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When Musk cashed in his chips at PayPal in 2002, he invested nearly every cent of it, with \$100 million going to SpaceX and \$70 million to Telsa. A huge risk at the time, it has paid off in the most spectacular way – proof of the man's single-minded determination to secure his vision and legacy, even if it comes at the expense of everyone else

STORY JAMIE KITMAN
TYPOGRAPHY ANTHONY BURRILL

HE MAN HAS HIS DETRACTORS. Unsurprising, too, for disliking one of the world's most famous persons, Elon Musk, is not that hard to do. Particularly, it seems, for executives of competing automobile companies. Occupying various points along the grand boulevard of human bitterness, they find themselves irked, appalled and, perhaps as much as anything, jealous of Musk and Tesla, the electric car company he built. Not least because the stock market values Tesla more generously than the world's six largest car companies combined, despite comparatively modest sales and a near complete lack of operating profit over its thirteen years of existence. You bet his competitors are steamed.

Their enmity extends to the 50-year-old South African-born Musk himself, one of the 21st century's great showmen and a world-class egoist. It seems that eccentric billionaires and their billions really do drive many buttoned-down, mere millionaires crazy, particularly when the object of their ire has succeeded where they have failed. For example, depending on the day and the closing price of Tesla's valuable yet always volatile shares - buffeted on the regular by the CEO's signature tweets and public remarks, cryptic to incendiary to facetious and back again - the maverick carmaker still hovers near the very top of the list the world's wealthiest individuals, the ranking a trophy of capitalist overachievement that less well-compensated captains of industry can't help coveting. Nor will the resentment abate anytime soon. Because all angst, frustration and carping aside, this much has become clear: the time for dismissing Elon Musk as a flash in the pan has passed.

ELON MUSK DOESN'T CARE IF YOU LIKE HIM. If anything, indifference to his critics, no matter how justified the criticism, is a key feature of the outsized financial success and the all-encompassing,

multi-platformed fame that only a platinum-tipped narcissist, with the help of the interconnected technologies and militant troll armies of the 21st century, could create and sustain. A huckster, a fabulist and yet an undeniable visionary, he stands, we can say now, with other noted surfers on history's great technological waves – from Alexander Graham Bell to Thomas Edison to Steve Jobs. Always sure he's right and frequently deemed an asshole for it, he is to popular culture what a Bob Dylan or John Lennon once were – a voluble, bona fide rock star, minus the tunes.

But alongside these legendary human analogs, there's a larger truth lurking – as much as any man alive, Musk truly has changed the face of the automotive world, arguably like no one since another industrial giant, Henry Ford. He's done it with a product of more revolutionary dimension than the Model T, Ford's breakthrough, and a global cult of personality that old Henry – the internationally lauded father of mass production and, one hundred years ago, the man widely imagined to be the living examplar of all human progress – couldn't have imagined in his wildest, most paranoid or grandiose dream. And that's before you consider Elon's hugely successful rocket business, Space X.

For better or worse, Musk has come to stand in the popular imagination for the future and how it should look. He is a maker of often astonishingly good cars, among other things. But unlike his established competition, whose shares have languished in the doldrums for decades no matter how successful their businesses might be, he has been blessed to have gone forth as a creature of California's Silicon Valley, a place where valuations are absurdly high as a matter of course, failure is rife but normal, and the minting of overnight billionaires betting on the future has been defying conventional reason (and driving the heavy industry car guys to distraction) since Elon Musk was in short pants. He has gone forward judged by, and adhering to, a different set of rules than





the old smokestack Joes of Detroit and cast-iron Jurgens of Stuttgart. Which makes them mad and makes him richer.

Edward Niedermeyer, communications director at Partners for Automated Vehicle Education, a non-profit funded by industry and technology players, and author of *Ludicrous: The Unvarnished Story of Tesla Motors*, suggests the shift in relevance from Detroit to Silicon Valley has been central to Musk's success. 'Detroit was not only the economic powerhouse, it had huge cultural impact. It was specifically the place where people showed you what the future was going to be. You had Hollywood, but Silicon Valley has 100 per cent – and without people really realizing it – inherited the role that Detroit used to play in our society.'

Detroit's problem, Niedermeyer proposed in a recent telephone discussion, was that it 'lost that flamboyant, futurist car guy showing us the way the world is going to be through cars thing. That's a deeply embedded element in our culture. We didn't really realize that it had gone missing. But when Musk popped up and started doing it again, it just fit so neatly into the culture. Because it had been there for the longest time.'

Lately, the industry appears to be coming around to acknowledge Musk's historical significance along with its own shortcomings. A senior marketing and sales executive for a global carmaker, who chose not to be identified, conceded as much in a recent telephone call.

'It's unprecedented, really, what [Musk] has accomplished. There have been many automotive startups over the last five or six decades, and a lot of people with great visions and brilliant ideas, but none of them really succeeded as much as Tesla in building a brand from scratch, that today – from a brand value perspective, certainly amongst the established OEMs – is second in the luxury field maybe only to the ones that took 140-plus years to get there, like Mercedes or [latterly] BMW.

'He's also been incredibly successful in shifting the automotive paradigm [to electrification] that many thought was where the industry should be going, but didn't have any idea or mechanism to get there. And he has not only built a great brand in a timeframe that is unlike anything achieved before, he has also single-handedly forced the industry to pivot [to electrification]. Now, we can talk a lot about how he did that, and whether the business that's been built can sustain that rate and that success, but I almost think that's a secondary discussion. We need to look at the here and now and how well he has done up to this point.'

STARING AT A PAIR OF BLACK TESLA-BRANDED TEA mugs in my kitchen cabinet – they arrived unbidden in the mail years ago – I am reminded of a different time in Musk's past, earlier in his erratic but steady and quite intentional march to world domination, when Tesla bothered to send journalists swag. How times have changed. Some months back, Musk shuttered Tesla's press department entirely. Staff couldn't have been too surprised, though: employee departures at Tesla add a new dimension to the term 'brisk,' with 44 per cent of Tesla executives leaving annually, versus American industry's nine per cent turnover average.

