25th i i i wrote back do you know what day is december 25th and say yeah it's a holiday uh i i said you know i i don't know whether i'll get people to listen to you uh he said well if they don't want to listen to me it's their loss

so he actually arrived on the 24th uh we put him in the hotel and then brought him into the university i announced it as much as i can to people that uh this uh this guy is gonna speak on the 25th then he actually sorry which university were you there macau university oh macau yes yeah and then he uh he said that i i just don't want to just talk to you i want to see all kinds of people there in my talk oh i said okay then i i actually fortunately he has a nobel prize so people are willing to come and it turns out i know that a hundred people came to listen to him and he was very interested well yeah that's right yeah doesn't uh i mean china doesn't celebrate christmas so you get people they work all the time anyway that's right that's right so i was able



to get people coming in from the next door which is han chingpao you know they also came in so i actually uh we were able to get him he's he's an ama intellectually i find him to be so profound and deep in my three days of interaction with him it means so scary listening to him uh and and i think that he must be he must kick up a storm at nus am i right definitely in fact he has so many interests that he wrote a book on architecture together with some people other people and in so many different fields he has been but of course in china everyone is only interested in his science but he has kicked up a storm in other areas but the leadership is not really interested they're only interested in these people securing the hundreds of millions from nrf into nus so you'll get that story from them but i agree with you costia is very interesting and i think that what and what nus well at least at your level i don't know whether and chai never mentioned it but at your level uh you understand the profound importance of intellectual bandwidth um it is it is not just the guy has a nobel prize would you that that that's not bad okay

he he is able to to communicate to your students the meaning of love knowledge and which is what i found in him not that many people can be as as deep and as broad as him you know they're good scientists and good professors yes but let me explain let me give you a background about him and why i think he's good for him he got the nowhere price around 36 or something like that because he was a student of geim in netherlands he became a postdoc of geim in manchester and he was the guy who did all the work grime was the professor so he he did all the work and he's young and because of that i think nus and most universities should employ young nobel laureates those over the hill can only talk so he he goes to the lab and he teaches students and postdocs personally and he's active in research and he has new ideas because he's young that's really i mean he's in his 40s now yeah but his impact is so much younger than you yes i know because i i re i mean i was i mean i knew him since he was a sore he was still uh in manchester he was uh he was a sort of royal society research fellow but basically a glorified postdoc but when he got a nobel prize he became a professor straight away over a night yes overnight and but you see of course when nus i was recruiting him at that time um the difficulty was he wasn't a full professor and he didn't have a nobel prize then but we recognized his potential but now things are different of course so i fully agree with you that the nobel prize makes a difference and fortunately in this case nus made the right choice we do have some visiting nobel laureate leggett and so on you probably know them yeah that's different yeah they did they they come now and then and give a talk and that's it but we now have embedded a nobel laureate that does ex meet students and that's a total difference and that's the way nus should recruit and i think ngai also understands that we don't want to recruit people who are over the hill and i think that that makes a difference absolutely absolutely so i think that lifting the intellectual bandwidth of a university is a fundamental thing for how to get the university to become better that's right yeah yeah yeah well um max you have any more questions any questions yes i i do and i want to go back to an earlier point that andrew was talking about which is sort of uh you know it's how government and uh the general kind of the atmosphere towards a basic research here you know now when we look back at how singapore government treated or transformed its policy towards higher education we see a clear transformation right in the beginning the economy was talking about hey we're trying to survive singapore is essentially trying to become a oversea headquarters for multinational corporations and all of our citizens should have the skill to be employed and at some point the government

