ing a practice of appropriation and participation; of participating in processes that otherwise take place behind closed doors.[11] The extraction of the rare element neodymium, which the artists are realizing for the group exhibition "Rare Earth," is (as I know from research carried out as part of the "Times of Waste" project) not rendered industrially since, despite its radioactivity, it's cheaper to dig up rare elements in Mongolia than it is to recycle them.[12] DIY here also means removing things from their historical and technical determinations in a concrete *and* symbolic way.

THE EGO-SHOOTER[13] AND MATERIAL PERSPECTIVE

Even a new computer is a piece of junk. It's not just that it contains tons of residuals, but that it is designed to break quickly, too. This is a medium of devaluation and displacement. Cohen and van Balen also make this quality of new tech visible. Their recent film "Trapped in the Dream of the Other" and installation "Avant Tout, Discipline" (both 2017) are the transmedial realizations of a long-term project on mines/mining that they began, first as a performance, in 2012. The aim was to combine one's own digital life with the extraction of raw materials from the Democratic Republic of Congo and the production of goods in China, so that the real mines become a neocolonial computer game. Chinese fireworks would be fired into the coltan mines of DR Congo via a wireless game controller. (Coltan is the ore from which tantalum is extracted.)

A solid filmic piece of documentation in its own right, the video "Trapped in the Dream of the Other" was shot from the perspective of an "Ego-Shooter" (first-person shooter) – an impression reinforced by jerky movements – as we look into the coltan mine. The labyrinths the camera

travels are the geological faults and paths used by prospectors. This walking, searching, tracking, and tracing within the mountain is accompanied by fire salvos and the clattering of the fireworks, which billow out of the holes like smog. We see young men carrying their filled sacks over the rocky terrain, and we hear a buzzing and crackling, interrupted by the men's voices. Via smartphone or game controller, we are acoustically live-connected to the mine; and indeed these devices are made from the very materials this mine extracts. As the sound acts out the digital connectedness with the remote zone, the camera's movements and its embodied perspective create a sense of distancelessness; the feeling of being in the middle of the rock or in the game. Through these forms of mediation, the mine itself seems to become a protagonist. Cohen and van Balen create an aesthetic of being part of the environment, a specific medial intimacy with the material, and thus they set the stage for the dependencies of the global "(computer) game" in relation to the physical events in the mine.

THE IDIOM OF ART AND NATURAL SCIENCES

Julien Charrière is an artist who also works with the geology of media and its waste economy. In his 2016 exhibition "Into the Hollow" (at Berlin's Dittrich-Schlechtriem gallery), he exhibited his series of rock objects called "Metamorphisms": grey chunks with a fascinatingly vibrant surface full of traces and residues in various colors. Here, we again see electronic scrap being made into stone, as here, too, the future of discarded computers and their mineral past is fused into a strange object that is both nature and technology, past and future, waste and magical object. However, Charrière's work, in contrast to "B/NdAl-

Julian Charrière, „Metamorphism XXXI", 2016

werden. Cohen und van Balen erzeugen hier eine Ästhetik des Teil-Seins der Umwelt, eine spezifisch mediale Intimität mit dem Materiellen, und setzen so die Abhängigkeiten des globalen „(Computer-)Spiels" in ein Verhältnis zum körperlichen Geschehen in der Mine.

DAS IDIOM VON KUNST UND NATURKUNDE

Ebenfalls mit der Geologie der Medien und ihrer Abfallwirtschaft operiert Julien Charrière. „Into the Hollow" hieß 2016 die Ausstellung in der Galerie Dittrich & Schlechtriem, Berlin, in der er seine Serie von Gesteinsobjekten namens „Metamorphism" ausstellte: graue Brocken mit einer faszinierend lebendig erscheinenden Oberfläche voller Spuren und Rückstände in verschiedenen Farben. Auch hier handelt es sich um zu Stein gemachte Abfälle aus Elektroschrott. Und auch hier wird die Zukunft ausrangierter Computer mit ihrer Vergangenheit als Gestein zu einem fremdartigen Objekt verschmolzen, das gleichermaßen Natur und Technik, Vergangenheit und Zukunft,

Abfall und magisches Objekt ist. Im Gegensatz zu „B/NdAlTaAu" wird jedoch weder präzisiert, um welche Elemente es sich im Detail handelt, noch wird recycelt. Vielmehr wird der Schrott mit „Schlacke"[13] zusammengeschmolzen. Diese künstlerische Methode adaptiert industrielle Verfahren der Vermischung und Metamorphose. Vermischungen werden in europäischen Elektroschrottbetrieben oft angewendet, da die Gleichbehandlung aller Materialien allemal kostengünstiger ist, als sie von Hand zu trennen. Aber Vermischung bedeutet auch Entwertung, da sich so qualitativ hochwertiger Stoff kaum zurückgewinnen lässt. Abfall, als das Nutzlose und Entwertete per definitionem, ist so stets das Vermischte. Während die Steine von Cohen und van Balen Assemblagen von Rohstoffen sind, denen zu neuem Materialwert verholfen wurde und die ein weiteres Mal für die Produktion von Computern eingesetzt werden könnten, ist das bei denen aus „Metamorphism", falls überhaupt, nur unter erneuten, nicht benannten Verlusten möglich. Die Steine sind das

TaAu," does not make a point of making visible its component elements. Rather, the work is made from scrap that the artist melts together with iron-oxide "scum."[14] This artistic method adapts industrial mixing and metamorphosis processes. Mixtures are often used by European electronic scrap companies because treating all materials at once can be cheaper than separating them out by hand. But mixing also means there's devaluation, because high-quality materials cannot then be recovered. Waste – being, by definition, useless and devalued – is always a mixture. Whereas Cohen and van Balen's stones are assemblages of raw materials that have been given a new material value and which could be reused for the production of computers, Charrière's pieces foreclose this possibility. His stones are the result of an artistic process that makes them useless and devalued as a material.

But such detailed considerations about the materials' exchange value do not seem to be the motivation for Charrière's "Metamorphism" series. In fact, it was only after corresponding with the gallery about this work that I realized the artist did not produce these metamorphoses himself (as other media had claimed). He instead contracts ThyssenKrupp MillServices & Systems (a global raw materials distributor and industrial processing corporation) to handle for him the enormous masses of rock and high temperatures necessary to produce his work. Unlike Cohen and van Balen's DIY methodology and their related concepts (of participation, transparency, and criticism of the state-of-the-art processes for dealing with e-waste), Charrière embraces industrial production, obscuring the production processes and upgrading the value of his end products by transforming them from industrial materials into art, a tried and true method that art history has certainly embraced before. Meanwhile, the glass vitrines that Charrière employs are reminiscent of (natural history) museum display. This is done without apology or any detectable institutional-critical reflection. One can understand this however (and Cohen and van Balen's pedestals do the same) as a case where the artist is hardly concerned with fetishizing the work of art, but rather is aiming to crystallize the ideological and economic division of fetish and its waste. That said, Charrière's mutation of the geological and material into art relies, all the same, on conventional exhibition display protocol, a trust in the material speaking for itself. With Charrière, the ecological discourse on the geology of media is, here, literally petrified and put behind glass.

"I AM MATTER OUT OF PLACE"

For a third example, consider "Waste Manage-