

# 互联网思维、鲰鱼效应及其它

## Internet Ideas, Catfish Effect and etc.

# —— 特斯拉颠覆汽车行业 —— -- Tesla Subverts Auto Industry --

特斯拉Model是一个逐步迭代和升级的产品，每次迭代和升级一点，积累起来就非常惊艳。ModelS P85D用了非常成熟的Mobileye的解决方案，使智能驾驶成为一个亮点。人们认为，特斯拉所做的无非是传统车企已经成熟的辅助驾驶方案。

但是，由于燃油汽车的发动机在低速状态下启停、刹车及油门控制不够精确，所以大部分车型定速巡航的时速都必须规定在40Km以上。然而，电动汽车的启停非常精准，并且对于善于做电子系统的特斯拉来说，控制一个舒适的启停，并且能精准地在城市车流里跟车、暂停及启动，解决了拥堵路段开车的技术难题。这是非常有价值的事情。

智能驾驶势必在某一天会颠覆传统驾驶。Google在好多年前就已经做出原型机，想自动驾驶一步到位，生产了没有方向盘的无人驾驶汽车。而特斯拉则从自动泊车、自动巡航等迭代和升级逐步做到位。你开车遇到拥堵时，车子可以自己开，你自己可以上网浏览朋友圈。在任何时速下的自动巡航如此舒适惬意，可能是燃油汽车一时间还无法做到的。

现在特斯拉已经在路上，全世界标配这些技术的车很少，并且很少能做得非常舒适。在人们的体验上，特斯拉好过燃油汽车的自动巡航。虽然和特斯拉一样，有一些传统车企也采用相似的方案。但是它们不够互联网化，迭代和升级产品的速度总是太慢、品牌对粉丝的吸引力也不足、而且产品对现状的冲击力更是不够。



Tesla Model is a constant upgrading product. Upgrading gives an impressive innovation.

ModelS P85D adopts a very mature Mobileye solution, making the intelligent driving a bright spot. It is believed that Tesla only would provide an auxiliary driving scheme for the traditional car companies.

However, due to fuel car engines which are not accurate in the start and stop, braking, and throttle control at a low speed, most of the models have their cruise control that must be stipulated at more than 40 km per hour. On the other hand, the start-stop in electric



文/ 凌云 Text/Ling Yun

### 特斯拉拥有互联网思维

全世界主要的电动汽车品牌在美国销售，日产的LEAF大约才35000美金，但是1台特斯拉最低版本也能买2台LEAF。可见是特斯拉品牌支撑起这个价格市场，其他公司在高端市场很难跟特斯拉竞争，即使是宝马的i8，也还暂时难以动摇特斯拉在电动汽车市场的地位。

如果有人对特斯拉车主的地域、职业分布做一个调查，就不难发现它们的用户非常高端、非常新潮。中美两

cars is very accurate. For Tesla which is good at making electronic systems, it is very valuable to provide comfortable and accurate start, stop, pause and other operations.

Intelligent driving will inevitably overturn traditional driving in one day. Google made a prototype in many years ago, and it wanted to make a car that does not need any driver. Tesla adopts a gradual way from automatic parking, automatic cruise to auto driving etc. When you encounter a congestion, the car can drive. During this driving, you can browse the website that give your information from the circle of friends. Under any speed, automatic cruise is so comfortable. This goal may be take a long time for the fuel cars.



国的互联网创业公司CEO，可能是特斯拉保有量最高的人群。这让特斯拉的种子用户非常热衷体验车联网新产品、也非常愿意在社交网络上帮助特斯拉进行口碑传播。这两个特点，让特斯拉在创业早期不用像传统车企那样背上巨额的营销和推广费用。而且任何一个小幅的迭代和升级，都会被活跃的用户们体验并反馈。如果同样的辅助驾车方案，同时交给宝马i3和Model S来使用，迭代和升级的速度永远是后者快过前者。

### 特斯拉掀起鲑鱼效应

很多人都知道阿里巴巴和上汽联合的故事，也有很多人看到乐视入股北汽的故事，这些都太明显了。CarPlay或者Android Auto是迟早有一天会普及的事情，届时标准的统一是一个问题。