Ditching the branded mementos is one thing. But doing away with the in-house press office? A little outside the box, surely. Then again, can you blame him? With 60 million Twitter followers, plus countless journos, market analysts, and so-called influencers hanging on Musk's every word, ready and willing to disseminate the product of the man's limitless appetite for sharing whatever occurs to him in the moment – brilliant, closely reasoned, or decidedly otherwise – why bother with press releases and the people who write them?

The man's unfiltered thought stream today-from his impassioned advocacy of crypto-currencies to his sometimes belief that the pyramids of Egypt were built by extraterrestrials, and then on to his demonstrably overblown and quite likely tortious claims for his vehicles' autonomous capability – effortlessly become tomorrow's headlines and market movers, at no cost. Why pay more? Or, as Donald Trump, a Musk-like figure (albeit a far bigger liar) might say, why pay at all?

All of which begs the question, who is Elon Musk and how'd he do it? While we've long been in the Musk/Tesla agnostic camp in my house – we've seen the good, the bad and the ugly; the incredible, the indifferent and the stunningly misguided – we still can't get these questions out of our thoughts, even as each year more facts hove into view.

So, to better understand the man and what he has and hasn't achieved, we've pored deeply over the historical record and reached out to many who've worked with Musk, inside and outside his company, those who've covered him and those who've competed against him. And while their views vary in degree, they are all certain of this much – there's no one quite like him.

Said one executive with high-level brand experience in Europe and America, 'I've had that question posed to me many times by my board. "Why can't we do what Tesla does?"And I always say, "Because you, Mr. CEO or Mr. Chairman, you are not Elon Musk. The minute you're willing to smoke a joint on a TV show and promise people rides into space, then I can start building you a brand on a shoestring as well." The cult of personality certainly contributed to a large degree to [Tesla's] success.'

Musk's old collaborators and competitors admire him, fear him and, often, despise him. Should they? That's up to them. But, if we're lucky, they'll help

us answer the defining question: to paraphrase Dorothy from *The Wizard of Oz*, is he a good billionaire mad genius or a bad one?

Another thing on which most of those with whom we spoke agreed was that they must remain unidentified. Such is the power of the Musk internet infantry that there is truly 'no upside' – all but one interviewee used those words exactly – for those in the traditional automobile business, or any business, to be seen slagging him in public. Or, for that matter, to be seen praising him either.

Reminding us that our own cancellation by the forces of Musk, who by all accounts truck no dissent whatsoever, must surely be imminent, even if we readily concede he has changed the world and done much good in the process. We were startled, for instance, to read the account of Fred Lambert, a veteran journalist for the electric car website Elektrek, an acknowledged Tesla fan and owner of three of Elon's cars. After writing over 7000 blogs on the company and its products, '95 per cent of them favorable' by his count, Lambert reported that he was nonetheless trolled viciously, even receiving multiple death threats from the Musk fanboy army - or 'Tesla-stans' as they are known - when he had the temerity to correct a pro-Tesla Twitter troll on a matter of fact in a piece reporting on fires in stationary Tesla vehicles. Said a former Tesla employee, 'So, yeah, for me to talk about Tesla publicly is to get death threats.'

For the record, we couldn't even figure out how to get an interview request into the great man. Much as with Trump, to whom he may be fairly compared in the entirely modern nature of his social media pull and demagogic appeal – rooted in the zeal of fact-resistant true believers – Musk's elusive availability (not to be confused with any reticence to speak unbidden or directly to the Tesla faithful) helps to contour the narrative. When you're remaking the world to your own design, message control is Job No. 1 and Musk well knows it.

BUT, FIRST, YES, WHATTA GUY. SUPREME LEADER of the modern electric car movement and Tesla CEO. Captain of the world's most successful space flight company and its second most highly valued venture-backed startup, SpaceX. An irrepressible ideas man, an intuitive master of hype, lauded around the globe, and, in our species' most telling indicator of appreciation, internationally rich.

A Horatio Alger rags to riches story, however, Musk is not. Born to a wealthy South African engineer father and a Canadian fashion model mother, he emigrated from Pretoria to western Canada, and later dropped out of graduate school at Stanford on his second day with no more formal education than a pair of undergraduate degrees (in economics and physics). But his early success in Silicon Valley enabled this bright and energetic

TAKING CREDIT WHERE CREDIT ISN'T DUE

young man to imagine whole new takes on industry and commerce, practically willing them into existence. Lucky, too: he was an early investor in what became PayPal.

These days, if Musk can imagine it, the capital is there for the raising, whether or not he chooses to mine his own private cash mountain. He launches new businesses the way ordinary mortals spit pumpkin seed husks off the porch, sending thousands of Starlink telecommunication satellites into space (1500 so far, with 27,000 promised by 2027) on his own rockets, while proposing complicated and costly networks of 'hyperloop' urban tunnels with his amusingly named start up, The Boring Company. His Neuralink venture will purportedly use brain implants to extend human capabilities - 'a Fitbit for the brain' he called it while in his copious spare time (!) he enthusiastically anticipates life on Mars, which he sees as an essential next step for humanity given we seem determined to trash this planet. Though many of his ideas are ideas and not much more, Musk has, as the world's leading prophet of the future, traction. That these ideas might be someone else's, and that he's got a specific financial interest in many aspects of the future he advocates, doesn't seem to bother too many people too much. Him, neither. If the ideas don't fly, he walks away.

That unshakeable confidence in the certain value of his cranial output, plus his demonstrated myth-

making prowess and intense focus are not atypical of those touched by the Asperger's syndrome he recently claimed – in a comedic monologue performance on *Saturday Night Live* – to have. One former Tesla employee told us: 'He is not so socially adept, [but] I know pretty much everybody that knows him was surprised to hear him say that.' Nevertheless, what Musk has is a rare ability to move markets with a single tweet – often to his own pecuniary advantage – and to establish the terms of global debate, as he all the while runs roughshod over governments, regulators and more established competitors. As the Twitter account he inhabits immodestly has it, he is our reigning 'TechnoKing' and the 'Imperator of Mars.'

