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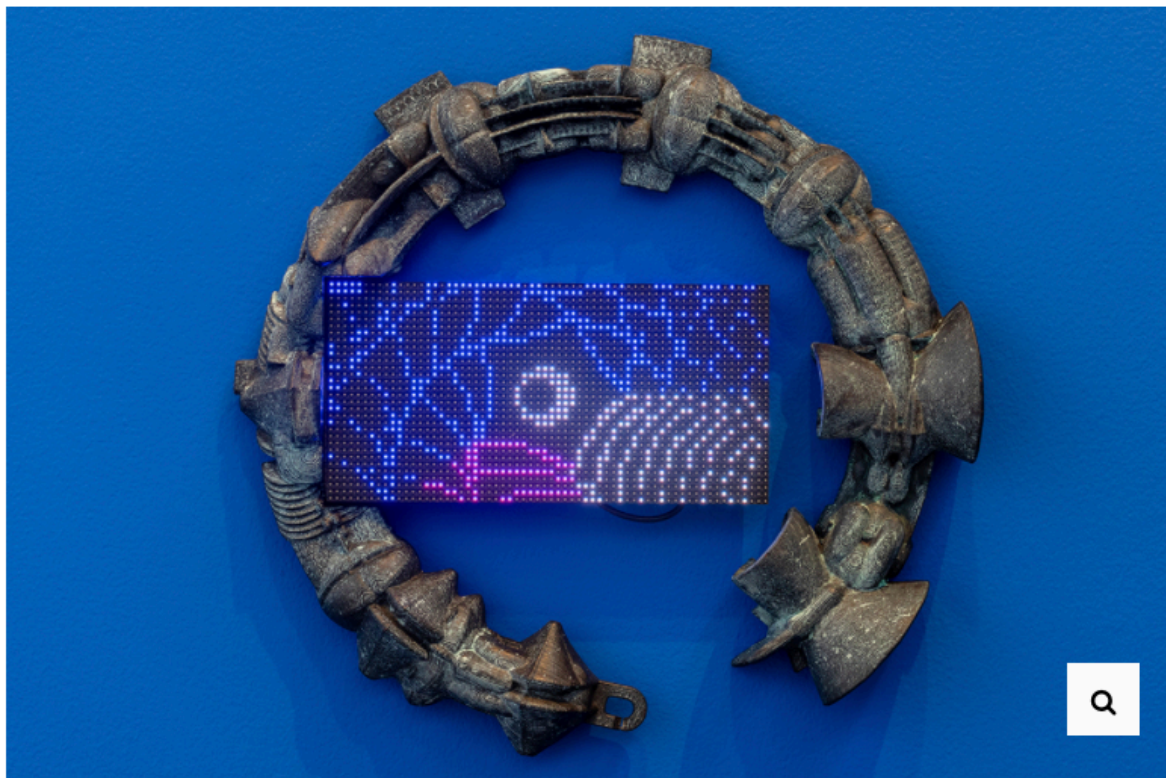
"This AI-powered show turns text into all kinds of art"

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IAIN AKERMAN | CULTURE | JANUARY 18

This AI-powered show turns text into all kinds of art

Samson Young's new installation in Dubai uses computational analysis of an ancient Taoist text to generate mesmerizing sonic and visual art.



ON ONE OF the walls in artist Samson Young's *Reasonable Music* is a small sculpture that reacts to sound. If you clap loud enough, its digital display reveals a single word. If you clap again, it reveals another. There are four words in total: plenty, love, peace, and truth—the same names given to the government ministries in George Orwell's *Nineteen Eighty-Four*. It's a smile-inducing moment in an otherwise meditative artistic experience.

The various components of Young's site-specific installation at Dubai's Jameel Arts Centre have been derived from the "digital distortion" of the *Tao Te Ching*, the foundational text of Taoism. Young, a multidisciplinary artist from Hong Kong with a PhD in music composition, used this text as a blueprint to generate a network of sonic and visual objects—all of which listen to and sense the space around them. The show, which runs until May 7, includes 3D-printed sculptures, animated texts, and ambient sounds, all created using processes like machine learning and AI.

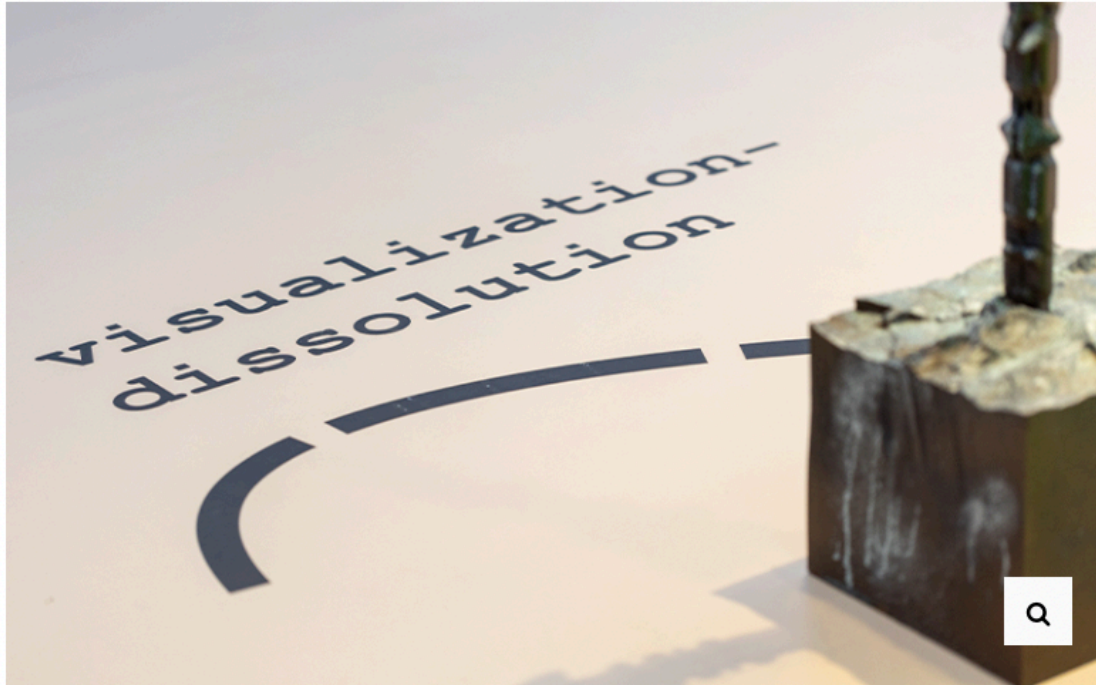
Each networked object has embedded electronic components that enable it to react to both sound and light levels. So, depending on how many people are in the room at any given time, algorithms will begin to generate text or sound differently. "It's very subtle, it's not in your face, but shows that the algorithm is a living thing, in a way," says Lucas Morin, exhibitions curator at Jameel Arts Centre.

