

# SOUND ANIMATION, OR ON THE SINGING STONE

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Peter Kus is a composer, puppet director, manufacturer of original musical instruments and teacher. For a number of years, he has been creating original performances in which he explores the intersections of the fields of music and theatre (more at: <http://peterkus.net>).

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The "Egyptian" statue of Memnon of Thebes near Luxor has an unusual history. It was created by Pharaoh Amenhotep III in the 14<sup>th</sup> century BC as part of a huge temple complex designed for the worshipping of the dead. Of the entire temple, only two large, badly damaged colossi are still surviving today. The important change in their history occurred in 27 BC, when the city of Thebes was hit by an earthquake, which damaged the colossi. The lower part of the colossus standing closer to the north was ripped open when this happened, while the upper part fell off. Shortly after that, at dawn, when the first sunrays shone upon it, this colossus started emitting a strong sound, which happened a few times a month: the Greek historian and geographer Strabo, who visited the place only a few years after the earthquake, described the sound as an acoustic shock, while Pausanias compared it to the sound of the lyre, the striking of brass and whistling. In Roman times, the singing statue became a tourist attraction, which attracted many men of note (the Emperor Hadrian visited it around 130 AD). The sounds emanating from the statue sparked the story that it represents Memnon, the son of Eos, the goddess of the dawn, the hero killed in the Trojan War by Achilles. Legend has it that Zeus restored him to life – but ever only at the instant of dawn, when he could say hello to his mother by way of song.

Today, there exists a scientific explanation for the statue's making of sounds. When the rock in the lower part of the statue cracked, a cavity was created in which, during the

1 Today, so-called *solar thermal organs* work according to a similar principle, collecting the energy of the sun in reflective parabolic mirrors and directing it into the tube in the middle of the construction. In it, the column of air begins oscillating and produces a whistling sound. The field of solar thermal music is called *memnonia*, after Memnon; a short description is found in an article by Michael R. Duffey, "The Vocal Memnon and Solar Thermal Automata", *Leonardo Music Journal (LMJ)* vol. 17, December 2007, pp. 51–54.

2 I am referring to an essay by Mladen Dolar, "Kamen in glas", in Mladen Dolar, *Strel*

*sredi koncerta*, Ljubljana: Cankarjeva založba, 2012, pp. 226–259.

3 Georg Wilhelm Friedrich Hegel, *Hegel's Aesthetics: Lectures on Fine Art*, translated by T. M. Knox, Vol. 1, Oxford: Clarendon Press, 1975, p. 358.

4 Dolar, "Kamen in glas", op. cit., p. 235.

5 Ibid., loc. cit.

6 For more on the links between ancient Chinese music and cosmology, and especially its cultural and political implications, see Erica Fox Brindley, *Music, Cosmology, and the Politics of Harmony in Early China*, Albany: State University of New York Press, 2012. This is the

nights, water gathered as a result of humidity. With the morning sun, the dew started evaporating, while the vapour created harmonic whistling while seeping through the crack.<sup>1</sup> The singing statue's story ended around 200 AD, when the Roman Emperor Septimius Severus had the statue repaired. After that, the stone stopped emitting sounds and grew dumb.

The fascination with the singing stone arises from the perfect opposition between voice and stone.<sup>2</sup> Phrases like *stone-deaf* point to the inability of stone to emit or receive sounds. Stone is a dead, immovable matter, objectivity without a self, an allegory of inanimate, soulless worlds. Voice, on the other hand, is always a sign and proof of life. At the same time, it is merely the shivering of air, it is all in movement, always elusive and transitory. If something is "carved in stone", as we say, it is permanent, while voice disappears as soon as it appears.