真的，干汽车、或电动汽车这一行太难了！难在供应商的寻找和合作，每个乘用车厂商都有自己的CAN协议，没错，每个厂商都有一套自己的CAN协议。在IT如此发达的今天，无法想像汽车行业竟然如此封闭。例如一个汽车的车灯控制器，ESP都不能完全的适配到另外的一个汽车上，因为协议不同，就好像汽车行车电脑在讲中文，而ESP在讲英文一样，中间的适配要浪费大量的金钱时间。

如果是IT行业，要用MTK的方案搞一款手机，很快可以买到开发版，找到你所需要的配件供应商，看说明书，集成硬件，然后开发软件，最后出来一个手机。

但是，汽车行业要是自己写一个协议，然后再一家一家要求供应商达到你的协议。据说某公司开发了一个

Now, Tesla has been on the road. There is a low number of such cars having these technologies which can bring a very comfortable feeling. On experience of automatic cruise, Tesla is better than fuel cars. Some traditional car companies also USES a similar scheme, but they are not much dependent on the Internet. The upgrading speed is too slow, and the brand is not much attractive. Moreover, the impact of the product on the current situation is not enough.

### Tesla has Internet ideas

The world's main electric car brand sales is in the United States. Nissan LEAF only is priced at about 35000USD, but which is 50% of the price for the lowest Tesla Version car. Therefore, Tesla brand can prop up the price and is a champion in the high-end market. Even for the BMW i8, it also is temporarily difficult to shake the status for Tesla in the electric vehicle market.

If someone makes a survey on Tesla car owners' regional and professional distributions, then it is easy to find that their users are very stylish. The CEOs from Internet start-ups in China and the United States may be Tesla's loyal customers. Tesla's seed users are very keen to experience car-networking new products and also very willing to Help Tesla word-of-mouth spread on social network. These two characteristics let Tesla in the early-stage avoid huge marketing and promotion costs. And any minor upgrade will be experienced and commented by active users. The same auxiliary driving scheme may take a longer time to be upgraded by BMW i3, when compared with Model S.

### Tesla's catfish effect

A lot of people know the story of Alibaba and SAIC. There are also a lot of people who hear the story of Leshi buying stakes of BAIC. CarPlay or Android Auto is sooner or later one day to become popular, and then time, unifying is a problem.

Really, it is difficult for fuel or electric car makers to look for suitable providers. Each passenger car manufacturer has its own CAN protocol. Today, IT technology develops fast. The different protocols, however, prevent car lamp controllers from being widely

DEMO车，做了一个网关，10台车。这个费用是多少呢？5000万！拜访过一个ESP供应商，告知费用是600万起。这仅仅是一个零部件。

自己做一个？更没门。须知ESP全球只有6家公司有资格生产，获得相关的安全认证，你自己做的东西要过这些标准，没有很多钱，并且耗费大量时间，是绝对不能上路行使的。

这不会是一个永久的状态，汽车行业正在意识到这个问题。包括通用正在努力地开放自己的协议，很多公司都希望让整个行业变得更透明。所以，Musk宣布开放自己所有的专利，这在任何一个传统车企都是异端。让更多的人加入这场游戏，这样的行为势必引起“鲶鱼效应”。

人们每天都在讨论用户、讨论知识产权、讨论安全。但是在漫长的讨论中，成千上万的人因为疲劳驾驶在车祸中丧生，产业十年如一日止步不前。汽车的安全问题，如同金融行业刚刚接触互联网时一样，银行也出现过银行卡被偷的问题，后来才有了U盾，手机银行。安全问题永远是存在的，但是道高一尺、魔高一丈，是永远存在的博弈，我们不能因为安全问题，就让汽车行业永远停留在现在那么原始的阶段。

## 特斯拉颠覆汽车产业

现在ElonMusk已经成为行业里面的标杆人物，能超过他的可能只有乔布斯。但是，在特斯拉的故事中，创始人其实并不是马斯克。当年做出第一台EV1的工程师艾尔-科科尼（AlCoconi）在美国成立了公司ACPropulsion制造电动汽车，后来资金非常困难，硅谷的工程师马丁-艾伯哈德（MartinEberhard）投资15万美金，艾伯哈德成为特斯拉最初的创始人。

艾伯哈德从ACpropulsion拿到技术许可，用ACP提供的技术制造电动汽车。当然，今天特斯拉已经完全替换掉了原来拿到的技术许可。最初就是硅谷的工程师们，希望用一些现成的技术来制造电动汽车。之后，马斯克是作为投资人加入特斯拉，成为合伙人，进而成为最大的股东。

今天，特斯拉有了很多专利，也有了更多新技术，但是血液里面依然是硅谷的那套Geek的风格和态度。世界需要不一样的声音、内容和汽车。在很多厂商扭扭捏捏地开始做电动汽车的时候，只有特斯拉在这件事情上特别认真。汽车需要更多的马

suitable for different cars, thereby this situation leads to a huge waste in time and money.

