



July 25, 2023 - October 10, 2023

Fundamental Research Project #20

Auditory-Kinesthetic-Visual Integration in Songwriting: A Nonprofit-Based Fundamental Research Report

Abstract

This study investigates the cognitive dynamics and multisensory processes involved in songwriting through the lens of the Auditory-Kinesthetic-Visual (AKV) model. Conducted over a ten-week period at PERFI8TH INC.—an organization primarily engaged in basic research—the project explored how sensory modalities interact and shift across different phases of music creation. Daily research activities included lyrical-melodic mapping, motion-based compositional trials, vocal memory tracking, multisensory sketching, and gesture-informed rhythmic learning. Participants engaged in structured self-reporting, auditory recall tasks, and visual-kinesthetic reinforcement exercises. Results indicate that kinesthetic feedback significantly enhanced phrasing precision and lyric retention, while visual mapping supported structural cohesion in verse-chorus transitions. Auditory constraints triggered spontaneous tonal modulation and affective exploration. The research contributes to the foundational understanding of AKV interplay in artistic cognition and offers a new framework for songwriting pedagogy and multisensory creativity.

Introduction

The creative act of songwriting is inherently multimodal, involving not only auditory processing but also physical movement and visual-spatial imagination. While the auditory dimension of music has been extensively studied, the embodied and visual components remain underexplored in empirical songwriting research. To address this gap, a ten-week initiative was developed under PERFI8TH INC., an institution primarily engaged in basic research, to apply an integrated AKV (Auditory-Kinesthetic-Visual) framework. This model conceptualizes songwriting as a dynamic process of shifting sensory focus and internal-external feedback loops. It suggests that during composition, creators fluidly move between imagined sounds, bodily gestures that guide timing and phrasing, and mental images of musical form and emotional narrative. The initiative implemented structured daily tasks to trace modality dominance and decision-making throughout the songwriting process. This approach, grounded in observational and reflective methodologies, aligns with PERFI8TH INC.'s broader mission to support fundamental inquiries in music cognition through non-commercial research design. Drawing from cognitive science, sensory psychology, and music pedagogy, this study presents an early step in understanding the multisensory interplay that shapes original music creation.

Research Design and Methodology

The project was conducted between July 23 and October 1, 2023, under the auspices of PERFI8TH INC., a nonprofit research organization recognized under 501(c)(3) for conducting fundamental, non-commercial investigation in the arts. The research followed a structured timesheet model, wherein the researcher engaged in four dedicated workdays per week over a twelve-week period. Each workday was defined by a unique project title and task derived from the AKV framework, ensuring that no cognitive or procedural repetition occurred.

The methodology focused on tracking and analyzing the dynamic transitions between auditory, kinesthetic, and visual modalities across the phases of songwriting. Data were collected qualitatively through reflective documentation, audio recordings, lyric drafts, visual diagrams, and movement-based cue sheets.

Specifically, the researcher implemented the following categories of activities:

- **Auditory-based trials**, such as testing interval recall, phrase repetition under tonic shifts, and lyrical-melodic congruence analysis
- **Kinesthetic rehearsal experiments**, which involved using gestures (e.g., body pulses, directional arm motions, and micro-movements) to stabilize rhythm and phrase recall
- **Visual structuring tasks**, including sketching emotional shape arcs of verse-chorus sections, drawing tonal trajectories, and mapping lyric densities
- **Multisensory integration activities**, where two or more modalities were purposefully fused—for example, combining silent gesture with imagined melodic playback

All sessions emphasized open-ended exploration without commercial goals. Observations were documented in daily entries, forming the dataset for this report. The project did not involve human subjects beyond the researcher, and all analyses remained reflective and first-person based.

Results and Discussion

Over ten weeks, the research yielded a substantial body of qualitative data, highlighting patterns that support the AKV model's central premise: songwriting is a multisensory, non-linear process. For PERFI8TH INC.—an institution primarily engaged in basic research—this project provided a rich context for exploring how sensory modes converge and conflict during composition.

Auditory Phase Findings

Tasks centered on auditory recall and interval control revealed that delayed tonal resolutions introduced both tension and innovation. These moments, though initially destabilizing, led to adaptive strategies like melodic expansion or lyrical elaboration.

Kinesthetic Phase Findings

Gesture-based rehearsal improved phrase memory and rhythmic timing. Physical cues—like torso movements or directional hand sweeps—not only enhanced internal pulse perception but also predicted harmonic shifts during improvisation, pointing to an embodied-musical link.

Visual Findings:

Visual tools supported early structural decisions and problem-spotting. Sketching lyric contours and symmetry maps gave the researcher a way to anticipate phrasing issues even before hearing them, a strategy that preserved coherence across sections.

Multisensory Interaction and Phase Shifts

Perhaps most revealing were the transitional and hybrid phases. Shifts in sensory dominance depended on the stage of songwriting: early stages were more visually or kinesthetically oriented, while later stages leaned heavily on auditory feedback. At times, modality clashes—such as visual structure contradicting auditory flow—acted as generative disruptions that opened new artistic possibilities.

Each observation underscored the project's core framework and reinforced its value as a non-commercial initiative primarily engaged in basic research.

Conclusion and Impact

This project represents a foundational investigation into the cognitive mechanisms underpinning the songwriting process through the AKV (Auditory-Kinesthetic-Visual) framework. Over the course of ten weeks, the research demonstrated that songwriting is not a purely auditory phenomenon, but rather a fluid, multisensory experience that requires continual negotiation between internal modalities and external expressive constraints.

By documenting daily phase shifts—such as moving from visual planning to kinesthetic rehearsal or from motor cues back to tonal improvisation—the study highlights the complex and recursive nature of artistic cognition. Key contributions include the identification of gesture-based rehearsal as a stabilizing force for rhythm and memory, the role of visual mapping in structural cohesion, and the destabilizing yet generative effect of disrupted auditory expectation.

As a piece of **basic, non-commercial research**, this project contributes to the growing field of music cognition by supplying firsthand, practice-based evidence of how sensory dominance fluctuates during the compositional cycle. It also proposes an emerging four-phase creative model—**Sensory Activation, Structural Mapping, Expectation Resolution, and Emotional Framing**—which may serve future researchers, educators, and therapists seeking to understand the intersection of artistic intuition, cognition, and sensory awareness.

For a nonprofit like PERFI8TH INC., **primarily engaged in basic research**, this project also serves as a blueprint for how reflective, non-commercial inquiry can meaningfully contribute to broader dialogues in embodied cognition, music learning, and songwriting pedagogy. Most critically, the results affirm that creativity in music is not the product of any one sense or technique, but rather the emergent result of multisensory collaboration between mind, body, and imagination.

Sample Observational Data			
	Tt Title	📅 Date	🔄 Status
	Auditory Melodic Framework	Jul 24, 2023	Completed ▾
	Kinesthetic Rhythmic Phrase	Aug 1, 2023	Completed ▾
	Visual Lyric Draft	Aug 15, 2023	Completed ▾
	Kinesthetic Flow Pattern	Sep 5, 2023	Completed ▾
	Multimodal Full Song Sketch	Sep 22, 2023	Completed ▾

References

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