realized okay we're transforming into a knowledge economy we not only need to have the skill to be employed we need to be able to create knowledge innovation hence you know a lot of policies towards applied science this and that and i think many of that resulted in today's you know higher education landscape in singapore and when it comes to basic research as you mentioned there are some degree of basic research but not the degree that we're seeing in the united states seeing in the the western advanced economies and my question is do you think that's an intentional government decision or is it as what darshan said it's like this small nation mentality that's limiting the the the development in basic science yes i i think you hit a nail on the head and i agree that there's a small nation mentality but let me give you a background to the decision makers okay and their views now um i did say that we are very economically and uh oriented in cabinet and the person responsible for it for many years was dpm hence we care who was a friend of mine in cambridge he did economics and basically but he turned down the pm ship and all but uh so all the whole generation of cabinet people many uh cambridge economies or from other top universities that influence their mindset and and and partly because i think you look at the budget of singapore it's it's different from 500 billion compared to u.s and trillions uh of course one could come to a logical conclusion but uh um but but fortunately we have one champion in cabinet the pm himself lisen long because he studied mathematics at cambridge before me um but but he's younger than tasha and i don't know whether you know him no but he has kept his interest in mathematics and and and he understands the importance of basic science and because he's the prime minister i think uh he understands and um well the whole cabinet probably goes this way they probably appreciate that basic science is important while he's prime minister now um [Music] i i hope we will have more champions in the future um i i don't know because uh the the public service commission all their scholars are doing economics in in in all the top us universe okay some are engineering of course uh like yourself um but they they convert i mean they don't practice engineering they join the government and they become um administrators okay but they they have the engineers but engineers and scientists think differently as as star channels so engineers and economists leading singapore will have a certain mindset there are very few physicists or or scientists in government all the youngsters who like science take up the a-star scholarship these days and they get they do phds in the best universities in the u.s but they go back and serve their bond within a star which is a research organization very good scientists but no input into policy so these are separated they're two different ecosystems in singapore now i have to uh say something i know all this because uh for for some years i was the president of the singapore national academy of science right um but i'm a past president so um this was uh one organization that was very neglected in singapore because it's non-government when i took it up which was i can't remember when 2012 or something like that so it had no status in singapore no money whatsoever because uh it's a voluntary i i think tasha knows background all the the scientific societies in singapore all we do is run olympiads and and select singapore students education not not policy so i tried to change that of 2040 uh 2014. when i became president i wrote the white paper um say um to nrf at that time because i was aware of this situation telling them why uh scientists need to be involved in policy uh making in singapore and basically saying that look at the royal society and the national academy of science the government gives them grants so with money you can do things with no money you can't do anything and volunteers everyone does it as a low priority right you know that scientists treat all

these things unless there's money there now in 2014 the nrf and the the ministries read this paper and threw it in a bin basically because uh decision making is the exclusive uh uh responsibility of the government and scientists shouldn't get involved right that that's that's a singapore perspective but at the end of my um presidency in 2019 somewhere around there um this i i took out this paper again and this time i formed a committee which involved sydney brenner a nobel laureate who is who was as honorary singapore citizen and we met at shangri-la hotel a few months before he passed on in 2019 yeah so he was in a wheelchair and oxygen support and all that but we got his signature right and a host of other important people as well and uh i tried again okay but i was stepping down as president so i had to get a new president support and so on and this uh white paper and letter went uh to the dpm hang right to the decision maker whom i know and because he knows me i think he gave me a bit of faith by saying uh let's have a chat and we actually had a chat um and i brought in um did tidming who is the current president and ling son who is a vice president and now ntu provost uh to his uh his mti office the day before national day when he had one hour to spare so in 2019 i think and then we made our case to him because he's an important person and he knows all of us because all three of us happen to be cambridge trained as well so we all know each other every one of us so um we in the end i'm i'm not sure the reasons uh only he would know but he we left the meetings uh with him saying he will highlight this to nrf and um uh and he likes certain ideas but not other ideas so uh soon after that that nrf contacted me i guess uh that's the way things work when you you get into the top the top tells the the nrf to do something nrf has to contact me right so they contacted us saying that uh you know i think uh we can fund uh snaps so um so we can give you a grant but we have to go through the usual protocols and and assign various documents and so on and so forth but we have a grant but we have to do it in a way that that the government is not supporting staff but we are giving stars a grant to support something so now we are administering the asean post doctoral fellowship scheme because that was something the dpm hang saw was good in foreign policy right so um so uh we were not doing the nrf fellowship which is a worldwide scheme but at least for our immediate neighborhood we could select the best scientists and bring them to singapore and they don't have a startup they but they are fully supported and they work with somebody and we train the people in the region we build up our networks uh with our existing scientists and they thought that's a good thing you can let scientists do that sort of things so snares but having said that because 20 posts a year is a lot of money i mean uh we have uh uh from ra 20 25 we have uh order a million dollar budget right uh tens of million dollar budget and it comes with administrative uh uh costs inside of maximum of four percent they wouldn't give us overheads uh like they give in the u.s or fifty percent or even to a university 30 percent but four percent is still a lot right i mean for a snaz an organization that has zero dollars before right so for the first time in our history we uh recruited one full-time person right and we are in the process of trying to recruit another full-time person and although i'm past president i'm still involved because uh i started it and i i advised the current president and until he doesn't want to listen to me i will be involved and um so so we are cycling this and i'm in in the process but now the difference is that the singapore national academy of science for the first time has government money through an indirect way right so hopefully that will uh is one step towards my vision of being a royal society or national academy of science in the us and have a voice in policy making in singapore now for scientists to have that now we are still not there yet that's just the first step and i have left the scene but i'm hoping