Bullied as a child in his telling – for a number of years, and to the point where he was hospitalized after being thrown down some stairs at school – he claims to work 80-120 hours a week as an adult, a good portion of it running Tesla, an organization whose top-down micromanagement by Musk, erratic protocols and non-existent lines of succession would cause conventional industries' board members and their bankers to faint dead away. His busy work schedule – also spread between his many non-automotive ventures, especially the more conventionally managed Space X – would appear to leave him a total of 48 hours in a busy week to eat, sleep, hang with his latest partner, the Canadian songstress Grimes, and raise his seven

children (six by previous marriages). Assuming a suboptimal six hours a day of sleep, that leaves him with a total of six hours a week – less than an hour a day – to, as they say, have a life. Such is the price of genius, and presumably part of what it takes to grow a twelve-figure personal fortune of between \$150 and \$209 billion, a capital accumulation which puts him, for those scoring at home, in the rarefied company of the world's leading certified billionaire weirdos, Amazon's Jeff Bezos and Microsoft's Bill Gates, as well as LMVH's Bernard Arnault.

In his short time on Earth, he's created the world's most valuable car company – as of writing capitalized by the market in the area of \$550 billion, though it's been as high as \$835 billion. All for an enterprise that's selling fewer cars globally than the combined American-market production of Stellantis' flatlining Chrysler and Dodge divisions. By proving the desirability of electric vehicles and making a tonne of money doing so, Musk has upended the auto industry, and, though his final chapters have yet to be written, for that he will likely always be remembered.

BEING REMEMBERED IS ONE THING. SAVING THE world is another. In spite of his success and dramatic impact, many – and not just his competitors – portray Musk in starkly negative terms. They call him a fraud, an egomaniac, an entitled, self-aggrandising, money-obsessed hypocrite who's not

that green at all, a stock market manipulator, a serial liar in way over his swollen head, a big shot riding for a fall and even a murderer, for claiming his cars will drive themselves, when they clearly won't. These charges, our review persuades us, are not without merit, as does the suggestion that he has benefitted hugely from a double standard – the old rules of valuation and regulation simply don't apply to him. And, then, too, what precisely is one to make of a fellow who uses monarchical language and Roman honorifics to describe his own role on Earth?

Here are six points to consider, an anatomy, if you will, of our Techno-King:

1. NOT SO INNOVATIVE

A little-known fact: Elon Musk didn't found Tesla. American entrepreneurs and engineers Martin Eberhard and Marc Tarpenning did in 2003. Musk came in as investor with an initial infusion of a now-piddling-seeming \$6.5 million and he didn't become the CEO until 2008.

But it was Eberhard and Tarpenning, the engineers, who'd first identified a market opportunity for an electric vehicle that appealed to the well-heeled driver with an interest in technology – as a form of social statement and gadgetry one-upmanship with a nod to the environment, while simultaneously raising a giant, double-electric, middle-fingered bird to the notion that one

had to endure penalty-box deprivation in Mother Earth's name. It was they who thought to hatch what became the Lotus Elise-based Tesla Roadster.

Falling out with Musk, both men were gone by 2008 and litigation ensued, with Eberhard suing Musk for libel for constantly omitting his role as one of the company's founders. In an otherwise undisclosed settlement, the two less well-known men's roles were acknowledged by Musk, a concession that still sticks in the Tesla chief's craw, given his capacity for taking credit where credit isn't due. As one former Tesla employee recounted to me with incredulity and undisguised sadness, 'the number of Tesla drivers I meet now who've never heard of Martin Eberhard are astounding but really common. And frankly, they don't care, because they believe in that history where Elon commenced the world, Martin was a failure, and Mark is even less well known.

According to Niedermeyer, Musk has always guarded his role in the Tesla creation story fiercely, blowing up when the first two *New York Times* pieces on the EV startup back in the middle 2000s failed to mention him at all. Leaked emails confirmed that Musk was so furious he threatened to fire the young startup's press agencies and its own PRs. Later, when his name was referenced by the *Times*, but only as a financial backer, it 'didn't satisfy him at all. He thought that was, if anything, even more insulting, because he felt like his contributions on

the product side - which there's controversy around - had been very important.

'Eberhard subsequently said it was the first fight that was not just two engineers or engineering types disagreeing about engineering product decisions. And it's fascinating what brought that about –publicity. That, I think, showed what Musk cares about deep down. If you look at the history of the company, he's made a lot of decisions over the years that really emphasize perception, image, and, in particular, his own heroism. And the heroism piece is interesting, because if you need a hero at a car company, things have already gone horribly wrong.'

For many though, Musk's vision of an electrified future does indeed make him a hero. He certainly has sped the world's movement in that direction. Crucially, however, the Tesla creation story Musk espouses does not dwell on the fact that the company did not create the signature 'skateboard' chassis (a free-standing chassis which houses batteries, electric motors and other electronics, which make it suitable as a platform for different types of EV body configurations at comparatively low cost) that distinguished Tesla's Model S, the successful saloon that followed up on the Elisederived Roadster, and all offerings since. One former executive with high-ranking stints at leading car and tech companies observed that this was Musk's true breakthrough. 'He has done a really good job with one idea, [CONTINUED ON PAGE 52]

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Left: The Crew Dragon capsule, which in 2020 became the first privately owned spacecraft to send astronauts to the ISS Above: Musk celebrates the Dragon's launch The Falcon 9 launching from Cape Canaveral. The rocket is a SpaceX success story, with 126 launches and counting

which was skateboard architecture where there was a lot of skepticism [in the industry] about the safety of the idea. On the other hand, all of the things that he's commercialised, he's never been first in any of them,' the executive said, citing General Motors, its then head of research and development, Larry Burns, and the engineer Chris Borroni-Bird, as the true progenitors of the skateboard.

