

Flanked by hills and quarries in northeastern Jiangxi province, Jingdezhen is famed for its porcelain. The region's rich deposits of kaolinite resulted in exceptional wares sought after by European colonial powers. Kaolinite is useful for another reason: it traps rare-earth elements, which are extracted today for many applications, from oil refining to making smartphones and missileguidance systems. China supplies most of the United States' rare-earths imports—an imbalance that has called attention amid the Sino-US trade dispute.

This historical and geopolitical intersection inspired Zheng Mahler's installation Mountains Of Gold and Silver Are Not As Good As Mountains of Blue And Green (2020). Displayed at Asia Society in Hong Kong, four nondescript, bisque-fired vases one of which broke in transit—accompany nine holographic fans on which 3D-animated images of neon-hued minerals dissolve and mutate into objects including ceramics and packing crates. These spectral items morph again into photographic imagery from protests in Ganzhou, another city in Jiangxi, where the surrounding villages have been contaminated by rare-earth mines; Zheng Mahler's work takes its title from one of the protest slogans. In a robotic voice generated by text-to-speech software, the objects "converse" on the cycles of greed and desire that result in the poisoning of the land.

The convergence of social science and speculative fiction is characteristic of the multidisciplinary, research-based practice of the Hong Kong-based collective, comprising Royce Ng and Daisy Bisenieks. Born in 1983 in Melbourne, the pair met in the city in 2005. Ng was enrolled in a BFA in painting at RMIT University, while Bisenieks was studying anthropology and philosophy at the University of Melbourne. The couple moved to Seoul in 2011, participating in residencies and exhibitions. That year, they joined a residency at Artspace Mite-Ugro in Gwangju, where they presented a towering cat house based on the traditional hanok as a study of local feline-human cohabitation. Bisenieks's interest in multispecies perspectives later prompted her to pursue a master's degree in anthrozoology at the University of Exeter.

In 2013, Zurich's private Johann Jacobs Museum (JJM)—dedicated to global trade and established by coffee magnate Klaus Johann Jacobs—commissioned Zheng Mahler to stage a multipart exhibition on Sino-African economic exchange. The artists' choice of topic was influenced by Bisenieks's prior research on informal economies in Kenya, as well as the significance of the transcontinental relationship to Ng, whose maternal ancestors had migrated from

China to Mozambique in the 19th century. Zheng Mahler's research brought them to Hong Kong, a key node in Sino-African trade routes, and the artists have been based on Lantau, one of the city's outlying islands, ever since. "Through that first long-term project, Zheng Mahler's identity came about," Bisenieks explained when I met the duo. A "sensitive meeting" during their investigation called for a pseudonym. "Zheng" is a distortion of Ng's Chinese name and nods to the Ming-dynasty, Muslim admiral Zheng He, known for his expeditions to Africa, and Ng's family history of being diasporic Chinese in East Africa. "Mahler" is Bisenieks's Latvian great-grandmother's maiden name, which her family believes masked her Jewish identity during World War II. The collective's name alludes to "elements of subterfuge and concealment that revealed themselves throughout our research in global trade and migration."

For their Zurich debut, "A Season in Shell" (2014), Zheng Mahler shadowed a Hong Kong-based Somali businessman for six months, documenting their experiences and the logistics of the abalone trade in a film and a ten-part prose poem penned by Bisenieks. They also decided to "implicate and activate" the gallery by turning it into a stop along the trade route: the artists imported two tons of Berbera abalone shells, which remained on view for the exhibition's run before continuing to a Guangdong facility for separating nacre from shells. "'A Season in Shell' really helped us explore the more sensory dimension of research," Bisenieks stated. "It wasn't just the sight of shells in the space. It was the smell; the touch. People pocketed them. I think that sensory perspective has really guided us since then."

Zheng Mahler completed their JJM commission with the 2016 show "Mutual Aid," named after anarchist thinker Peter Kropotkin's 1902 treatise on cooperation. Now a buzzword in Chinese official discourse on economic ties with Africa, the concept was partly influenced by Kropotkin's visit with an anarchist collective of Swiss watchmakers. Zheng Mahler compared the complex production of watches—one of few European imports to imperial China—to that of China's exported porcelain. The duo came full circle, adding calcium carbonate ground from abalone shells to their ceramic sculptures of enlarged watch parts.

Presented at their first Hong Kong show, at Holy Motors art space, *Deep Water* (2017), a 3D animation imagining the Sham Shui Po neighborhood under the sea, marked an aesthetic shift. Asked about this transition, Ng replied, "The short answer is we had a child." Unable to travel for long periods,

Ng started exploring 3D animation and VR technology. "There's something amazing about world-making with digital images and animation, and being able to do that on a personal computer." Yet, Zheng Mahler are invested in reconciling the immaterial nature of digital with material, sculptural interfaces. "Our engagement with digital media in the last few years is almost anti-media art." Ng pointed to the use of holographic fans in recent works: "There's something viscerally unpleasant about it, industrial-sounding. It's almost a classical Brechtian distancing device so you don't get so seduced by the sensual world of digital forms."

Referencing the historical development of Sham Shui Po ("deep water pier" in Cantonese), which was built partially on reclaimed land, Deep Water traverses labyrinthine streets filled with drifting boulders and sea creatures. This collapsing of multiple real and fictive temporalities is pushed further in Zheng Mahler's commissions for "Phantom Plane, Cyberpunk in the Year of the Future" (2019-20) at Tai Kwun Contemporary. The video installation Nostalgia Machines (2019) conjures a neon-drenched Hong Kong, where people are addicted to simulations of romanticized pasts, while the holographic projection The Master Algorithm (2019) features a cyborg based on an AI newsreader unveiled on Chinese state television in 2018. "Once, the present of Asia was our eternal past. Then it became a vision of our dystopian future," Ng said, detailing how the trope of the "cyberpunk" Asian metropolis is rooted in Western anxieties about the economic and technological might of Japan and China. At the same time, "Shanghai's template for modernizing was Western science fiction, specifically cyberpunk," he notes, referencing Anna Greenspan's 2014 book Shanghai Future: Modernity Remade. "The urban fabric itself is retro-futurist. and someone else's projection of what the future should be. It is the future of another moment, and it will continually eat itself."

Zheng Mahler's new project, slated for a group show at Para Site, returns to Bisenieks's graduate research on Lantau's water buffaloes. The duo plan to create a soundscape that records how the animals and humans "co-construct" the local wetland ecology. Zheng Mahler will also present their projects for JJM and Asia Society in Shanghai in 2021. The artists see the trilogy as a "conversation" that has gained relevance amid the socioeconomic disruptions of the pandemic. "It's all about relationships, not just trade but social relationships, and the values we put on them. Everything is interconnected."

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