我们如何窥探未来生活

伦敦V&A博物馆正在举办的“The Future Starts Here”展览，

以探索“正在塑造未来世界的100个项目”为主题，它并不能算是一次关于科技本身的展览，

这些展品的展出目的并不是为了解释它们的功能性。

相反地，人们用它们来观察，科技的发展和进步已经如何影响——并将如何进一步影响我们作为消费者、公民和物种的生活。

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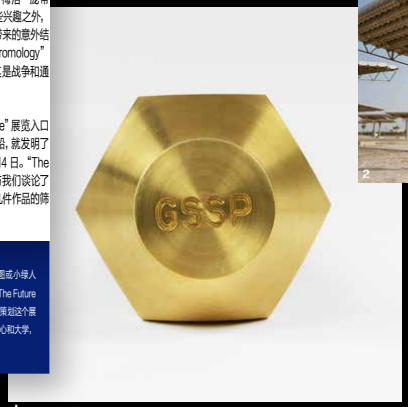
“当你发明轮船，就发明了海难”——法国哲学家及城市专家保罗·维里利奥(Paul Virilio) 在1999 年说过的这句话，强调了科技发明的这一固有本质。每一次重要的科技突破都可能会带来灾难。这位文化理论学家以前常与亨利·马蒂斯(Henri Matisse)一起研究彩色玻璃窗，还会去巴黎大学听莫里斯·梅洛－庞蒂(Maurice Merleau-Ponty)的现象学讲座。除了这些兴趣之外，他还一直非常着迷于研究技术的进步以及技术进步带来的意外结果，还有人与机器之间的关系。维里利奥还发明了“dromology”一词，用来研究“速度”给当时社会带来的影响，尤其是战争和通信方面的影响。

这次在V&A 博物馆举办的“The Future Starts Here”展览入口处，同样以保罗·维里利奥的那句名言“当你发明轮船，就发明了海难”为装饰标语。展览展出时间将持续至今年11 月4 日。“The Future Starts Here”的策展人Mariana Pestana 与我们谈论了保罗·维里利奥的预测是否合理，并且谈及了其中的几件作品的筛选理由。

参观者请注意：如果你想要在这次展览中寻找塔图因星球地图或小绿人即将入侵之证据的话，可能要失望而归了。虽然展览的名字“The Future Starts Here”很有科幻感，但它并不是一次科幻小说探索。为了策划这个展览，该博物馆的策划团队参观了世界各地无数的实验室、研究中心和大学，他们带回了超过100 件物品。



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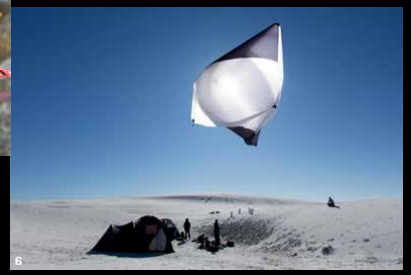
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Anthropocene spike, 标志着人类世的开始 © 伦敦 V&A 博物馆

2
Masdar City, 世界上第一个低碳零废物城市 © Etienne Malapert, The City of Possibilities, Ecal

3
DNA 测试实验室 Bento Labs 的项目 © Bento Bioworks

4
Luchtsingel, 鹿特丹公民聚集的人行天桥 © ZUS

5
身体代码影片片段 © E.O.Wilson Biodiversity Foundation

6
艺术家 Tomas Saraceno 认为，除了上天入地，人类还可以在半空生活 © Photography by Studio Tomás Saraceno, 2015

和 Mariana Pestana 的对话

周末画报

未来常与科学联系在一起。有趣的是，在V&A 博物馆，你们把DNA 看作一种设计材料来探索。其中有个名为《Radical Love》的展出项目，艺术家Heather Dewey Hagborg 为其重新绘制了一幅前美国士兵Bradley Manning 的画像——Manning 曾在2010 年向维基解密(WikiLeaks) 泄漏了机密信息。因为Manning 在军事法庭监禁受审，而且当时他正在接受变性手术并改名Chelsea Manning，所以坊间没有她的任何照片。为了配合Hagborg，Manning 把用过的指甲剪和唾液拭子寄给了他，然后Hagborg 用这些提取出她的DNA，并设计了两幅3D 画像——一幅是男性，一幅是女性。如今，任何人都可以通过基因测试来了解自己的种族背景或潜在健康威胁，你觉得，DNA 测序的民主化发展会有多大的危险性？