The key to Musk's success in the EV space, he continued, was successful navigation of world regulatory agencies' side impact pole tests, which, the executive conceded are 'really challenging for a vehicle with an architecture like this, with batteries out to the perimeter, for no matter how strong you make the rocker [sill] cell, you'd still have this risk. And the risk of puncture [from below], when the underbody contacts a manhole cover or something like that,' with fire resulting, is great.

'But he was right and all of the naysayers were wrong. But because he didn't have anyone saying no to him, he could pursue it. And there were firings, and he kept on going. He got that architecture right. And it's had manifold benefits.'

2. NOT SO SAFE

On the other hand, this executive insisted, 'Tesla often talks about how they had the highest rates of U.S. government crash test safety ratings' - Telsa claimed it had a 5.4 star rating from the NHTSA, the National Highway Traffic Safety Administration, when the NHTSA does not award more than five stars - 'and [the government] says, "You can't do that. You can't say that. There's no such calculation." [Tesla] do it anyway. But the primary thing that makes that so, isn't the impact performance. It's the really amazing static stability factor which leads to a very high rollover resistance rating. That's the key thing that gives Tesla the first five-star rating that they have, that [skateboard chassis'] low [center of gravity.] It's really hard to roll one of those cars over and that ended up pulling out the incremental risk.

'Elon is always comparing Teslas to the average car on the road today – one that is 12 years old and has 100,000 miles on it. It's a bogus comparison that people do not call him out on. If you compare a current model year Tesla to any current model year [car of similar size], any car with an internal combustion engine, the Tesla will not have a better safety record. It will not have a better fire record.'

3. NOT SO GREEN

Cars may become greener sooner thanks to Tesla, but things at the company's factory in Fremont, California, are not even as green as the not very stringent laws require. As of this May, the company had received over 33 notices of violation of air



pollution regulation from the Bay Area Air Quality Management District, which alleged violations including emissions beyond Tesla's permit limits, installing and modifying equipment in the absence of permits, failing to conduct required emissions tests, shoddy record keeping and neglecting to report required information to the Air Quality District in a timely fashion.

Many complaints from within the factory related to work speed ups and its hastily erected paint shop, which along with Musk's vociferous anti-union policies, has been the subject of much antagonism among Tesla's 10,000 Fremont employees. Wrote Richard Ortiz, a former worker there, fired wrongly for his organizing efforts, according to the U.S. government's National Labor Relations Board review, 'The Tesla approach, of cracking down on workers who try to organize for better and safer conditions, is a threat to a sustainable future – not a solution. Because there is nothing cleaner, greener, or more sustainable than making sure working families can thrive.'

In May, 2021, the company settled a suit brought by the U.S. Environmental Protection Agency by paying a \$1 million fine for violating air pollution regulations with emissions from the paint shop. Workers in the shop have complained of cut corners that have resulted in fires, along with inadequate cleaning and maintenance. The company has been fined repeatedly for issues pertaining to certification, safety and improper disposal of toxic waste. According to The National Council for Occupational Safety and Health, a workplace safety advocacy group, working at Tesla is among the twelve most dangerous jobs in the U.S., with injuries 31 per cent higher than the industry average and serious injuries 83 per cent greater. And an independent investigation suggested that Tesla hasn't reported all serious injuries suffered in its plants. On top of which, the company has a long history of retaliating against whistleblowers.

In Germany, where the company hopes to open a new giga-factory outside Berlin in 2022, Tesla has also faced criticism from environmentalists over planned deforestation and water usage, and looks likely to run afoul of the country's largest union for seeking to run a non-union shop. Hampered by unforeseen delays, the company's experience erecting the Berlin factory is different than its usual breakneck pace. Its giga-factory in Shanghai, for example, went up in a speedy 11 months. Meanwhile, the German government previously fined Tesla €12 million for failing to take back and recycle batteries as it had pledged.

Peculiarly, for a man who has built his reputation on greening the planet and proposes to build enormously pricey tunnels for high-speed transit, Musk is not an advocate for mass transportation, which is surely the safest, most energy and space

efficient way of moving large numbers of people. As quoted by *Wired*, Musk told a conference on neural information processing in Long Beach, California, 'There is this premise that good things must be somehow painful. I think public transport is painful. It sucks. Why do you want to get on something with a lot of other people, that doesn't start where you want it to start and doesn't end where you want it to end? And it doesn't go all the time. It's a pain in the ass. That's why no one likes it. And there's, like, a bunch of random strangers, one of who might be a serial killer. And so that's why people like individualised transport that goes where you want, when you want.' OK, so maybe we'll be canceling that tunnel order, after all.

Perhaps most mystifying to those who credit Musk as a man of science was his refusal to take the Covid pandemic seriously. Fighting local California officials over a stay-at-home order issued to stem the spread of the virus last year (he even threatened to close the plant and move elsewhere), he chose to violate the order, which he called 'unconstitutional' and called workers back to the factory while the virus still raged, leading to 450 cases of the disease. This Trump-friendly position may have been expedient - as president, The Donald could have made Musk's life very miserable via the many regulatory agencies under whose purview a carmaker falls, but very clearly didn't. And the violation kept the production lines open so projected sales volumes could grow, but, as one competing executive wondered, 'How could a smart-thinking engineer or scientist continue to profess, "No it's not real," when the [country's] excess death rate was completely explained by Covid? It makes no sense.'

4. NOT SO INNOCENT

While leading the charge to automotive electrification will likely be proven a true net positive, there are serious reasons to question Musk's frequent claims that he earnestly hoped to hasten other manufacturers' sojourn out of the fossil fuel desert by licensing Tesla's technology and sharing its best-in-the-business Supercharging network, with its 2700 high-speed charging stations worldwide. The former North American CEO of a major international car company offered this searing indictment:

'One thing I've always found really disgusting about [Tesla's] approach is, they talk about their mission being the electrification of the automotive industry, as if this is really all they want to do, and if they inspire competitors to go faster, "It's great."