What happens when a dead stone starts singing? From among the analyses of Memnon in philosophical discourse and the theory of art (especially in Romanticism), let us ponder Hegel's emphasis in *Aesthetics* that Memnon in itself has no soul that could animate it from the inside; rather, it needs light to elicit sound, while "the human voice, on the other hand, resounds out of one's own feeling and one's own spirit without any external impulse."<sup>3</sup> Sunlight brings out the voice that animates the stone's dead interior and instils in it the germ of reflexivity. "The invisible voice rips the stone open from within, it splits it, and this is the origin of the spirit. This is not only about the sound that is produced, say, when visible things are being rubbed, but also about the voice, that is something that comes from within and whose source remains structurally concealed."<sup>4</sup>

Let us move from here to the field of musical instruments. Among the so-called idiophones (musical instruments that create sound by the instrument as a whole vibrating, without the use of strings, tongue or membranes), there is an instrument called *lithophone* (from Greek *lithos* – stone) made of stones. The original, most primitive lithophones were made of untreated, natural stones, be they stalactites from caves or smaller flat stones that can be found in nature. In India and Southeast Asia (e.g. the Vietnamese *đàn đá*), they were used as early as 2,000 years ago, while in Europe they were known in Iceland and Wales, where they were made of marl. Contemporary lithophones, produced by some manufacturers of musical instruments, are made of hard marble or dolomite, whose sound is crystal clear, and they are precisely tuned to any scale.

In the production of a lithophone (or, for that matter, of any musical instrument), the opposition between stone and voice is repeated in a peculiar manner. The dead materiality

philosophical and cultural background of the play *Izgubljeni ton* [*The Lost Tone*, Lutkovno gledališče Ljubljana, 2010] by the author of this article. It tells the story of a town that has fallen out of tune into disorder. The hero of the story, Mali, is given the task of finding the "lost tone" with which the harmony in town could be restored. On his journey, he gradually realises that the lost tone, to which we can tune ourselves, is silence. More about the play at: <http://peterkus.net/si/projects/ton/>.

7 The examples are drawn from the chapter "Les Dieux sont des chants" by Marius Schneider, in Roland Manuel (ed.), *Histoire de la*

*Musique*, La Pléiade, Paris: Gallimard, 1960, vol. 1, pp. 132–214.

8 Brian Greene, *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory*, New York: W. W. Norton & Company, 2003, p. 144.

9 Here, we are not going to draw a line between "sound" animation (the animation of objects by means of sounds, so that they are used like musical instruments) and the more general animation of objects in the sense of the theatre of objects (*Objekttheater*), for it seems that an analogous process is at work here – with the animation of objects, too, we are dealing with a

certain repetition of an inner voice of a "dead" object.

10 According to Heidegger's celebrated formula "*der Stein ist weltlos, das Tier ist weltarm, der Mensch ist weltbildend*", in Martin Heidegger, *Grundbegriffe der Metaphysik. Welt – Endlichkeit – Einsamkeit*, *Martin Heidegger Gesamtausgabe* 29/30, Frankfurt: Klostermann, 1983, p. 273.

11 See, for example, Anthony Gritten, "Instrumental Technology", in Theodore Gracyk and Andrew Kania (eds.), *The Routledge Companion to Philosophy of Music*, New York: Routledge, p. 188.

of stone (or any other thing), transformed into an instrument, starts playing and singing. This is not about the stone simply emitting any given sound, but rather about its interior, its self and spirit – which make the stone transcend itself – being externalised through sound. This surplus does not occur due to a hidden inner impulse of the stone; rather, an external factor is needed, which brings out the life within it: the light of dawn that triggers Memnon is now replaced by the musician. Similar to the earthquake ripping open the statue of Memnon and making it "speak", the musician who produces a lithophone must "break" the stone and treat it to be able to play it. "The thing 'speaks' only if it is broken, quite literally split; the self literally originates from the slit ..."<sup>5</sup> In this mythical and magical transformation of the stone, we can perceive the procedure of *animation* in its primordial form: the animator instils the soul in dead matter, which comes to life in his hands, starts speaking and generates meaning.