Mariana Pestana

DNA 测序是一种解释DNA 样本信息的科学。Heather 在此基础上更迈进了一步，她使用表型技术(phenotyping techniques) 来预测出面部特征，比如蓝眼睛或是棕色头发。在之前名为《Stranger Visions》的作品中，她从陌生人那里收来了用过的烟头和口香糖，用同样的技术描绘出了3D 肖像。这种创作形式，可能更多是一种令人不安的对社会的注解，而不是一种科学冒险行为。不过，它也给另一些项目带来了灵感，比如Parabon 的“Snapshot”，就是根据犯罪现场发现的DNA 创作出肖像，然后再把这些肖像卖给美国警方。事实上，离开了实验室受控制环境的DNA 操作是很有问题的，因为人们都把这看作是一种可靠的工具，但实际上，表型技术的基础也只是一种可能性概率而已。

周末画报

之所以说它有问题，因为它只是基于概率所以不准确，还是因为有朝一日它也可能变得非常准确进而不给其他概率留有任何空间？

Mariana Pestana

向公众灌输误导性信息的做法，永远都应该受到质疑。不过，科学准确性的真正问题在于监控。许多像伦敦这样的城市，都安装了闭路监控摄像头。我们的数据和图像都在不断被记录下来。设想一个这样未来：不论走到哪里，我们的生物数据都可能被采集走，不论是我们去过的地方，还是我们用过的水杯。像Minion Mk1 这样的技术，可以分析偏远地区的水质，或者通过监测感染患者的病毒DNA 突变，来追踪埃博拉病毒的传播。但它也可以在U 盘上就完整整个人类基因测序。从自由和隐私方面来说，这些都是非常敏感的做法。

周末画报

科技也常被用于延长寿命。法国生物技术公司Hemarina 最近因利用海洋虫子研制出一种革命性氧载体而成为媒体报道头条。这一技术将可能挽救数百万人的生命，它可以为中风患者的大脑提供氧气，还能显著提高器官移植的效果。科学的意义是为了延长生命……直到实现永生吗？

Mariana Pestana

永生是人类最古老的幻想之一。当我们为这次展览做研究时，我们遇到了各种各样的研究人员，他们也都是未来学家、技术学家或是超人类学家。让他们能走到一起的是，他们都对永生这个概念非常投入。他们有些人正在致力于创造一种“超人类”身体，还有一些人认为，机器的寿命比我们长，但人类的人性可以变成一个巨大的大脑网络传输到电脑中。这次展览的“末世”这一部分内容，谈到的就是这些问题。

周末画报

展望当代医学以外的领域，人体冷冻实验室可在低温条件下将人冷冻保存，希望以后科学水平能达到的时候可以重新让他们复苏雇来。还有多久才能实现这一愿望？

Mariana Pestana

人体冷冻是一个非常有趣的例子，因为有人，其中也包括许多科学家在内，都愿意被冷冻——即使还根没有出现能够唤醒他们的科技。不过，还有其他的选择：Eternime 这个APP 就是直接受到了热播影视剧《黑镜》的影响。人们可以永久活在这个应用里，它们可以分享预录下来的回忆，通过人工智能开发的数字肖像与未来的世代进行互动。就我个人来说，我认为我们不会永远活着。我们知道如何按照我们的思考方式来做出精准的模型，并利用这些研究来形成机器的思维方式。所以，我们更可能看到的是我们科技副本的诞生，而不是我们人类的永生。

周末画报

那么人类是否就注定要消失？

Mariana Pestana

在这次展览中，我们展出了来自Svalbard Global Institute 的样本，该机构是全世界最大的农作物收藏机构，也是一个“文明的图书馆”，它拥有文明重生所需要的一切东西。所以说，虽然我们没有答案，但我们真的很关心：如何去界定我们人类现在的身份，未来人类身份的意义又是什么。

周末画报

我们尚不清楚这些收藏和档案是为了以后帮助我们重新开始我们所了解的生活，还是只是记录我们曾经的样子……资源的消耗也是未来面对的一大问题。科学家们都认为，我们已经进入了一个由人类行为塑造的新地质时代——上世纪50 年代或60 年代的核试验时期对产生了很大影响。除了拯救地球之外，另一个选择是否就只能抛弃地球，另寻他处生活？

Mariana Pestana

这正是我们想要探讨的另一个难题。我们设置的“If Mars is the answer, what is the question?”这一部分展览内容，讨论的就是人们对于征服火星的痴迷。正如你所言，我们生活在一个气候突变剧烈的时代，许多生物学家和工程师都认为我们可能会因此而面临一次大灭绝。上一次的地球环境巨变，导致了恐龙的灭绝。气候变化很可能会引发新的变化，所以我们必须开始在其他星球寻找资源和生存的可能性。但不过，我们也可能过于自大。我们正处在一个走向未知的十字路口，它既令人兴奋，也可能非常危险，但如果还把我们所有能量都用在保护以前拥有的东西上，已经为时太晚。