'The reality is the pitch went like this. In 2012 or 2013, Tesla would invite automotive CEOs like myself to their plants. They would inquire about our zero-emission vehicle programs. And the pitch,

honestly, word for word, went, "[Name withheld,] why would you spend \$750 million to put a zeroemission vehicle out? We can meet the California Air Resources Board's requirements by selling you credits we've earned selling Tesla EVs. We can sell you credits and we guarantee you that the total cost of the credits you pay us for will be just \$150 million. And so you're saving \$600 million or more." I believe they were saying to not waste our money building these EV and hydrogen platforms, and they had that pitch for every automaker. And some of them decided "That's not crazy." So this was an unintended consequence [of legislation creating the saleable credits.] It was such a well-intentioned idea, "Oh, let's give carmakers the opportunity to earn credits for selling more zero-emission vehicles and then they can trade those credits."

'Well, unfortunately that idea in the hands of a company like Tesla with this Machiavellian streak, they're really looking for monopoly. They weren't looking to get other competitors moving. They wanted this all to themselves. It was a 100 per cent easy play. It made all the sense in the world to create dependencies with other automakers now paying them money for credits instead of investing in this technology on their own. So the credits led to fewer companies investing in EV technology earlier. Everyone's catching up now and has figured this out and said, "Oh, damnit! I screwed that up." FCA being number one – they had to merge with Peugeot [PSA] [forming Stellantis] because of it.'

A former Tesla employee buttressed this analysis by revealing how Musk - who's talked big about sharing Tesla's supercharging network, something even its boosters acknowledge constitutes the company's single greatest competitive advantage - has never shared it with anyone. 'Tesla shut that down every time. There is a really popular story that still exists among the community that Tesla has thrown open the doors and said, "Anyone else that wants to use the supercharger system, come on in, as long as you pay your fair share." And so, therefore, "Shame on every other automaker for not doing that." And yet, I know for sure, because I was in the room for several meetings where other automakers tried, [Tesla] shut down the conversation entirely. Like, the first meeting happened, and I don't know if Tesla imagined that the automakers would walk away and decide otherwise, but at least a couple came back and said, "No, we're really interested in this. Let's keep going." And it was Tesla that ended up putting them off to the point the companies gave up. It was like the other automakers called their bluff and said. "Yes, sure. Let's have that conversation." And Tesla was like, "Oh, wait. We didn't actually want to. We just want to be given credit for wanting to."

According to a recent article on the *Electrek* website, Musk claims [CONTINUED ON PAGE 58]





Above: Trump and Pence in 2020, watching a Falcon 9 launch the first astronauts from US soil since 2011. Previous pages: the Tesla Giga Nevada, which opened in 2016

other automakers are now using Tesla's Supercharger network 'low-key', but he wouldn't confirm which ones, and it may well turn out to be just more talk.

Similarly, despite promises to license its proprietary technologies to other makers looking to expedite their conversion to electric architectures, it hasn't happened. Said one former CEO of a major carmaker, 'It's like, "We're giving away all of our patents and all of our IP." But the asterisk was, "All you need to do is come to us and get a licence." And I have a feeling that's where the friction occurred: they actually were in complete control. But you have to ask, if the technology is so good and they really are just giving it away, why has no one taken them up on this idea? Or has the offer been retracted? You should ask the PR team there to look at that. Oh right, there is no PR team.'

5. NOT SO SINCERE

It seems reasonable that if any other carmaker had attempted some of the things Tesla has tried and gotten away with, they would have been fined, pilloried in the press, hauled before Congress, shut down or jailed. The massive fines (totalling some \$35 billion) and jail terms levied against Volkswagen and some of its executives in its diesel emissions

cheating scandal stand in stark contrast. Many is the government agency that could have waylaid Musk rather than coddling him with kid gloves.

There are exceptions. The aforementioned EPA fines, however small, come to mind. Or the time in August 2018 when Musk infamously tweeted, 'Am considering taking Tesla private at \$420 [a share]. Funding secured.' Tesla shares rose immediately, but it wasn't true, and the U.S. Securities and Exchange Commission sued Tesla for securities fraud, alleging that Musk knew the transaction was uncertain, subject to contingencies and that no deal terms, including price, had ever been disclosed to potential finance partners.