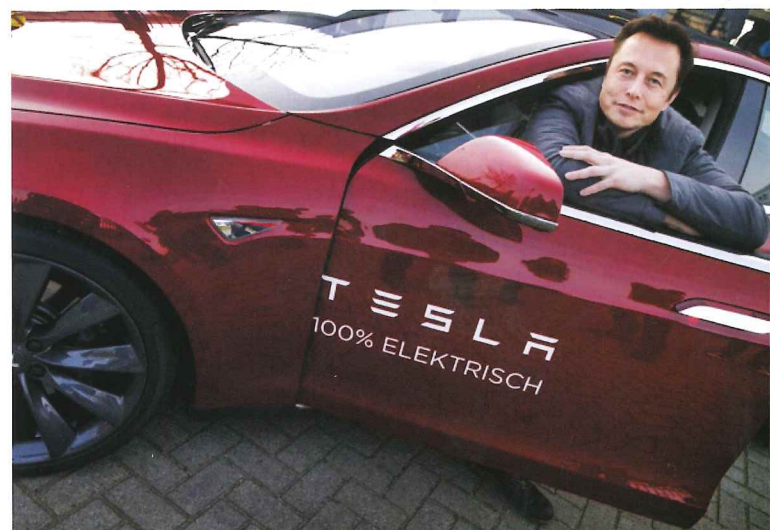
If IT is in the IT industry, to have a phone with MTK solution, can quickly get the development version, find what you need accessories suppliers, see the directions, integrated hardware, and then develop software, finally come out a cell phone.

The auto industry should have its own protocol with which the supplier is required to meet. It is said that a company has developed a DEMO car and a gateway. How much does this cost? 50 million! an ESP supplier visited says this will cost 6 million. It is just a part.

Can you make one by yourself? No way. There are only six companies qualified for ESP global production which can pass the relevant safety certification. It requires a standard, much money, much time and so forth.

This is not a permanent state. The auto industry is aware of the problem. GM is trying to open his own protocol, and many companies hope that this will make the industry more transparent. So, Musk announced to open all his own patents, which he was believed as a heresy by any traditional car companies. Let more people to join the game. This will cause a catfish effect.

Every day, we talked about users, intellectual property rights, and security. But in the long discussion, tens of thousands of people were killed in car accidents due to their fatigue driving. The industry



斯克一样的外行去推动这个行业的进步。

记得柯达在1975年发明了全世界第一台数码相机，但是这台相机竟然成为柯达公司的掘墓人。这家建立于1881年的公司，在数码时代来临的时候，依然留恋于传统胶片市场，拒绝激进的变革，终于在2012年申请破产。

电动车史上，通用是急先锋，1996年12月率先研发初铅酸电车电动汽车EV1，并租赁推广，之后被“谋杀”销毁。2009年的6月1日，1908年创建的通用公司申请破产保护。

通用破产的第二年，2010年6月29号特斯拉在美国上市，成为美国1956年以来首家公开上市的汽车公司。发行价格17美元。如今，特斯拉股价已经突破200美元。

这是汽车产业的宿命，还是特斯拉的颠覆？！

developed slowly in the safety performance in past ten years. The safety of the car is always important. The problem about safety also occurs in in the fields of the banking and Internet. Later, U Shield and mobile banking occur. We should not let the automobile industry stay in the low level due to the safety problem.

### Tesla reverses the auto industry

Now Elon Musk has become the hero in the industry, who likes Jobs. In the story of Tesla, the founder, however, is not really Elon Musk. An engineer who made the first EV1, Al Cocconi set up AC Propulsion Company to manufacture electric motors in the United States. Later he lacked of money. On the other hand, engineer of Silicon Valley Martin Eberhard invested 150000 USD. Thus, Martin Eberhard was the founder of Tesla.