For the music, a similar effect was achieved through the application of a generative layer to the installation's soundtrack, explains Young. Written in music programming language Chuck, the generative layer is constantly changing. "Its tempo and the switches between blocks of music are influenced by the noise level of the space, and the structure of the 'filtered' version of the *Tao Te Ching*," says Young.



It's a complex, often mesmerizing experience, with many different processes within the installation happening simultaneously. It's also hugely impressive. To create the sculptures, for example, Young wrote a program in Processing, a coding "sketchbook" designed for the visual arts, that filtered an English translation of the *Tao Te Ching* and removed anything that was not a noun, a verb that functions as a noun, or punctuation. The program then turned the processed text into groups of phonemes (the smallest units of speech that distinguish a word), before a computer modeling framework was used to "transcribe" them into shapes.

“To give myself some guidelines I gave each phoneme a score in ‘openness,’ ‘dryness,’ ‘sharpness,’ and ‘jumpiness,’” explains Young, a self-taught programmer. “There are no hard rules, but, for example, when a sound has a high score in ‘sharpness’ the shape may be more pointy and/or have sharper edges. The program then takes all of the phonemes and turns them into a string of supershapes. These are placed one after another, forming a long pole. This combined shape is then exported as an 3D file.”



On the Easter egg hunt at Reasonable Music; to unlock one, you have to scream.

At this point, Young discovered a bug in the program. Whenever there was a shorter word with fewer phonemes, the supershape at the end of the word-group would repeat several times. “I figured that this bug was caused by the way I tabled the phonemes in the program’s backend, which caused the process to repeat a phoneme-supershape each time there is a blank in the table. Although not by design, this bug’s behavior is consistent, and has its own logic. It produces a visual stutter that gives the text a rhythm, so I left it in.”

The resultant “poles” were then imported into Blender—open-source, free 3D-modeling and animation software—and shaped further, twisted, and given bases for stability by the artist. They were then 3D-printed and painted. Interestingly, system overloads occasionally cause the various components within the installation to reboot, with each transformation resulting in a distortion, or movement away, from the original text’s teachings. “The distortion is an outcome of the process itself,” explains Young. “It began with some sort of logic, which became less and less coherent as the work progressed, as intuition, ‘mis-translations,’ and software bugs come into play.”

Such an installation raises a number of issues, not least the difficulty of curating such tech-based art for a public museum. It also throws up new challenges for curators, including that of simple comprehension and audience engagement. “You just have to accept that as a curator you know less than the artist, which is the case for most art... the artist is the specialist. You just have to be able to have a conversation with them while relying on their expertise,” says Morin of Jameel Arts Centre.

“The challenge for us is to make work that can seem very techie and abstract actually relatable. And I think the angle that Samson really wanted to develop was this relationship to anxiety, which is a very personal and intimate feeling that we all have to struggle with in a certain way. He wanted to make a space that was actually relaxing... You don’t need to understand the algorithm. You can just enjoy the sound experience and the visual experience.”

Young is at relative ease when discussing his own personal anxieties. In an earlier phase of *Reasonable Music*’s development, he had initially been interested in a Hong Kong urban legend related to Taoism. Although the installation no longer references that urban legend, Young did become interested in Taoist thoughts.



Samson Young used AI tools to morph text into shapes.

“The *Tao Te Ching* teaches a pretty unusual sort of way of looking at the world, which I am fascinated by, but am also suspicious of,” says Young, who represented Hong Kong at the 57th Venice Biennale. “At the same time, I did find some features of Taoist thoughts helpful when it comes to self-acceptance and my overall psychological wellbeing. As someone from Hong Kong, I also think that Taoist thoughts actually function as a sort of unconscious and perhaps unexamined mythical structure to the way some of us process the world.”

The more time you spend at the installation the more it reveals, with a handful of playful “Easter eggs” that are unlocked through the performance of certain activities; to activate one, you need to scream for at least 10 seconds.

Elsewhere, three sculptures known as “sandpits” feature tiny text-generating screens. Based on the sand-filled altars commonly used in Taoism, the sculptures are “fed” by books of Hong Kong poetry. These are either by authors that Young is close to, or who have been active politically in the past ten years.

“In the end, the work ended up being about my personal anxieties and psychological problems. I feel like I am going a little crazy being trapped in a sort of ‘prison of the mind,’ barely held together by medications that only maintain a calm visage,” says Young. “But of course, these personal issues were at the very least exacerbated by the increasingly oppressive environment in Hong Kong, and are perhaps even a sort of projection of the political situation there.”