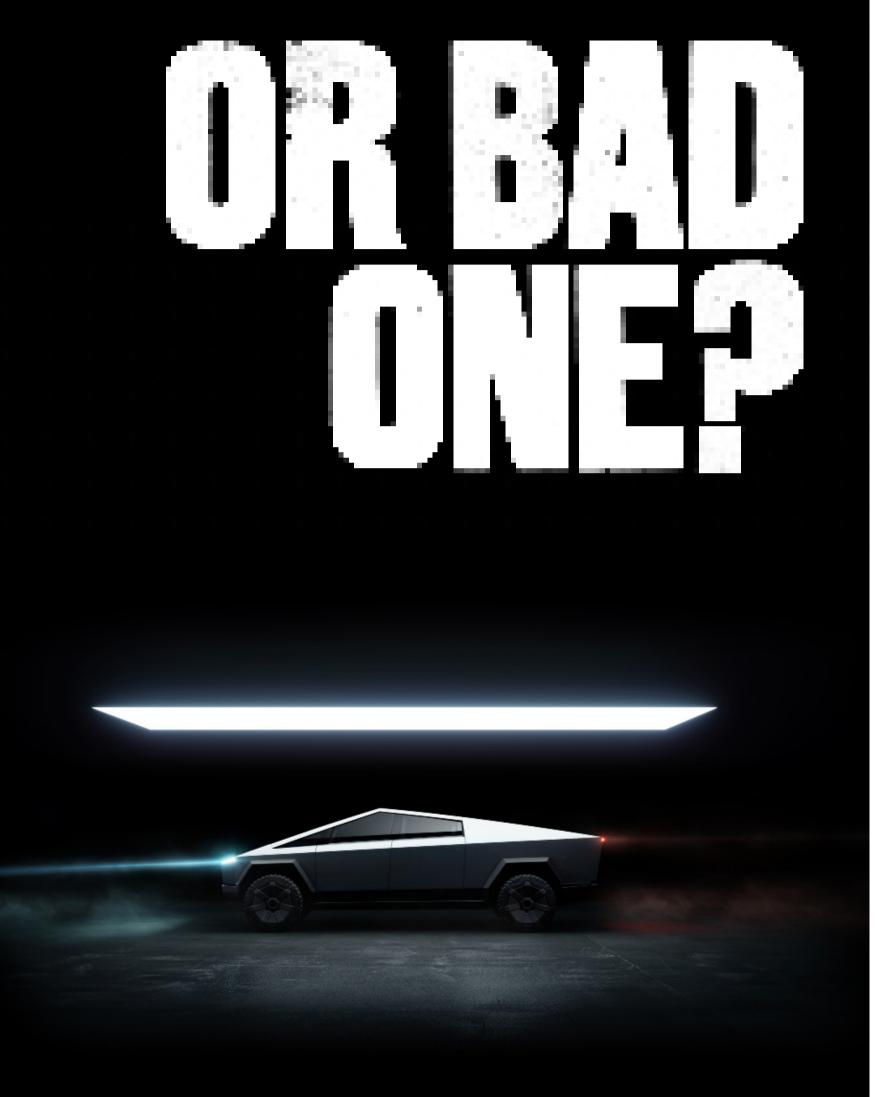
A settlement saw Musk agree to limits on the subject matter of his tweets and, more ominous-sounding, lose his chairmanship for three years, while Musk and Tesla were fined \$20 million each to be paid as restitution to injured shareholders. Yet as far as anyone can see, his primacy in the company, where he remained CEO, and its direction were unchanged. Some months later, the SEC charged him with contempt of court for violating the settlement, and a new set of even stricter limits on his tweet content was agreed, with tweets to be cleared with company lawyers before going out. However, in the event, Musk's emails to employees containing information material to

Tesla's financial prospects – the ostensible purpose of the SEC's tweet governor – have been leaked to the media, effectively serving the same function as the outlawed tweets.

But what of the other agencies that might be more aggressively regulating Tesla and the claims being made for it? Niedermeyer and others see Musk's unique role in the national (and world) consciousness as effectively crippling weak regulatory apparatus, including the United States National Highway Transportation Safety Agency, whose purview includes writing and enforcing federal motor vehicle safety standards.

'They just aren't in any way equipped for Tesla's ability to leverage its unique positioning to evade regulation.' Niedermeyer opined. 'The fact that Tesla don't have dealerships, but have a direct relationship with the customer, has allowed them to pretty rampantly evade things like the TREAD Act [Transportation Recall Enhancement, Accountability and Documentation Act,] and other basic regulatory compliance stuff. A lot of this also goes back to Tesla's most important task: controlling information about the company.' Assiduous use of non-disclosure agreements (NDAs) helped Tesla 'avoid a lot of compliance stuff and negative coverage for years.' For instance, a rash of broken front suspension claims, wherein hubs separated

MAD GENUS...



from Model S control arms owing to prematurely rusted ball joints, saw owners who wished to be partially compensated for the out of warranty repairs forced to sign an NDA that read:

'The Goodwill is being provided to you without any admission of liability or wrongdoing or acceptance of any facts by Tesla, and shall not be treated as or considered evidence of Tesla's liability with respect to any claim or incidents. You agree to keep confidential our provision of the Goodwill, the terms of this agreement and the incidents or claims leading or related to our provision of the Goodwill. In accepting the Goodwill, you hereby release and discharge Tesla and related persons or entities from any and all claims or damages arising out of or in any way connected with any claims or incidents leading or related to our provision of the Goodwill. You further agree that you will not commence, participate or voluntarily aid in any action at law or in equity or any legal proceeding against Tesla or related persons or entities based upon facts related to the claims or incidents leading to or related to this Goodwill.' [emphasis added]

Wrote Niedermeyer, 'This offer, to repair a defective part in exchange for an NDA, is unheard of in the auto industry. More troublingly, it represents a potential assault by Tesla Motors on the right of vehicle owners to report defects to the NHTSA's complaint database, the auto safety regulator's sole means of discovering defects independent of the automakers they regulate.'

In another series of incidents between 2013 and 2016, several Model S cars would suddenly and unexpectedly flash warning signals then stop dead on crowded highways, as clear an NHTSA-regulated recall hazard as there could be. Yet the company launched what amounted to a stealth recall campaign, fixing some cars, but not others, which they remotely diagnosed as having bad high-voltage contactors, but without ever acknowledging that it was a safety related issue such as would have triggered a full NHTSA investigation and a much wider recall. Instead, in letters to owners they'd innocuously suggest what sounded like an upgrade rather than a safety recall.

'Engineering has identified your car as potentially benefitting from a switch and power supply update. The technicians will evaluate your high-voltage system and determine whether it would benefit from having the latest generation power switches installed. If they determine that it would, we will perform the installation.'

Perhaps the subject of greatest controversy among Tesla watchers has been the bold promises made for their Autopilot system, with Musk loudly proclaiming full autonomous driving capability, now or in some near-off over-the-air download. The fact that they call their driver assistance program Autopilot suggests as much, even if it is contradicted

by the fine print in Tesla owner's manuals, the danger being a false sense of security.

