

Rosemary Brown’s “New Scale” and the Property K

Érico Bomfim

Universidade Federal do Rio de Janeiro (UFRJ)

e_tourinho@hotmail.com

Carlos Almada

Universidade Federal do Rio de Janeiro (UFRJ)

carlosalmada@musica.ufrj.br

Abstract: In the 1960s, Rosemary Brown started to compose original musical pieces that she attributed to the spirits of great historical composers, as she claimed to be a spirit medium. Several musical critics praised her works, while many others remained skeptical. Though she became quite famous, many of her pieces were never published, nor recorded. One of them is *New Scale Modulations*, attributed to the spirit of Liszt. This musical piece makes use of an original scale, revealed through invented key signatures. It is not the purpose of this article to address the musical piece itself, but rather to study the scale “invented” by Brown (or by the spirit of Liszt, according to her), especially its unique triadic space and the notable and rare property K (an original theoretical concept by Carlos Almada), associated with parsimonious motion between chords. The paper also shows an application of the scale, consisting of a piano piece composed by Carlos Almada, which makes use of the property K and provides a proper musical illustration of the possibilities of the scale.

Keywords: Rosemary Brown. Property K. Scalar Symmetry/Asymmetry. Parsimony. Triadic Space.

A “Nova Escala” de Rosemary Brown e a propriedade K

Resumo: Na década de 1960, Rosemary Brown começou a compor peças musicais originais que atribuiu aos espíritos de grandes compositores históricos, dizendo-se médium. Vários críticos musicais elogiaram seus trabalhos, embora muitos outros tenham permanecido céticos. Apesar de ela ter se tornado bastante famosa, muitas de suas peças nunca foram publicadas, nem gravadas. Uma dessas peças é *New Scale Modulations*, atribuída ao espírito de Liszt. Essa peça musical faz uso de uma escala original, revelada através de armaduras de clave inventadas. Não é objetivo deste artigo abordar a peça musical em si, mas sim estudar a escala “inventada” por Brown (ou pelo espírito de Liszt, segundo ela), especialmente seu espaço triádico único e a rara e notável propriedade K (um conceito teórico original do Segundo Autor), associada ao movimento parcimonioso entre acordes. O artigo também mostra uma aplicação da escala, consistindo em uma peça de piano composta pelo Segundo Autor, que faz uso da propriedade K e fornece uma ilustração musical adequada das possibilidades da escala.

Palavras-chave: Rosemary Brown. Propriedade K. Simetria/assimetria escalar. Parcimônia. Espaço triádico.

1. Introduction

Rosemary Brown (1916-2001) was a British composer who claimed to be a spirit medium. As such, she attributed many musical pieces to the spirits of great composers – among them, Bach, Mozart, Beethoven, Schubert, Schumann, Brahms, Chopin, Liszt, Debussy and many others. She achieved considerable fame during the 1960s and 70s, especially after the BBC (British Broadcasting Corporation) produced a documentary on her and her music. On that occasion, in front of the cameras, she

composed *Grübelei*, attributed to Liszt. One of the most prominent Liszt scholars at the time, Humphrey Searle, was impressed by the piece, saying it was not only quite original, but also close to Liszt's late style. Searle's was not the only favorable opinion Brown collected from critics. She also received enthusiastic reviews from pianist John Lill¹ and composers Richard Rodney Bennett and Ian Parrott, who became the most dedicated Rosemary Brown champion, writing a book (PARROTT, 1978) arguing for the authenticity of Brown's music and, therefore, spiritual gifts.

Rosemary Brown wrote three books (BROWN, 1971; 1974; 1986), the first of which was translated to Portuguese for a Brazilian edition (BROWN, 1971a). She also participated in many television shows, and several of her pieces were published and recorded.² Yet, many other pieces remain unpublished and completely unknown to the public to this point. This is the case of *New Scale Modulations*,³ attributed to Liszt. The piece is especially interesting, for it indeed presents a “new scale” (henceforth, NS) by means of invented key signatures. The scale is identified by William Zeitler as Katathian,⁴ but he gave this name himself, and there seems to be no register of any explicit use of the scale in the repertoire (besides Zeitler's own pieces). It is not our concern here to discuss Rosemary Brown's musical piece – something that was done elsewhere⁵ –, but to show how the “invented scale” can be used for compositional purposes, being fertile in harmonic possibilities.