Martin Eberhard got the technical permit from AC Propulsion to manufacture electric cars. Today, of course, tesla has completely replaced the original technical that was licensed. At first, the engineers of Silicon Valley wanted to use some technology to make electric cars. Later, Musk was as an investor to become Tesla's partner, then further became the largest shareholder.

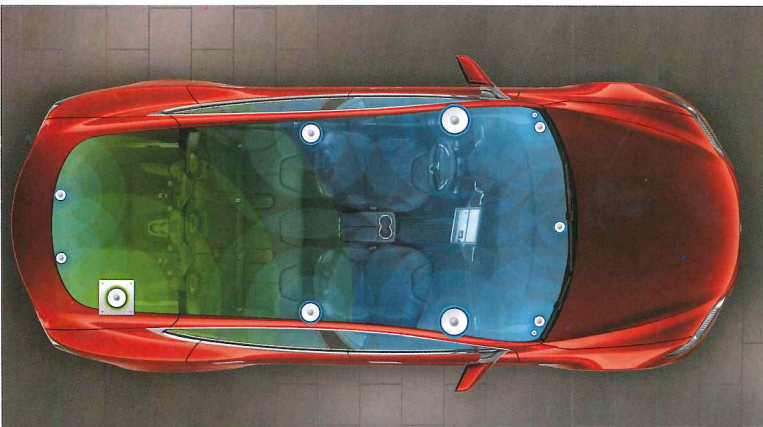
Today, Tesla has a lot of patents and technologies, but in its blood, still a style and attitude of Geek from Silicon Valley. The world needs a different voice, content, and car. Many vendors made electric cars, but only Tesla was particularly serious in this matter. Cars need more amateurs like Musk to push the progress of the industry.

Remember that Kodak invented the world's first digital camera in 1975, but this camera was the destroyer of Kodak. The company was founded in 1881, but in the digital era, it still lingered in the traditional film market and refused the radical change. Finally, it filed for bankruptcy in 2012.

In the history of electric vehicles, GM is a vanguard. In December 1996, It took the lead in research and development to launch lead-acid traction EV1 electric car. It was leased and promoted in use, and finally destroyed. On June 1, 2009, GM which was founded in 1908 filed for bankruptcy protection.

The next year of its bankruptcy, June 29, 2010 Tesla was listed in America and became the first publicly traded as a car company from 1956. The stock price was 17USD. Today, Tesla's stock price has been more than 200USD.

Is this is the fate of the auto industry or the subversion by Tesla?





文/阿伦 Text/A Lun

## 掀起轮椅革命 Wheelchair Revolution

用四轮驱动的电动轮椅车，能够在传统轮椅难以通行的碎石路、雪路等恶劣路况上行驶，能够攀登7.5厘米的台阶。

该产品的特点：“全方位”前轮是由24个小轮子像串珠一样串成一圈。前后移动时，全方位轮作为一个车轮向前后运动；横向移动时，借助多个小车轮的旋转，轮椅可实现横向移动。

过去，轮椅大都是供伤病残障人士使用，并不是外观拉风的交通工具。如今，扩大为老年人的代步工具。数据显示，美国的电动轮椅市场规模将达到每年40万台。日本该市场的规模虽然只有2万台，但老龄化的加剧有可能带动该市场的扩大。该产品今年秋季在美国和日本上市，价格为95万日元。

这款以黑色和灰色为主色调、有着近未来设计风格的电动交通工具，是总部设在东京都町田市的险企业“WHILL”开发的，充电一次大约可行驶20公里。WHILL的首席技术官福冈宗明表示：“只要兼具精致的设计与功能，轮椅将成为健康人也能使用的交通工具，催生出前所未有的市场。”

开发这台轮椅的是曾任职于大型车企和大型精密设备企业的技术人员，他们用了两年多的时间反覆改进。还打算为这款电动轮椅配备自动驾驶功能。这样，在机场和主题公园等场所，就能自动前往目的地。该车正在掀起一场轮椅革命。



The four-wheel electric wheelchair can run in the gravel or snow road and so forth which are difficult for the traditional wheelchairs to run. It also can climb the steps of 7.5 cm. □

The characteristics of the product: The "all-round" front wheel is composed of 24 small wheels like beads strung into a circle. Moving to and fro, the omni-directional wheel acts as a wheel. In the lateral movement, it can rotate with the aid of multiple small wheels. □

In the past, the wheelchair was mostly used for the persons with disability rather than a trendsetter transportation means. Now, it can be used by the elder people. In the United States, according to the data, the market scale will reach 400 thousand electric wheelchairs a year. Although Japan has a scale of only 20000 wheelchairs, the aging of the population is likely to drive the market expanding. The product was listed in the United States and Japan this fall with the price of 950000 yen.