and this is something i'm trying to communicate to future young leaders that science science should scientists should be involved in policy making and we shouldn't just leave it to the economics and engineer apologies to you max so i hope the future of singapore is will be get better i don't know how things will turn up we have laid we have laid the foundation um it depends on the future leaders to take over i may not see a fruition but maybe uh we can change the mindset so so that's all i have to say this is fantastic yeah this is really fantastic

why but but please do not be careful i'm telling you a lot of stories from a personal account of course but but uh do not write it because uh these are all personal and a lot of people don't understand this we will not first uh uh my question uh with what you just said is uh what about the working with the lee kuan yew school of public policy which is defined to be a a an institute for public policy but probably not in size no yes um that is a very good idea i know keyshaw very well he was the first name um the second in use houston choir i think from lse i would not also know him very well um um they are very economic oriented of course yes and they're not scientists so so um the people in the lky school

i don't think i will currently find anyone that will support me um but but if they if i could i would love to work with them so so thank you for the really deep deep specific insights i think that's very helpful for us to understand kind of what's going on from perspective for your understanding not for writing right so i'm going to try to generalize it and paraphrase it in a way that hopefully both align with what you're saying but also convey kind of the the some of the points but i don't think it's going to be perfect so from my understanding as a listener listening to what you said and seeing the transformation of the us what i see is in the past in the beginning the u.s or su was basically part of moe it was nrmoe it was part of the government and can i correct that can i correct that right in nus corporatized in 2006. right so um we went through a process whereby we are private company right i i went through that process because i was dean from b being a stat board under the moe like you described to having an independent board of governors as probably georgetown they have told you so things have changed okay so so what i was saying is that before that the u.s was kind of under moe and the u.s become this almost autonomous body where scientist now manages its own campus you decide your own promotion you decide your own talents and as a next stage what you're hoping is scientists kind of go beyond university campus and be part of the society's policy making for the next generation that's kind of like the next phase you're trying to get into by the way but i i do not know how many people share that because i might be a lone person because i think the majority of scientists in singapore are not interested in policy because of the environment they grew up in unless they went to the overseas and understood the situation the problem isn't just singapore look at what we have in the united states yeah but uh but you have people who are involved in policy and they are like steve chu i that's amazing i mean you have a nobel laureate in obama's government that would never happen in singapore that's right that's right that's right yeah well we also have a new lane i don't know whether you know him uh he no i don't he was a science advisor he's a physicist uh he's a science advisor for clinton all right but i i i don't know why does i know but i don't have anyone but biden has some i know trump doesn't have yes biden does have someone uh who came from university of oklahoma i don't know i don't remember his name do you remember like i think we were discussing this with tony chan a few