2. The NS Triadic Space

The scale presents the internal intervallic structure <3131211>, as shown in Figure 1.⁶ It seems noteworthy that this scale is very close to some *verbunkos* (or Hungarian-Gypsy) scales, which are very important to Liszt's harmonic language and late idiom, as Shay Loya (2011) discusses in detail. As two of the *verbunkos* scales most favored by Liszt – the *verbunkos* minor and *kalindra* – NS contains two augmented seconds, four semitones and only one whole-tone.⁷ Figure 1 shows another essential feature of NS, more important to the purposes of the present study: it contains

¹ This was a particularly curious case. John Lill (1974) himself wrote an appendix for the second of Rosemary Brown's books, where he argues that he believed Brown's authenticity as a spirit medium because he would have gotten confirmation from the spirit of Beethoven, with whom he believed to be in touch.

² The first record of some of Brown's pieces was entitled *A Musical Séance*, a Long-Play recorded by Phillips.

³ Although most of Brown's manuscripts indicate date of composition, this one does not. Therefore, it is not possible to know its date of composition.

⁴ Available at: <<https://allthescales.org/>>.

⁵ This is discussed by Bomfim and Almada in an article in evaluation.

⁶ The numbers inside the vector refer to semitones.

⁷ As we noted elsewhere, the new scale is very close to the sixth mode of the *verbunkos* minor.

the model $\langle 313131 \rangle$ of the hexatonic scale (henceforth, H_{3-1}),⁸ but divides the last augmented second in a whole-tone plus a semitone. This modification breaks the symmetrical character of the scale, turning it into a heptatonic mode, capable of being “translated” into key signatures (as it is done in Rosemary Brown’s manuscript).

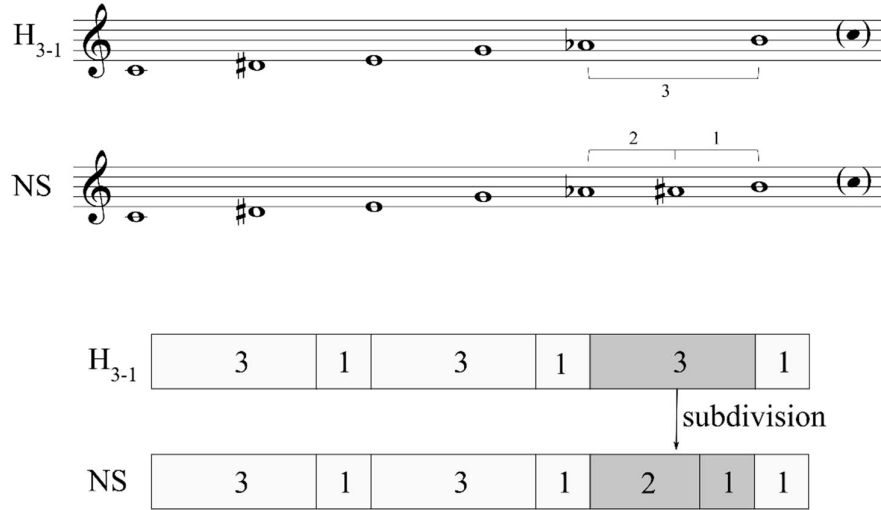


Figure 1: Comparison between NS and H_{3-1} .

The most notable aspect of NS lays in its *triadic space*. We define this concept as the set of triads that can be constructed with the pitch classes that form a given scale. As a matter of fact, due to NS’s unique interval configuration, its triadic space is strongly peculiar, presenting the following characteristics: (1) its number of chords (ten) is higher than the number of scalar degrees that NS has (seven); (2) it contemplates the four classic qualities of triads (major, minor, diminished, and augmented); (3) its triads can all be linked parsimoniously, forming maximally-smooth cycles. Formally, we introduce an original definition: we consider that a scale has the *property K* (the reason of the choice of this letter will be clear in due time) if and only if it meets those three special conditions explained above. The peculiarity of NS’s triadic space becomes evident when we compare it with the triadic spaces related to other scales. This is done in Figure 2 with the help of an original network, called *Omni-triadic space* (OTS).⁹

As shown in the graph, the triadic space of the symmetrical H_{3-1} (denoted by the gray area) meets conditions (1) and (3),¹⁰ but not (2), since it contains only

⁸ The label refers to the initial intervallic pattern (3-1 semitones) whose replication generates the structure of the model. The inversion of this pattern (1-3 semitones) sets the basis for the production of the second model of the hexatonic scale (H_{1-3}).