Where Cadillac's SuperCruise system has, for instance, numerous warnings demanding an attentive driver, Musk has been selling the public a \$10,000 upgrade for five years as a 'full selfdriving technology.' It has not gone well. So far, Tesla's Autopilot has been implicated in more than 20 deaths around the world, while NHTSA is investigating 20 accidents and four deaths in the US. Privately, the company has told California regulators that driver assistance is needed, while in Germany a court has concluded the company misled the public and has demanded that it refrain from using the phrases 'full potential for autonomous driving' and 'Autopilot inclusive' in its advertising materials there. More recently, China has ordered the recall of 275,000 Model 3 and Model Y cars for reprogramming of their automatic cruise control systems, to prevent automatic activation. Fines and penalties so far? None. For his part, Musk recently offered the observation that 'All input is error,' a sentiment that wouldn't be so creepy if full autonomy wasn't still

America's respected *Consumer Reports*, early Tesla boosters, have withdrawn their recommendation of Tesla vehicles owing to shoddy workmanship and materials as reported by owners, along with extended wait times for repairs and replacement parts.

The respected magazine has also established that Model 3 will drive without anyone in the driver's seat, contrary to Tesla claims. 'In our evaluation, the system not only failed to make sure the driver was paying attention, but it also couldn't tell if there was a driver there at all,' Jake Fisher, *Consumer Report*'s senior director of auto testing, who conducted the experiment, said. 'Tesla is falling behind other automakers like GM and Ford that, on models with advanced driver assist systems, use technology to make sure the driver is looking at the road.'

Fisher found it bewildering that Tesla hasn't adopted more effective driver monitoring. 'They have changed the EV market and made the idea of owning an EV far more attractive than ever before. But they seem to be using their customers as development engineers as they work on self-driving technologies, and they need to do a better job of keeping them safe.'

Perhaps still more ironically, according to a former car company CEO with considerable autonomous engineering experience, Tesla's Autopilot system is itself substandard. 'He's so far over his skis and he keeps doubling down and there is no hope really for his Autopilot solution. No hope at all. The sensing suite that he's using is lame.'

It was also recently reported by the news agency

Reuters that Tesla has dropped radar sensors from its semi-autonomous driving system, choosing to rely on cameras for a vision-only system. Such vision-only systems face challenges when it comes to darkness, sun glare and bad weather conditions generally, let alone things like dirt accumulation obscuring their view.

How bad is it? Niedermeyer noted, 'Tesla's data management system was totally non-transparent until they suddenly changed it in 2018, so nobody knows how many crashes might really have happened. Control of information explains Tesla as a PR phenomenon. It explains a lot of why they have evaded regulatory action. They also used to take cars down to NHTSA and let employees check them out and ride in them.' With the best of intentions, he suggests, they lose their objectivity in the face of Tesla's inescapable coolness.

'There is one other factor that I think must also play into this,' continues Niedermeyer. 'Tesla negotiates with regulators with a gun to its head (either implicitly or explicitly). Because the company has always been in such a precarious position, a single bad story could wipe away billions from its market cap, and in some cases even topple the house of cards. If regulatory action could put an end to this popularly beloved American success story, regulators are forced to ask themselves if they want that blood on their hands. It would kill any hopes of their getting in on the Silicon Valley revolving door, and the perception would be that they had killed Tesla over something that wasn't necessarily worth it. The more you think about this dynamic, the more it makes sense as a factor in keeping Tesla from the consequences of its rampant noncompliance with a wide variety of

Added one Californian who has worked with California's regulatory Air Resources Board, 'There are lots of things here and there that could have – should have – happened with respect to pulling [Musk] up short. But, it's easy to see how they could think, "Hey, we have this cool, successful company everybody wants a piece of based in our own backvard, how much do we want to mess with that?" And in a sense, it's the same perhaps with the federal agencies where you go, "The entire American industry is kind of lost and here you have this bright success story that's doing well in places like China and Europe, and do we really want to kill them?" Especially at a point in time when Tesla is the counterpoint to industry bailouts and [so-called] Government Motors [GM]. And that was what the American auto industry was known for, having to be bailed out after the financial crash. Then, here's Tesla as a counterpoint to that, a company that's innovative, cool, and buzzworthy.' Although, as SpaceX with its government-funded rockets and Tesla with its Doors for the Model S at the Fremont factory, the first car designed and engineered from scratch by Telsa

reliance on government-granted saleable emissions credits suggest, the government has played a starring role in Musk's success story.

6. NOT SO DIFFERENT

Is it telling that two of the richest men on the planet, Musk and Amazon's Jeff Bezos, are engaged in a mortal combat-grade dick waving contest to launch rockets into outer space, one that's been going on for more than 15 years, since when both men were only moderately stupid rich? Musk's SpaceX (launched in 2002) has been the more successful in attracting government investment. 'He's the best rent seeker there is,' according to one industry insider. [Oxford Languages definition: 'the fact or practice of manipulating public policy or economic conditions as a strategy for increasing profits.' But Bezos and his company Blue Origin (launched in 2000, though Musk calls him the 'copycat') recently scored points when he auctioned off the right to accompany him, his brother and one other occupant on a planned 11-minute rocket ride into space, with a three-minute period of unbuckled weightlessness, the winning bid approaching \$30 million including buyers' commission, making for a first of sorts. Virgin Galactic's Richard Branson, a piker compared to these two on the wealth scale and in the outer space business generally, can only hope the pendulum swings back his way after his successfully completed sub-orbital joyride. Here's hoping none of these dreamy billionaires eventually blow themselves up on the launch pad.

SO SPACE IS THE PLACE AND IT'S THE FUTURE, according to Elon Musk, who, a former senior Tesla executive forecasts, may well wind up there. 'I've got to believe that's where he wants to end his days, on Mars. On the bright side, he can't micromanage Tesla if he's living on Mars.' Or can he?

Another former employee sees him as not long for Tesla, 'I think Tesla as a brand sticks around. But I also think it is relatively clear Elon's getting bored. And I'm a little surprised he stuck it out this long. But, I think, the main question around Tesla's success hinges hugely on how long Elon chooses to stay, because the post-Elon Tesla will be very different, at least in the minds of its cult following. And they might move on from that brand if he's no longer associated with it. Especially because he has not cultivated anybody else there as a personality that could smooth that transition. There's a fair amount of speculation [among those who've known him] along the lines that all of the paedophile tweeting [wherein he accused a British diver of being one - although Musk successfully argued in court that he used it as a throwaway pejorative rather than a factual accusation] was very much trying to goad his board into moving him out of the

company. [In such a scenario,] he could be the victim there and not be the one that quit. I don't think that's completely misguided as a notion of what his instinct might be.'

