# Dispelling the Seven myths of Tchaikovsky's Children's Album through Computational and Language Modeling

*Evgeny Pyshkin and John Blake*

*Background*

Despite the existence of limited scholarly studies on rich metaphors hidden in 24 compositions of Tchaikovsky's Children's Album, Op. 39, this work is still often understood as an (1) authorized publication of a (2) curated collection of (3) simple piano pieces with (4) child-centric appeal that capture (5) the essence of childhood for (6) pedagogic purposes yet display (7) sophisticated themes that are educational, enjoyable, and executable for young musicians.

*Purpose*

In this paper we seek to show that these seven concepts are oversimplifications or misbeliefs. We discuss how computational and language modeling augment a musicology-centered analysis of the genesis of the Children's Album.

*Related works*

Composers like Schumann and Tchaikovsky revolutionized music education for children by blending educational and inspirational aspects in their compositions, moving beyond mere technical exercises to capture the children's imaginations and engage their emotions. Rather than focusing the technical aspects of piano play (i.e., not ignoring them), convey the more sophisticated images that appeal to both children and adults. Unlike purely didactical works by other composers, their pieces incorporate narratives that transcend simple instructional content. Schumann, in particular, is credited with creating a new genre of programmatic music for children, initially composing playful pieces for his own children before expanding the collection. This innovative approach has been followed by other composers, such as Debussy, Mompou, Ravel, Shchedrin, and Prokofiev. Prokofiev's Op. 65, for

instance, is celebrated for its educational intent, musical connections to his larger works, and its thematic unity towards symbolizing a cycle of rebirth in a similar vein to Tchaikovsky's method, demonstrating a profound influence on the development of music for young audiences.

*Method*

A thematic analysis of the published literature was conducted which resulted in the detection of the seven points itemized above. These points apparently permeate the published literature as our interaction with ChatGPT 4.0 confirmed this prevailing view. A critical analysis of the literature, however, revealed that these seven points were built on shifting sand rather than firm foundations. Detailed comparative analyses of scores were conducted using computational and language modeling (Georges, 2017). Signature elicitation algorithms (Cope, 1991) were harnessed to detect similarities between compositions.

*Findings*

Some of our key findings include: The first thorough analysis of the changes from Tchaikovsky's Children's Album manuscripts to its first published edition appeared significantly later, suggesting a nuanced view of Tchaikovsky's relationship to Schumann's work and raising questions about the intent behind publication changes. Admitting Schumann's influence on Tchaikovsky does not reduce the Children's Album to mere imitation; rather, it opens discussions on the subtleties of inspiration versus direct copying, especially given the disruptive edits made for publication. Despite abundant historical documents, the reasons behind Tchaikovsky's editorial changes remain speculative, but modern analytical tools, such as the use of signature elicitation algorithms, offer new ways to examine these transformations and their implications on musical style and authorship. Preliminary experiments with signature elicitation algorithms reveal a diverse set of compositional influences within Tchaikovsky's Children's Album, challenging the notion of a deliberate imitation of Schumann's style (Pyshkin et al., 2022). The disruptive reordering in Tchaikovsky's first published edition versus the manuscript suggests a deeper thematic and structural coherence in the original composition, underscoring the complexity of interpreting Tchaikovsky's editorial decisions.

*Conclusion*

Based on our findings, we argue that the prevailing seven concepts may be considered as far from factual given the following:

(1) The author signed the first published edition could not hide all the metaphors that we can discover from the original manuscript. Such an approval must not be understood as a definitive final message of the author.

(2) Children's Album is not simply a collection, but an integral inseparable larger scale composition constructed of 24 pieces linked to appear as several untitled parts of the whole. From this perspective, Tchaikovsky's Children's Album is maybe a unique case, where Tchaikovsky is closer to reflect on 24 Chopin's Preludes from Op. 28 (1839) rather than on Schumann's pieces for children.

(3) Though the pieces are technically accessible for young musicians, they are not simply from the perspective of their mental appeal, pictures they portray, and the perspectives they unveil.

(4) Children's Album can be appreciated by young piano players and their audiences, but they are not appealing to children only. To truly revel the whole construction, its metaphors and perspectives, one requires both historical and musical background, as well mental maturity of an adult person.

(5) Unlike many cited excellent examples of music for children, the compositions from Children's Album do not simply capture the essence of childhood and nostalgically paint the pictures from the childhood, but portray the whole human life journey and experience through creating a complex blend of compositions seemingly intended for children but requiring a background of an educated, sensitive, and inspirable person to savour its metaphorical richness.

(6) The educational benefits are not to be contested, but the purpose of advancing piano playing skills is definitely not the main motive leading the composer to creation of the masterpiece.

(7) All the above points support the rationale to call in question the imitation of Schumann's style and approach as a leading force for appearance of Tchaikovsky's Op. 38, the latter consideration not disproving the Tchaikovsky's highest esteem to Schumann's heritage.

Some of above-mentioned considerations can be partially supported with the help of AI, computer science and linguistic instruments that can provide the additional important insights for musicologists searching to unravel the possible reasons of significant transformations that occurred on the way from the very accurately organized original manuscript to the first published edition of Tchaikovsky's Children's Album. Techniques based on formal mathematical and linguistics methods supported by AI and computer technology, though being unable to completely resolve these issues, can bring new data to the discourse of musicology and art.