⁹ OTS is an original conception of the Érico Bomfim, proposing an expansion of the well-known graph Cube Dance (DOUTHETT; STEINBACH, 1998) by incorporating the twelve diminished triads.

¹⁰ Its eight triads can be disposed in a maximally-smooth cycle, better known as Hexatonic Cycle (COHN, 1997).

three qualities (major, minor, and augmented). The octatonic collection O_{1-2} produces a triadic space with 15 triads, but these do not comprise the whole spectrum of qualities neither can form a perfect parsimonious cycle.¹¹ Nothing changes regarding the universe of asymmetrical scales.¹² Figure 2 depicts three other very known heptatonic scales (same cardinality of NS): major diatonic (DIA), acoustic (AC), and augmented (AUG). Their triadic spaces do not satisfy conditions (1) and (3), and only that of AUG encompasses the complete range of qualities (condition 2).

¹¹ That is, although all the 15 triads can be parsimoniously linked to at least another triad, it is not possible to find a path that travel through all the chords only one time, forming therefore a real cycle.

¹² For some literature related to the study of scalar structure, see for example STRAUS (2005) and TYMOCZKO (2011).

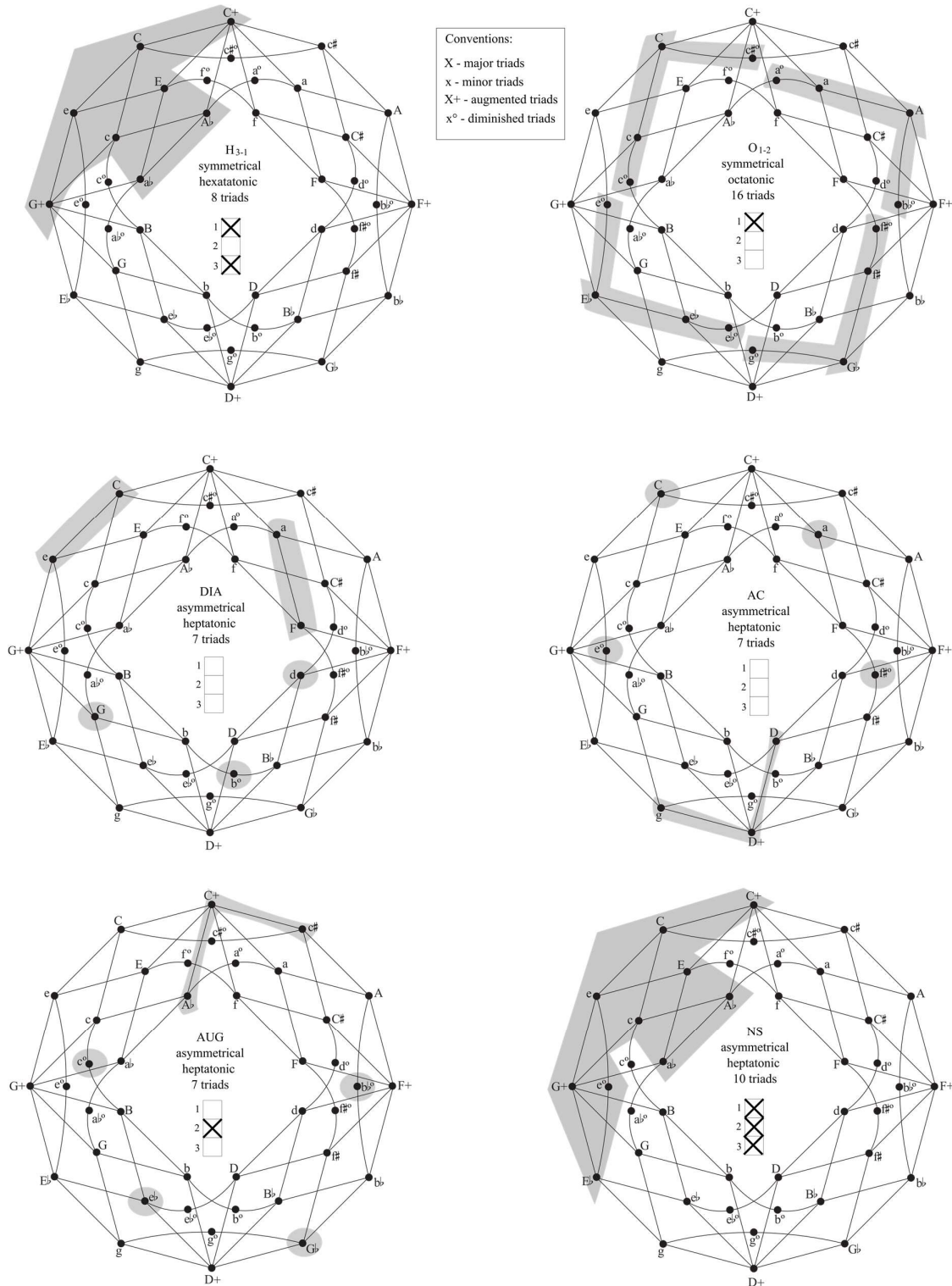


Figure 2: Six triadic spaces (H₃₋₁, O₁₋₂, DIA, AC, AUG, and NS), depicted by their respective gray areas. All scales are centered on C. Fulfillment of the three K properties are indicated in the respective boxes at the centers of the respective OTSs. Enharmonic equivalence is assumed.

Figure 3 isolates NS space from the OTS depicting two possible cycles that cover all triads only one time.¹³ Bold lines with arrows indicate those maximally-smooth paths.

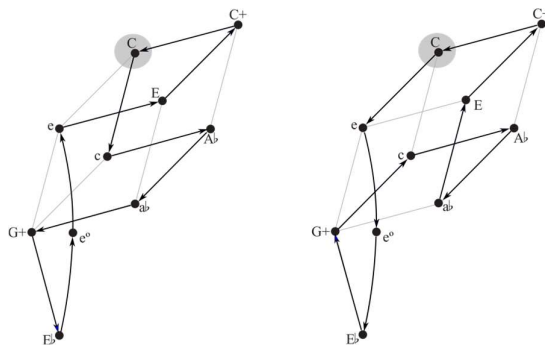


Figure 3: The two maximally-smooth cycles in NS triadic space, starting and closing in triad C.

In order to explore the rare property K of the scale “invented” by Rosemary Brown (or by the spirit of Liszt, according to her), Carlos Almada composed a piano piece, *A Walk in Königsberg*.¹⁴

2. *A Walk in Königsberg*