In the meantime, while waiting to go to Mars, Musk's filling nearby space with communications satellites through his Starlink outfit, which has received almost \$1 billion in grant money from the U.S. government in the hope that Musk's orbiting devices will bring internet to the hinterlands. So far, more than 1700 are aloft, travelling on SpaceX's reusable Falcon 9 rockets, with hopes for as many as 30,000 in time. That's a lot of space junk, much of which can be seen from Earth. But, says Musk, Starlink's revenue will help fund his quest to reach Mars. And as Starlink's terms of service note, 'For services provided on Mars, or in transit to Mars via Starship or other colonisation spacecraft, the parties recognize Mars as a free planet and that no Earth-based government has authority or sovereignty over Martian activities.' Right on, so far as it goes, but conspicuously left out is the possible authority of the man who calls himself The Imperator of Mars.

How green is Musk really? A final irony is found in a fellow who recently announced – after years of Bitcoin advocacy, including Tesla's \$1.5 billion investment in the crypto-currency and its loudly vaunted decision to begin accepting it as payment for its cars – a major policy reversal. The auto maker would no longer accept the digital currency in payment, on the grounds, Musk tweeted, that he worried about 'massive use' of coal and other fossil fuels used in the electricity needed to 'mine' bit coins. To which *Bitcoin Magazine* snarkily responded – by tweet, of course – 'Bitcoin Magazine has suspended purchasing any Teslas. We are concerned about the rapid increase in bad arguments... from the company's CEO.'

Recently a YouTube video purportedly made by the hacktivist group Anonymous went after Musk for 'constantly trolling' the markets for crypto, ginning them for his own financial benefit. 'For the past several years you have enjoyed one of the most favorable reputations of anyone in the billionaire class because you tapped into the desire many of us have to live in a world with electric cars and space exploration.' But the speaker, a man in a Guy Fawkes mask with a voice digitally altered, added, 'Recently, people are beginning to see you as another narcissistic rich dude who is desperate for attention.'

One needn't disagree with Musk's sudden awareness of the environmental cost of the mined currency to note the hypocrisy. The energy intensive nature of Bitcoin has long been well known. And as our own Paul Horrell pointed out in a recent WhatsApp exchange, this from a man who champions space tourism, surely not the most environmentally friendly of pursuits.

On the car front, expect ever faster Teslas, including a promised new Tesla Roadster with a co-branded SpaceX package that Musk says will propel it to 60 miles per hour in 1.1 seconds with cold air rocket thrusters, which might not address any real societal need, but would make it the world's most accelerative production car. Not too much environmentally aware about that.

Coming sooner, the new, much ballyhooed and much delayed Tesla Cybertruck. With its aggressively angular origami lines and a stainless steel exo-skeleton to put John DeLorean to shame, it's slated to be built at Tesla's new 'giga-factory' in Austin – to which Texas hipster oasis Musk and Grimes recently decamped – and should arrive within the year. A smaller version, suitable for European roads and other places that don't imagine space for large vehicles is unlimited, has also been mooted. The Cybertruck will surely be fast and, in its most desirable spec, with two or three motors, extended range battery pack options purported to



deliver up to 610 miles, and a retractable solar-collector bed cover and all-wheel-drive, it will be plenty expensive. No matter, the company says it has received more than 500,000 deposits. Very cool tech for the wealthy, undoubtedly, but again perhaps not real save the world stuff.

While the product continues to intrigue, Musk the man has begun to worry some who know him. Said a former Tesla veteran, 'Some years ago, you could look at [Musk's behaviour] and go, "Yeah, yeah, he's a certain Silicon Valley personality but, okay, we get it." Now it's just increasingly unhinged.'

Back to one of our CEOs, who sees something darker. 'The man has not an empathetic bone in his body. He can't imagine that there could be an entity with a mission as important as his. I've never had interactions like this with any human. He didn't seem like a human. He seemed so callous. He seemed like a horrible, horrible creature, like if there were a devil incarnate, he would act like this. All things, I think, associated with the textbook

definition of narcissism, it's what drives him and what plagues him. It's responsible for his success. It's also responsible for all of the unsavoury aspects of his character that the world sees all the time.'

Maybe so, though his mother still loves him, and his ex-wife – who he's married (and divorced) twice – claims she still loves him, too. Then again, if your ex had \$150 billion...

So good mad billionaire or bad one? We must give Elon Musk his due and acknowledge his unparalleled success and his contribution to the electrification of the world's automotive fleet. You don't do what he's done by being stupid, lazy or rich. We must also allow that, like Henry Ford and the other great shapers of industry, his legacy will likely be more often grey than black or white. He may not leave the world a much better place, but he's changed history.

We close with the words of Anohni, the 'spirit name' of a talented artist formerly known as Antony of pop group Antony and the Johnsons, who spoke

to the indie music title *Pitchfork* about non-fungible tokens, or NFTs, which are to art as bitcoin is to money. Because NFT's block-chain existence is also energy intensive, many musicians in an effort to defuse the issue have found themselves tackling environmental themes or donating portions of proceeds from the sale of their sometimes wildly expensive NFT sales to environmental causes. Musk's partner Grimes recently earned \$6 million by auctioning her NFTs, with an undisclosed percentage going to a non-profit dedicated to removing carbon from the atmosphere.

Anohni's not buying it.

'I think it's shit. They won't stop until they have sucked the value out of every remaining shred of organic life and every last gasp of analogue craft or thought, and crammed it into Elon Musk and Grimes' patented space dildo, and headed for Mars to reauthor the future of sentience in their own psychotic and ethically bankrupt likeness.'

That's one way to put it.

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