The product is dominated by the black and gray colors. It is an electric vehicle, and developed by WHILL as a company whose headquarter is Tokyo. After a charge, it can drive about 20 kilometers. WHILL's Fukuoka chief technology officer said, "As long as with the delicate design and function, the wheelchair will become a traffic tool for healthy people, creating the unprecedented market."

Developers of the wheelchair are technicians previously serving in large car companies. They spent more than two years for constant improvement. They also intend to let the electric wheelchair be equipped with automatic driving function. In this way, at the airport and theme parks and other places, it can automatically drive. The car is setting off a revolution in the field of the wheelchair.





# 电动车问题都触及社会问题

## Electric vehicle issues attack the social problems

文 / 茅于軾 The text/MAO yushi,

【按】近日，著名经济学家茅于軾在“新能源汽车大势·破局”的论坛上提出：解决环境破坏问题有一个重要的方法，就是把社会成本变成私人成本。现整理发表，以飨读者。

### 电动车还不能取代汽油车

电是一种二次能源，它是从别的能源转换过来的。你可以用水能、核能，也可以用再生能、生物质能、风能、太阳能都可以转化成电能，所以用电能是一种比较理想的方式。虽然电能是一种理想方式，但由于蓄电池尚未取得突破性发展，单位体积的储能小、充电时间长和蓄电池价格贵都是眼下无法突破的制约因素。目前电动车还不可能全面取代汽油车。电动机和汽油机同时使用的双能源车对节能减排是个理想的过渡方式。电动车并不等于没有排放，普通电只是把排放从城市转移到了郊区的发电厂。虽然对环境也有好处，但并没有完全解决问题。所以，如果电动车要彻底解决问题，那么就要把电动车的能源来源一次转化成可再生能，用水能、太阳能、风能、生物质能、海洋能等，也可将核能发电用于电动车。由于汽车是流动设备，不可能从接触网取电。高铁是接触网取电，有轨电车、无轨电车都是通过电网取电，而汽车没办法通过电网取电。目前，无线传输电能还十分有限。电动车最合适的应用范围在公交上，因为它的行驶距离不太长，也不怕充电等待，可以更换电池。电动车不可能全面推广，应瞄准公交车市场，在北京很多公交车已使用电动车，部分出租车也在使用。这在某种条件下是很好的选择方案。

【 in 】 recently, the famous economist MAO yushi had put forward the statement on the "new energy vehicles momentum, broken" BBS : there is one important way to solve environmental problem, it is to change the social cost to private cost. Now publishing with readers.

### Electric vehicle is still can not replace gasoline vehicle

Electricity is a kind of secondary energy, it is converted from other energies. You can use water energy, nuclear energy, also renewable energy, biomass energy, wind energy, solar energy to converse into electrical energy, so electricity can be an ideal way. Although electricity is a kind of ideal way, because the battery has not yet achieved breakthrough development, small unit volume of stored energy, long charging time and expensive battery are the constraint reason to breakthrough the situation. Electric vehicle is still cannot fully replace gasoline vehicle at present.

It is an ideal transition way for double energy saving car to reduce emission Using Energy car motor and the gasoline engine at the same time. Electric vehicle is not equal to no emissions, ordinary electricity just move the emission from city to countryside ones. Although is good for the environment, but has not completely solve the problem. So if electric vehicle need to thoroughly solve the problem, then need to transit the electric energy source into renewable energy, water energy, solar energy, wind energy, biomass energy and ocean energy, nuclear power will also be used for electric vehicles.