周末画报

依赖技术发展带来的结果可能弊大于利，因为我们将因此丧失决策力。谷歌的人工智能研究公司DeepMind 已经证明，人工智能在相对简单的任务上学习能力比人类更强，比如玩Atari 游戏。最终，这些人工智能还会受任去决更复杂的问题，如医疗保健或环境问题。虽然这可能对我们的生活带来积极的影响，但正如无人驾驶汽车Tesla 的创始人Elon Musk 曾经提醒过的，在AI 对人类造成威胁之前，应该对AI 进行监管。我们是否应该就此划出一条伦理界限，或者说，科技进步是否永远都应放在第一位？

Mariana Pestana

这是最难回答的问题。V&A 博物馆之所以有兴趣把这些展品收集到一起，不是因为有支持赞助，而是因为它们能够启发人们提出一系列问题。决定权在于参观者自身，他们可以仔细观察研究这些展品，然后得出他们自己的结论。每一个发现或新突破，都是对未来的一次赌注，所以真正的问题是：“这是我们想去的方向吗？”我们不得不抱持乐观的心态。

周末画报

“不得不”……这是个很悲观的说法，那么我们还能信任(技术的) 进步吗？

Mariana Pestana

这听起来或许有点悲观，但无论未来是多么的不确定，我们都有责任投身于其中。在这次展览中，我们还展出了妇女参政论者戴的一条围巾，上面写着“Vote for Women”。100 年前，这样的想法还非常令人难以置信。但如今，在大部分国家妇女都能参政。所以，尽管我们展出的有些项目可能会变得有危险，但它们当中也有许多都给这个世界带来了不可思议的更好的机会，抓住这些机会得靠我们自己。

周末画报

好的，谢谢分享。我想从太阳能服装到便携式DNA 实验室Beta 模型，再到世界种子银行的精心制作，这些挑选出来展出的物品让我们得以一瞥未来可能会是什么样，在给出答案的同时又提出了更多的问题，这是非常好的讨论。

Modern Weekly
‘The Future Starts Here’ by Maïa Morgensztern

“The invention of the ship was also the invention of the shipwreck”. French philosopher and urbanist Paul Virilio coined the phrase in 1999 to address the inherent nature of technological inventions. With every breakthrough comes its catastrophe. Besides working on stained glass windows with Henri Matisse and attending phenomenology lectures by Maurice Merleau-Ponty at the Sorbonne in Paris, the cultural theorist has always been fascinated by progress and accidents resulting from it, as well as the relationship between humans and machines. Virilio also fathered the term ‘dromology’, to reference the study of the impact of speed - rather than time - on society, mainly in regards to warfare and communication.
It then comes as no surprise that Virilio’s famous quote adorns the entrance wall of the V&A latest exhibition, *The Future Starts Here*, on view until 4 November 2018 in London.

Visitors beware: those looking for a map of Tatooine or proofs of an upcoming invasion by little green men will be disappointed. Despite its name, ‘The Future Starts Here’ is not an exploration of sci-fi fantasies. To curate the show, the museum’s curatorial team visited countless labs, research centres and universities around the world, to bring back a collection of over 100 objects. From already available solar-powered garments, beta models of portable DNA labs, to the elaboration of a world seed bank, the selected projects offer a peek into a possible future, provoking more questions than it answers. We met with Mariana Pestana, curator of *The Future Starts Here*, to gage the validity of Virilio’s premonition.

Maïa Morgensztern: The future is often associated with science. Interestingly, at the V&A you explore DNA as a design material. For one of the projects called ‘Radical Love’, artist Heather Dewey Hagborg reconstituted a portrait of former American soldier Bradley Manning, who famously sent classified information to WikiLeaks in 2010. Because Manning was trialled in the confinement of *court martial* while being in the process of becoming the transgender woman known as Chelsea Manning, there wasn’t any photograph of her available. In collaboration with Hagborg, Manning mailed nail clippings and saliva swabs, which Hagborg used to extract her DNA and design two 3D portraits. One male, one female. Today, anyone can take a genetic test to find out about his or her ethnic background or potential health threats. How dangerous can the democratisation of DNA sequencing be?

Mariana Pestana: DNA sequencing is the science of interpreting information found in a sample of DNA. Heather took a step further and used phenotyping techniques to predict facial features, like blue eyes or brown hair for example. In a previous work called ‘Stranger Visions’ she picked up cigarette butts and chewing gums from strangers and turned them into 3D portraits, using the same process. It was a disturbing commentary on society rather than a scientific venture, but it inspired projects like Parabon’s ‘Snapshot’, which

produces portraits from DNA found at crime scenes and sells them to the American Police. The fact that DNA manipulation left the controlled environment of the lab is really problematic because people perceive it as a reliable tool, when in fact phenotyping is based on probabilities.