The title of the piece refers to the famous “Königsberg Bridge Problem”, solved by Swiss mathematician Leonhard Euler (1707-1783).¹⁵ Basically, the problem corresponds to the task of founding a path that could cross all the seven bridges of the city of Königsberg (situated in Prussia in the 18th century, now named as Kaliningrad, and part of Russia) just one time. In order to solve this problem, Euler realized that he could disregard the actual distances depicted in map of the city and consider only the relations between the involved “objects” (i.e., the bridges). The model created for dealing with this problem gave birth to the fields of Graph Theory and Topology.¹⁶

The idea behind the composition of *A Walk in Königsberg* was to explore musically the NS triadic space by travelling through all its ten triads by the two cycles depicted in Figure 3. Both cycles are navigated two times by the melodic lines in the two hands of the piano.

A Walk in Königsberg is a very simple piece, structured in three brief sections. In the first one (mm. 1–7) the two hands perform a canon by inversion at the octave lower. As a matter of fact, the canon is not strict, since some notes of the comes (left hand) do not reproduce exactly the respective dux’s notes (right hand) but are adapted according to the continuous triadic changes (indicated in the sets beneath the score). Observe that the harmonic rhythm in both voices is not regular and that

¹³ Evidently, the number of paths is duplicated if consider also the two cycles in reverse order.

¹⁴ This piece and nine other ones form a collection entitled *Brownian Movements*.

¹⁵ For more information about this problem, see TRUDEAU (1993, pp. 185-188).

¹⁶ The “K” of the special property conveyed by NS stands for Königsberg.

some notes are implicitly considered, resulting in overlapping triads. These compositional strategies intend to avoid both monotony and obviousness. The NS maps below the analysis inform us how the harmony of the two voices were chosen. Dux and comes visit the ten triads of the space.¹⁷ Except by two coincidental paths ($c \rightarrow A \flat \rightarrow a \flat$), all the remaining trajectories are different.