However, does the stone (or any other thing) have the "potential of sound" in itself, as part of its inner nature? Let us briefly engage with two cosmological theories that describe the world using musical metaphors. In ancient Chinese culture, especially during the Han dynasty, it was believed that music in its structure epitomises the celestial order of the world; hence, by studying its principles, we can learn the basic cosmological laws of the world. Audible sounds are the emanation of the basic primary tone (*huangzhong*), the inaudible vibration that the ancient Chinese interpreted as the basis of the entire world (some elements of this system resemble the Pythagorean *harmony of the spheres*). The most important task of the rulers was the tuning of the empire to the basic Tone, which was considered the basic driving force of the world. Without it, life in the empire would come to a halt.<sup>6</sup> In such a cosmology, the world suddenly becomes music and, as such, it can be described in musical terms. The theory of music takes on the role of the philosophy of nature.

Let us add here that there are a great many cases in which music and voice are positioned in the centre of the world. World mythologies are rife with astonishing examples of the world and society being born out of a vocal gesture of the Creator:<sup>7</sup>

- Brahmâ, the supreme God and Creator of the world in Hinduism, denotes a primitive magical force, sacred speech and hymn. Other gods are born out of his mouth with singing.
- In the Vedic tradition, Prajapati, the divine Creator, originates from a "sonorous breath" singing hymns. All divine works are musical, for everything that the gods do is done by a "singing recitation".

- According to the Egyptians and some African tribes, God is "the Great Shouter".

What all these examples have in common is the belief that voice or music has a fundamental cosmological and social function, that they bind and pervade the whole world and society, which is established, lived and reinforced through them.

The intuition that the whole world is vibrating, emitting sounds and can be described as music has acquired various permutations through history and it is still resounding today. Contemporary physics, too, is using a musical metaphor to describe its *superstring theory*, which is meant to explain the basic structure of the world. At the most elementary micro-level, all basic particles and forces reigning in nature are composed of thin, vibrating strings in space. The various ways in which these strings vibrate and their dynamics determine the properties of all particles and all four forces of nature (gravitation, weak nuclear, electromagnetic and strong nuclear). Their vibration is similar to the vibration of musical strings, except that, in this case, the patterns of vibration determine the properties of individual particles instead of tones. The world is the "music of strings", so to speak: "The universe – being composed of an enormous number of these vibrating strings – is similar to a cosmic symphony."<sup>8</sup>

Thus, the animation of objects by means of sound (described as "sound animation" in our title)<sup>9</sup> does not appear simply as the animation of dead things, in which man is the active "constructor" creating the world and the object is an inanimate, soulless, worldly thing<sup>10</sup> that can be set in motion only from without. Our creativity bestows voice on things; however, in a peculiar blend of passivity and activity, the creative act must also listen to things and become an echo of the sound of the things themselves – it must become a repetition of their own inner sound.

When the stone is treated and struck, it starts singing; however, the stone as such already contains sound (in the sense of a vibration). This is a mysterious, empty emission of sound without meaning, similar to the sound of shells – we know they are empty, yet, their sound still gives us the impression that there is something in there and that we should listen to it, follow it. The inner voice needs an external mediator to articulate it; however, in a romantic and nostalgic vision, the musician/ animator, too, searches for the "inner" voice of the stone, with which he can accomplish his "external" created voice.

Here, we can discern the basic division between classical (nowadays mainly industrially produced) instruments and the original musical instruments, which derive from the "animation" of specific materials. An instrument is, above all, an elaborate device for the production of sound.<sup>11</sup> We can see it

12 The musician's relationship to the instrument is more complicated, of course, for the instrument often appears as a fetishised object and, due its own peculiar properties, takes on its own character. Suffice it to mention the famous Stradivari violins or the various stories in which musical instruments acquire anthropomorphic qualities, such as *Der singende Knochen* [The Singing Bone] by the Brothers Grimm.