MM: Is it a problem because it is based on probabilities so it's not accurate, or because one day it could become so accurate it will no longer leave any space for probability?

MP: Feeding the general public with misleading information is always questionable. But the real issue with scientific accuracy is surveillance. Many cities like London are already filled with CCTV cameras. Our data and image are constantly being recorded. Imagine a future where our biological data can also be taken wherever we go, from the places we visited to the glass from which we drank. Technologies like the MinIon Mk1 can analyse the quality of the water in remote places, or track the spread of the Ebola virus by monitoring mutations in viral DNA taken from infested patients. But it can also sequence a whole human genome on a USB stick. This could be quite sensitive in terms of freedom and privacy.

MM: Technology is also often used to prolong life. French biotechnology company Hemarina has recently made the headlines for developing a revolutionary oxygen carrier using sea worms. This could save millions of lives, from providing oxygen to the brain of people who just suffered a stroke to significantly improving the process of transplanting organs. Is the point of science to extend life... until we become immortal?

MP: Becoming immortal in one of mankind's oldest fantasy. When we were doing research for this exhibition, we came across a wide range of researchers who are also futurists, technologists or transhumanists. What united them is that they were all very invested in this idea of living forever. Some are working on creating 'suprahuman' bodies; others believe that machines will outlive us but that humanity could become a large network of brains uploaded on a computer. The 'afterlife' section of the exhibition raises these questions.

MM: Looking beyond contemporary medicine, cryonic labs offer to preserve people at very low temperature, usually at –196°C, in the hope of resuscitating them when science is able to do so. How close are we from this to happen?

MP: Cryonics is an interesting example because people, among them many scientists, are willing to be frozen even though the technology to revive them doesn't exist yet - far from it. But there are other options: Eternime was directly influenced by the popular TV series Black Mirror. People can live eternally on the app, sharing pre-recorded memories and interacting with future generations through a digital portrait of them developed using AI. Personally, I don't think we will live forever. We know how to make accurate

models of how we think and use that research to inform how machines think. So we are much more likely to witness the birth of our technological counterparts than to live forever.

MM: Is mankind bound to disappear then?

MP: In the exhibition we show samples from the Svalbard Global Institute, the world's biggest collection of crops, as well as the Library of Civilisation, which contains everything a civilisation would need to restart life. So while we do not have the answer, there is a real concern for defining who we are as humans now, and what it will mean in the future.

MM: It's not clear if these archives are meant to help us restart life as we know it, or record what we once were... Depleting resources are also a major concern for the future. While a specific site for the Anthropocene gold spike hasn't been allocated yet, scientists have agreed that we have entered a new geological age shaped by human actions, sometimes in 1950s or 1960s during the first nuclear tests. We are using up the planet's resources and provoking ecological mutations. So instead of saving the Earth, another solution could be to just abandon it and start fresh somewhere else?

MP: That's another difficult topic we wanted to address. We created the section 'If Mars is the answer, what is the question?' to discuss this obsession with colonising Mars. As you said, we live in a time of deep climatic mutations, and many biologists and engineers defend that we will probably face a major extinction because of it. The last major change provoked the extinction of dinosaurs. Climate change will very probably provoke a new one so we have to start looking for other resources and life opportunities on other planets. But maybe we are being too hubristic. We are now at the crossroads between heading towards the unknown, as exciting and dangerous as it might be, and investing our energy in protecting what we have before it is too late.

MM: Relying on the development of technology could do more harm than good though, as we would be forfeiting our power to make decisions. DeepMind, Google's artificial intelligence research company, proved that flexible intelligence can beat humans' capacity to learn relatively simple tasks, like playing an Atari game, in matter of hours. Ultimately, these artificial agents could be tasked to solve more fundamental and complex problems like health care or environmental issues. While this could have a major positive impact on our lives, Elon Musk, founder of the driverless Tesla car, has also warned that AI should be regulated before it becomes a danger for humanity. Should we ever draw an ethical line, or is the advancement of science and technology always a priority?

MP: This is the most difficult question. The V&A was interested in gathering these objects not because it is endorsing them, but because they open a series of questions. It is up to our visitors to engage with them and come up with their own conclusions. Each discovery or breakthrough is a bet on the

future, so the real question is: “is this where we want to go”? We have to be optimistic.

MM: “Have to be”... This is a rather pessimistic comment. Can we believe in progress?

MP: It sounds a bit gloomy, but no matter how uncertain the future is, we have the responsibility to engage with it. In the exhibition we show a scarf from the Suffragette that says, “Vote for Women”. A hundred years ago, this idea was highly implausible. Today it has become the norm in most countries. So while we are showing projects that could become sinister, there are also plenty of other options that open up incredible opportunities to the world. It is up to us to seize them.