The second section (mm. 8–15) corresponds to a sort of mirror of the first, since now the dux occurs on the left hand (with the intervallic directions being inverted in relation to the original format). The triads travelled are also distinct in both voices, aiming to produce harmonic diversity in this “recapitulation”. As depicted in the maps, the right hand seems to replicate the left-hand trajectory of the first cycle, but when reaching G+, instead of going to c, it follows to a@ and to A@. Then, for the first time in the piece, the path is reverted, leading back to a@, and from it to E.¹⁸

As informed by the graph, the two dashed arrows departing from this point suggest two possible interpretations for the ambiguous harmony of the coda (mm. 16–20), defined by a prolonged empty fifth C–G.¹⁹ Anyway, this transitional movement (performed equally by the left hand) represents the unique non-maximally smooth triadic connection in the piece, an incisive closing gesture—in spite of its abstractness—both in material and structure.

¹⁷ The dashed arrows indicate the closure of the cycles in m. 8, eliding with the beginning of the second cycles.

¹⁸ The trajectory of the left hand in its second cycle is still more idiosyncratic, with two moving-back moments ($E@ \leftrightarrow c^\circ$ and $G+ \leftrightarrow E@$). These two, so to speak, “indecisions” result in the suppression of a triad in the cycle (C+), the only case in the piece.

¹⁹ In psychoacoustic terms, the perception of C has a clear preference over c.

$\text{♩} = 120$

first canon (by non-strict inversion)

DUX
COMES

mp

tr

C C⁺ C c e e^o E^b G⁺ c A^b a^b E

(m. 8) C⁺ (m. 1) C E A^b G⁺ E^b C⁺ (m. 8)

(m. 1) C E A^b G⁺ E^b C⁺ (m. 8)

left hand right hand

second canon (by non-strict inversion)

COMES
DUX

tr

C⁺ C c e e^o E^b G⁺ a^b A^b E

8

15

coda

p ppp

(m. 15) C⁺ (m. 8) C E A^b G⁺ E^b C⁺ (m. 8)

(m. 15) C⁺ (m. 8) C E A^b G⁺ E^b C⁺ (m. 8)

left hand right hand

Figure 4: Formal and triadic analysis of *A Walk in Königsberg*.

Concluding remarks

Despite the spiritualist controversy on Rosemary Brown, the fact of the matter is that the British composer (or medium) achieved some noteworthy results. In *New Scale Modulations*, she indeed presented a new scale, which, besides establishing

a very interesting dialogue with Liszt's compositional thinking, it also encourages contemporary compositional endeavors. This paper is especially centered on one of NS's potential uses, associated with the rare property K. *Walk in Königsberg* demonstrates that the music of Rosemary Brown is not only interesting for the relations it establishes with historical composers; it can also be fruitful for original compositional enterprises.

References

- BROWN, Rosemary. *Unfinished Symphonies: Voices from the Beyond*. London: Souvenir Press, 1971.
- BROWN, Rosemary. *Sinfonias Inacabadas: Os Grandes Mestres Compõem do Além*. São Paulo: Edigraf, 1971a.
- BROWN, Rosemary. *Immortals at my Elbow*. London: Bachman & Turner, 1974.
- BROWN, Rosemary. *Look beyond today*. London: Bantam Press, 1986.
- COHN, Richard. Neo-Riemannian Operations, Parsimonious Trichords, and their *Tonnetz* Representations, *Journal of Music Theory*, v. 41, n.1, 1997, pp. 1–66.
- DOUTHETT, Jack and STEINBACH, Peter. Parsimonious Graphs: A Study in Parsimony, Contextual Transformations, and Modes of Limited Transposition. *Journal of Music Theory*, v. 42, n. 2, 1998, pp. 241–256.
- LILL, John. “My View of Spirituality by John Lill.” In: BROWN, Rosemary. *Immortals at my Elbow*. London: Bachman & Turner, 1974. pp. 228–34.
- LOYA, Shay. *Liszt's Transcultural Modernism and the Hungarian-Gypsy Tradition*. Rochester: University of Rochester Press, 2011.
- PARROTT, Ian. *The Music of Rosemary Brown*. London: Regency Press, 1978.
- STRAUS, Joseph. *Introduction to Post-Tonal Theory* (3 ed.). Englewood Cliffs: Prentice-Hall, 2005.
- TRUDEAU, Richard. *Introduction to Graph Theory*. New York: Dover, 1993.
- TYMOCZKO, Dmitri. *A Geometry of Music: Harmony and Counterpoint in the Extended Common Practice*. Oxford: Oxford University Press, 2011.