



HEAVY METAL

EARTH'S MINERALS AND THE FUTURE OF SUSTAINABLE SOCIETIES

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The composition incorporates several repeated rhythmic patterns, which are characteristic of African music in general and, in their timbral-pitch-inflected form, Black South African music in particular. Numerical values related to the chemical properties of platinum, such as isotope numbers, thermal conductivity and electrical resistivity, served as the foundation for generating rhythmically accented patterns, which formed the basis of each timeline. A rhythmic exposition at the composition's outset introduces each of these timelines. The intensity of percussive sounds also mirrors the history of violent struggles associated with mining in South Africa. As the piece progresses, various polyphonic techniques from traditional Indigenous vocal music are incorporated, including antiphony, non-simultaneous entry and ending of multiple voices, parallel harmonization, and melodic imitation and counterpoint. The conductivity motif is channeled through the filter of hexatonic scales predominant in certain mining regions of South Africa. Ultimately, the piece aims to give voice to previously marginalized Black African musical cultures and histories, envisioning a future where such acts of empowerment are not only expressed via artistic abstraction, but also through meaningful change to the material circumstances of those most affected.

Aura Tenebris (Radiant Darkness)

Augusta Read Thomas

Music for me is an embrace of the world, a way to open myself to being alive—in my body, in my sounds and in my mind. I care deeply about musicality, imagination, craft, clarity, dimensionality, and I seek to achieve an elegant balance between material and form, while expressing empathy with the performing musicians and all those who make the performance possible. Collaborating with the Axiom Brass Quintet and the University of British Columbia's Future Minerals Working Group has been one of the most exhilarating experiences of my creative life. I am deeply grateful to everyone who nurtured this relationship.

With *Aura Tenebris*, I have sought to sculpt music that allows our individual and collective work to turn freely in the air. The name of the composition, inspired from the Latin words for radiance (*aura*), gold (*aurum*) and darkness (*tenebrae*), reflects the duality of the element. For thousands of years, the beauty and radiance of gold have captured the human imagination. This element has come to symbolize wealth, privilege and power, and its main use is in decorative jewelry—a luxury for those who can afford it. Yet gold also has a darker side—a story of environmental and social disruption, political corruption and conflict. Its extraction involves the use of poisonous chemicals, including mercury and cyanide, creating significant health impacts and pollution, particularly in the developing world where informal artisanal gold mining is common. And the low concentration of gold in Earth’s crust results in large volumes of waste rock; about twenty metric tons of waste are produced to extract the gold needed for a single wedding ring. And yet, the high value of gold makes all this effort worthwhile, while also fueling violence that disproportionately impacts marginalized communities.

Aura Tenebris is by turns elegant, lyrical, prayerful, contrapuntal, flexible, fluid and buoyant. The composition delicately glows like a golden orb, with its radiant aura. The use of two flugelhorns, instead of trumpets, lends a mellow, dignified darkness to the hue of the music. The notes are generally in the lower register of the brass quintet’s collective ranges and registrations, allowing the musicians ease in sculpting their graceful aura. Organic and concerned with transformations and connections, the carefully sculpted and fashioned musical materials of *Aura Tenebris* are agile and resonant. Their flexibility allows pathways to braid harmonic, rhythmic, timbral, and contrapuntal elements that are constantly transformed, layered, and reverberating with overtly cantabile, melodic resonances and pirouettes.

Although my music is meticulously notated in every detail, I like it to sound as though it was being spontaneously invented; continuously in the act of becoming. I have a vivid sense that the process of the creative journey (rather than a predictable fixed point of arrival) is essential, and I love performances that spiral forth with natural musicality. *Aura Tenebris* unfolds an expressive labyrinth of musical interrelationships

and connections that showcase the five world-class musicians of the Axiom Brass Quintet in a display of rhythmic and timbral dexterity, counterpoint, dynamic and articulative range, precision, and teamwork. Each of the five musicians is featured in several brief soloistic phrases.

Music's eternal quality is its capacity for change, transformation, and renewal. No one composer, musical style, school of thought, technical practice, or historical period can claim a monopoly on music's truths. I believe music feeds our souls. Unbreakable is the power of art to build community. Humanity has worked, and always will work, together to further music's flexible, diverse capacity and innate power. In reflecting the duality of gold through my music, I sought to express a prayer and plea for worldwide equity, seeking economic, environmental and social justice for everyone, and allowing radiance to illuminate the darkest corners of our planet.

Iztacteocuitlatl (Silver)

Roberto Morales-Manzanares

For many centuries, silver held great cultural and economic importance to the Indigenous civilizations of Mexico, including the Aztecs, Mayans and other Mesoamerican cultures. In the Aztec Nahuatl language, which is still spoken today by more than a million Indigenous people in Mexico, the metal is known as *iztacteocuitlatl*, derived from a combination of the words white (*iztac*), power (*teo*) and solar excrement (*cuitlatl*)—quite literally ‘golden poo’. Silver was highly prized for its shiny, reflective qualities, making it popular for crafting ornamental and religious items, as well as decorative jewelry. Indigenous artisans in Mexico developed sophisticated techniques for working with silver, including casting, embossing, engraving and filigree, in which intricate designs are created by weaving fine silver wires together. Silver objects were used in rituals and ceremonies to honor deities or celebrate important events in