Because the car is flow equipment, can't charge the electricity from the grid. High railway train is charging electricity from grid, railway trolley, trolley buses are charging electricity form the grid, but the car can't charge electricity from the grid. At present, the wireless transmission power is very limited. The most suitable application range of the electric vehicle is on the bus, because it's driving range is not too long, not afraid of waiting for charging electricity, can change the battery. Electric vehicle may not

## 把社会成本变成私人成本

从经济学的角度，电动车发展要考虑：选择一个方案必须在经济上的合理性。方案的选择，不能使用太多的社会资源，因为社会资源包括劳动资本、土地资源等都是可以用钱量化的，整个社会面临的问题很多，贫困、教育、看病都需要用钱，解决这些问题都有钱的约束，把电动车放在这个体系中来权衡，要看到整个资源的约束情况以及把这些资源搁在什么地方最有效。因此，任何方案的比较，首先要想哪个方案更便宜，这是放在电动车中必须考虑的重要课题。

让全球头疼的环境问题，需要独特的解决方案：把社会成本变成私人成本。

如果个人破坏环境需要交税，政府破坏环境的行为同样需要交税。把社会成本转变成私人成本，人类就会小心地不破坏环境。成本问题是由交换空间表现出来的。买每样东西都要花钱，但成本是由个人承担。开车对环境有影响，这个成本应该加到所有开车的社会人身上。

国内的汽油价格跟欧洲、日本、澳大利亚甚至跟中国香港比，价格都很低。原因就是我们对环境的社会成本没有转化成私人成本，这对保护环境非常不利。



## 电动车问题触及社会问题

电动汽车的补贴政策，必须和技术创新结合起来。对环境有好处的技术政府就要鼓励，给予补贴。蓄电池的根本问题是要解决一个小空间里面蓄储巨大的电能，所以安全问题是关键。研究蓄电池问题、经济问题、安全问题等等电动车的问题，其实都会触及社会问题。先解决什么后解决什么，把有限的钱如何用在关键着力点上，这考验政府的智慧。中国原来是个自行车大国，从环境保护角度讲，应该鼓励大家多骑自行车。对于补贴的方向，北京公交补贴一年几十亿，不如花一点钱研究用什么方式补贴。钱花在什么地方最有效？这是非常有必要的。北京、上海，骑自行车的人越来越少。而荷兰却认准了脚踏车。原因是什么？值得我们探讨。

comprehensive promotion, should focus on the bus market, a lot of buses in Beijing have been using electric buses, also for some part of the taxis. This is a good choice Under these certain conditions.

## Change the social cost into private cost

From the perspective of economics, need to be considered for electric vehicle development: select a solution must reasonable in the economic. Scheme choice, can't use too much social resources, because of social resources including labor capital and land resources can be quantified in terms of money, such as the whole society is facing a lot of problems, poverty, education, and need money to see the doctor, there are lots of money constraints to solve these problems, to be considered the electric vehicle on the system, and need to consider the whole situation for the resource constraints, and where can be the most effective way to put these resources. Any scheme comparison, therefore, the first thing is to think which solution is cheaper, it is the important consideration topic in electric vehicle.

The world's headache environmental problem, need to require unique solutions: Change the social cost into private cost.

If people damage the environment and need to pay tax, while the government also need to pay tax when they damage the environment. Transform social cost into private cost, human will be careful not to damage the environment. Cost problem is shown by the swap space. Everything costs money, but the cost is borne by the individual. Driving impacts on the environment, all the cost should be added to the social drivers.

Domestic gasoline price is lower than the price of Europe, Japan, Australia, and even Hong Kong, China. The reason is that we don't have any social environment costs change into private costs, it is very bad for the environment.

## Electric vehicle problem hit the social problems

Electric vehicle subsidy policy, should be combined with technical innovation. The technology is good for the environment so the government should encourage, and give subsidies. Battery the fundamental problem is to solve the huge energy storage in a small storage space, so the security problem is the key part. Research battery storage problems, economic problems, safety problems and so on electric vehicle problems, that will hit the social problems. Which problem need to be solved first, how to use the limited money to the key part, it is the wisdom test for the government

China turned out to be a bike power country, from environmental protection point of view, everyone should be encouraged to ride a bike. As the subsidy direction, Beijing has subsidized billions on the bus a year, but spend a little money to study the subsidy method. Where does money is the most effective? It is very necessary. Beijing, Shanghai, fewer and fewer people to ride the bicycle. While Dutch had recognized the bicycle. What are the reasons? It is worth us to be discussed