13 For more information about the plays, see: <http://peterkus.net>.

14 At the same time, the performances are exploring the possibilities of enriching the medium of music and upgrading it with elements used by theatre. Music is not experienced solely in the medium of sound, for the musician, for instance, also expresses himself with numerous gestures, facial expressions and bodily movements, which during a concert performance of music may not be at the forefront. Its visual

image is also an important part of any concert. All these elements become particularly interesting when they are set out in the context of a theatre or puppet performance.



as a soulless technical resource in the hands of the musician, which serves the task of externalising the musician's thoughts and emotions.<sup>12</sup> The very object (the instrument) is hardly relevant in this act; it only serves the function of a tool. We could say that, in the case of a classical instrument, it is the musician who speaks through it, whereas in the case of an original musical instrument (a sonorous object), it is the object that does so. Therefore, the former is played, whereas the latter is animated. We could also say that an animated sonorous object is *spiritualised* through the process of animation, it acquires a soul and, as such, it can be used in the puppet theatre. The original musical instruments thus become puppets.

The author of this text explored the double nature of animated sonorous objects that become puppets in a series of musical puppet plays: *Kralj prisluškuje* [The King Is Eavesdropping, 2007], *Izgubljeni ton* [The Lost Tone, 2010], *Gozd raja!* [The Forest Is Dancing!, 2012] and *Zao-Yin-Siao-Zi Bi-Ba-Bong* [Bang Bang – The Story of a Rattling Boy, translated into Slovenian as *Bum, bum, tresk – povest o ropotajočem dečku*, 2014].<sup>13</sup> The plays are based on the use of original musical instruments as set design elements, props or puppets. They have a double nature, for, in addition to their visual and dramatic expressiveness, they also enable the performance of music. Through animation, they thus become the vehicles of dramatic narration, while their expressiveness extends to the field of music when the animators and musicians play them.

In the performances, sonorous objects or musical instruments are the primary means of expression with which various contents, ideas and visual impressions onstage are translated into sound and the language of music. The result is a blend of music concert and animated performance, that

strives to enhance the traditional puppet theatre and the theatre of objects with *sound animation* or the *animation of sound* (insofar as the musicians in the performance animate not only objects but also sound). While music is usually used in theatre as a secondary element, intended to augment the sensory perception of the stage action (the so-called synesthetic effects), sound and music are the starting points in these performances in terms of content and realisation, and to a certain extent they also subsume the other elements (set design, puppets, text).<sup>14</sup> The aim of these performances is to stage sound events, which are the content basis of action, and to put the spectator in a position in which one "listens [to music] with one's eyes."

### Abstract

The starting point for the author's reflection on sound animation is the Egyptian statue of Memnon, the stone that sang at dawn; at first sight, this appears to be an oxymoron, for stone is an allegory of the inanimate, and yet immortal, while voice is the exact opposite, the fleeting sign of life. This opposition has triggered thinking about the life of stone and about the question of whether stone – not unlike musical instruments – has its own soul or if another life sounds through it. The author touches upon cosmological theories and world mythologies, which describe the world and its origin with musical metaphors, as well as the *superstring theory* in contemporary physics, according to which the vibrations of superstrings determine the properties of particles and forces in nature. Oscillation, then, is an innate property of all things; hence, man is not only a constructor and animator, but must also listen to things and become an echo of their own sounds. In this relationship, the author finds the line separating classical, mainly industrial, instruments from original musical instruments that originate from the "animation" of materials: in the first case, it is the musician who expresses him- or herself, while in the latter case, it is the object that does so; the former instruments are played by musicians, the latter are animated by them. The writer is the author of musical puppet plays in which set design elements, props and puppets enable visual and theatrical expressiveness as well as the performance of music; therefore, his performances are an indivisible blend of puppet animation and music concerts.

### Keywords

Singing stone, classical and original musical instruments, lithophone, sound animation/animation of sound, sound event, voice.

Peter Kus, Ajda Rooss: *Gozdí rojdi/Forest of Songs*, Dječje kazalište Dubrava Zagreb, Glédalište Glej, Zavod Federacija Ljubljana, 2012.  
Foto/Photo: Ivo Hans Avberšek.



Peter Kus, Nebojša Pop Tasić, *Kradj priisluskuje/A King Listens*, Zavod Federacija in/and Cankarjev dom, Ljubljana 2007.  
Foto/Photo: Nada Žgank.

