

ESTHER FERRER & TOM JOHNSON

NÚMEROS, MÚSICAS Y FORMAS

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Opening: Wednesday 26th of September

"Music is a hidden arithmetic exercise of the soul, which does not know that it is counting". – Gottfried Leibniz, *Letter to Christian Goldbach* (1712)



àngels barcelona presents *Números, músicas y formas* (Numbers, music and forms), a unique exhibition that presents works by Esther Ferrer and Tom Johnson, two artists who stand out for their long and fruitful career in the fields of performance and fine arts as well as in musical composition respectively.

We could say that there has always been a long-lasting relationship between mathematics and art. Artists have used mathematics since the fourth century B.C. when the Greek sculptor Polykleitos wrote his *Canon*, and prescribed proportions for the ideal male nude, however is not only in the field of sculpture that we find this ancient proximity between the two subjects. Music is probably the artistic discipline that has most resonated closely in the world of mathematics, since for the Ancient Greeks music was part of mathematics, and the prime numbers are precisely among the most important sequences we can find in them.

This exhibition brings together works that are clear examples of how mathematics serves as the basis for the artistic production of both artists. If music is the art of time, we can also say that through the variations observed in Ferrer's series *The Poem of Prime Numbers* a temporal dynamic has been added to them and, consequently, her works share a common ground with the art of music, which, in the case of Johnson's drawings on cardboard, is exemplified by the measurement of time and frequency, allowing the viewer to discover a clear analogy with geometric patterns and music.

The importance of process, chance, rhythm, iteration, serialization and the perception of time are elements that are clearly manifested in the works of Esther Ferrer and Tom Johnson. As it shows in Ferrer's *Prime Numbers*, or the collaborative installation created by both authors, where the system itself becomes the structure of the work; or, in Johnson's case, in "Automatic music for 6 percussion" (2018) or in "Formula for string quartet" (2018) where the musical composition appears as a descriptive rather than prescriptive grammar of music and where geometric shapes materialize in the lines created through a system of serialization of different notes.

As Esther Ferrer states "Working with the series of prime numbers I have the feeling that they have something to do with the structure of the cosmos, the more you advance in the series, the greater is the distance between them, for me is a bit like the expansion of the universe" ¹, creating a world of abstraction that is common ground with the sphere of music.

In the 21st century, mathematics is seen as the abstract science of form, space, change, numbers, structures and quantity, which seeks new patterns through rigorous deduction, the use of logic and reasoning to solve problems. Therefore, in bringing together the works of these two artists, we emphasize their contemporary relevance as well as their capacity to transcend materiality by its own relational approach to time and change. *Números, músicas y formas* is the result, not only of the close relationship between three disciplines, but also of the collaboration between both authors, whose works are formalized in a minimalist and conceptual way based on their common passion for them.

¹ Interview with Laurence Rassel and Mar Villaespesa published on the catalogue of Esther Ferrer's solo exhibiton "All Variations Are valid, Including This One" which took place at Museo Reina Sofia (Madrid) 26 October, 2017 – 25 February, 2018. P 104.

BIO | Esther Ferrer (San Sebastián, 1937) is a pioneer and one of the leading representatives of performance art in Spain, she began her artistic practice in 1967 with the ZAJ group (formed by artists Walter Marchetti, Ramon Barce and Juan Hidalgo) until its dissolution in 1996, and, since then, she has used performance as her main medium. Performance is the guiding thread of all her work and it represents a moment where time, space and presence intervene simultaneously: "the action consists of leaving the picture, of the two-dimensionality, to enter the space, and use your body as a subject of a simple and direct work". Throughout her long career, Esther Ferrer has participated in numerous performance festivals and has exhibited her work in different museums, both in Spain and abroad (Germany, Italy, Switzerland, France, Denmark, Norway, England, Belgium, Holland, Poland, Slovakia, Czech Republic, Hungary, Bulgaria, United States, Canada, Mexico, Cuba, Brazil, Thailand, Japan, Korea, etc). She has also received several awards: in 1999 she was one of the representatives of Spain at the Venice Biennale; in 2008, she was awarded the National Prize for Plastic Arts in Spain; in 2012 with the Gure Artea Award from the Basque Government, and in 2014 with the MAV Prize (Women in the Visual Arts), the Marie Claire de l'Art Contemporain Prize (France) and the Velázquez Prize for Visual Arts (Spain).

Among her solo shows we highlight *Models and preliminary drawings*, in 2012 at àngels barcelona, in 2013 *Le chemin se fait en marchant* at FRAC Bretagne (France). In 2014 at the MAC / VAL (Musée d'art contemporain du Val-de-Marne) (France) she presented *Face B. Image Auto-portrait*. In 2017-18 the Reina Sofía Museum in Madrid presented the exhibition "All variations are valid, including this one". Amongst her latest projects in 2018 we find the solo show "Intertwined spaces" at the Guggenheim museum in Bilbao and an upcoming solo exhibition in October at the National Dance Museum in Paris.

Tom Johnson (Colorado, 1939) He is a composer, former student of Morton Feldman. He is considered a minimalist, since he works with simple forms, limited scales, and generally reduced materials, but he proceeds in a more logical way than most minimalists, often using formulas, permutations, predictable sequences and various mathematical models. Johnson is known for his operas: *The Four Note Opera* (1972) which continues to be represented in many countries. *Riemannoper* that has been staged more than 30 times in German-speaking countries since its premiere in Bremen in 1988. His biggest composition, *The Bonhoeffer Oratorium*, a two-hour work in German for orchestra, chorus, and soloists, with text by the German theologian Dietrich Bonhoeffer, was premiered in Maastricht in 1996, and, since then it has been presented in Berlin and New York. Johnson has also written numerous radio pieces, such as *J'entends un chœur* (commissioned by Radio France for the Prix Italia, 1993), *Music and Questions* and *Die Melodiemaschinen*, premiered by WDR Radio in Cologne in January 1996.

Amongst his most recent projects we find *Tilework*, (2003) a series of 14 pieces for solo instruments, *Galileo* (2005), a 40-minute piece written for a percussion instrument self-made by the author, *Slight Variations for piano* (2015), *Sept septuors* (2016), *Knock on Wood* (2018), and *Illustrated Music* (all currently available on his YouTube channel). His music is published by Editions 75, (www.editions75.com).

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