uh yeah well that a top chinese rocket scientist later you know became the governor of guangdong and now it's actually become the the party secretary for xinjiang yeah himself was the commissioner for that's right the new xinjiang uh party secretary uh was the defect of china's nasa head right he's a nice fellow and a rocket scientist and he's also a member of the china's chinese academy academy does that happen often in singapore that kind of no it has never happened no no scientist has really made but am i allowed to ask you questions sure of course yes okay um because i'm fully aware of the u.s china situation right and and china basically is supplying a lot of talent to the us right and of course some of them go back and many stay and become u.s citizens or canadian citizens like you so where do you see this going ah i think that in the next decade or two

actually it's already happening because of the situation in the united states i think the number of people returning to china is increasing rather rapidly at the moment yeah yeah that is bound to happen because it is not very friendly at the moment uh and people people don't like to live under under scrutiny by the department yes i've been reading about child labor and all the other things that's right that's right so i think that that's going to happen uh and basically america is shooting itself in the foot so what will happen well i think that first of all fewer and fewer students will come for graduate studies uh some some don't want to come and some probably wouldn't get visas to come and that's bound to happen and it's happening so what will happen to us universities well in the u.s universities will maintain its current strength uh for the foreseeable future because i think the rest you know places like harvard or mit or yale the best people in the world want to come yeah see they can look for trip that's right for the three quarters of the world even the best from singapore that's right i'm gonna ask you a question if the best student in singapore got admitted to mit and nus which one will he or she choose okay the answer would be obvious in my time and of course until recently uh it's mit it's obvious today there are there are it's difficult because of other reasons including including kovitz right so that that is

yeah i would say that nus would give mit a good run for their money i mean you have read about the nus college and we are trying to transform ourselves right and these days when i recommend students i tell them they want to go to cambridge uh mit i tell them uh sure alright reference but consider nus as well because some of our labs i've been to these places are better than me that's right yeah so so you understand we are in this transition but perception is reality yes yes you're right fortunately yes yeah also sorry go ahead andrew no no i i think reputation will carry itself for one more generation i think that's right that's right and also it depends on if you look at this question from outside of singapore within singapore if you are let's say a chinese students or asean students not singapore you look at mit you look at the us they're both top global universities that's quite hard to get in but if you are a singapore citizen just looking at the statistics the the acceptance rate for a us happens to be much higher than mit because the us has the responsibility to cultivate local talents they just hire more local talents they bring maybe this is an unfair comparison because mit takes the top 0.1 and u.s takes 10 percent of singapore population so the difference is that any us is a it's it's um it's a uh what do i say um has many ability groups within so uh nus tries to create a few pockets of excellence like nus college where we attract top students but the whole university itself is it gets government ground because we are educating singaporeans for the singaporean workforce mit cambridge

educate the world so it's not a fair comparison that's right absolutely yeah and because of that uh i think the students nowadays know this so um mit cambridge harvard and all will always be attractive nus is an option but will never be there well never maybe too strong but it will be a long time before it happens well it's a small singapore will always be small yeah i i yeah i have another meeting i'm late for okay well uh i think so much thank you so much for your time thank you if we have more questions i'll just email you yes and can i uh make a request of course can i have a look at the draw absolutely whatever absolutely i was just going to say that thank you what we have written and uh take out what you think is inappropriate and also just to confirm you want to remain anonymous in the article is that correct yes i want to remain anonymous because uh i i think it's it's not good for me to okay okay that's fine yeah yeah but but uh certain people will know this but only the people in the know but as far as the media is concerned i'll remain enormous i'm just an ordinary nus faculty member from yeah yeah okay thank you very much thank you thank you and uh all the best yeah thank you happy new year yes be healthy and safe everyone bye