

given this expected conclusion and results, the author should instead propose what changes to the from the top rubrics would force a change in trajectory. Such changes may include awarding new interpretations of old masters, awarding new compositions (this may involve teams where some are responsible for constructing the tune/harmonics and others are responsible for playing the instruments), awarding new paradigms and ideas (such as the change to atonality from the hierarchical treatment between pitches of traditional Western music), using tempo with major and minor keys in different ways (four quadrants) etc. This will elevate its contribution

Your instinct is directionally right—but in its current form, your proposal would still be **editorially weak unless reframed rigorously**.

Right now, what you're suggesting is:

“The paper should recommend changes to the *From the Top* rubric to alter outcomes.”

That *can* elevate the manuscript—but only if it transitions from:

- **descriptive sociology** → to
- **testable intervention framework**

Otherwise it becomes **normative speculation**, which high-quality journals will reject just as quickly.

1. Where your idea is strong

You are correctly identifying the **missing piece**:

The paper shows *persistent structure* but does not propose **mechanisms to change it**.

This is a major gap.

The current manuscript ends with:

“patterns persist” and “future research needed”

That is **low-impact closure**.

2. What needs to change (conceptually)

To make your suggestion scientifically valuable, the author must:

Shift from:

- Observational findings

To:

- **Intervention design + predicted measurable outcomes**

3. Reformulating your idea into a publishable contribution

Instead of saying:

“They should award new interpretations, compositions, etc.”

Frame it as:

A set of experimentally testable rubric modifications designed to alter selection distributions and repertoire diversity

4. Concrete framework (what the paper *should* include)

(A) Define the problem mechanistically

Right now the paper implies:

Access inequality → persistent selection outcomes

But does NOT specify *where intervention is possible*.

You want to explicitly model:

Training pipeline → applicant pool → selection rubric → outcomes

The rubric is the **only controllable lever inside the program**.

(B) Your proposed interventions (reframed rigorously)

Here’s how your ideas can be elevated into **scientifically meaningful levers**:

1. Repertoire Innovation Weighting

Proposal

- Assign scoring weight to:
 - Non-canonical works
 - Original compositions
 - Novel reinterpretations

Hypothesis

- Increases probability of selection from:
 - Non-traditional training backgrounds
 - Less canon-focused pedagogy

Testable prediction

- ↑ share of non-Top-20 composers (currently ~35–40%)

2. Composition–Performance Hybrid Category (your “teams” idea)

Proposal

- Introduce category:
 - Composer + performer collaboration

Why this is important (non-obvious insight)

- Classical training pipelines are **performance-heavy and resource-intensive**
- Composition pathways may be **less capital-constrained**

Hypothesis

- Broadens access by:
 - Decoupling elite performance training from participation

3. Interpretive Innovation Scoring

(Your “new interpretations of old masters”)

Proposal

- Explicit rubric dimension:
 - originality of interpretation
 - deviation from canonical phrasing/tempo norms

Mechanism

- Reduces advantage of:
 - students trained in highly standardized elite pedagogy

Prediction

- ↑ variance in stylistic expression
- Potentially ↑ geographic diversity

4. Structural Music Innovation (your “atonality / paradigm shifts”)

Proposal

- Dedicated category for:
 - non-tonal systems
 - alternative harmonic frameworks
 - experimental structure

Critical point

This is not just artistic—it is **institutional disruption of canon dominance**

Hypothesis

- Weakens historical lock-in to:
 - Western tonal canon
 - Eurocentric pedagogy

5. The “Four Quadrants” Tempo–Tonality Framework (your idea)

You can formalize this:

	Major key	Minor key
Fast tempo	Q1	Q2
Slow tempo	Q3	Q4

Proposal

- Require exploration across quadrants OR reward cross-quadrant reinterpretation

Why this matters

- Forces **structural variation within canonical works**
- Introduces controlled innovation without abandoning tradition

5. What makes this publishable: add causal predictions

Each intervention must include:

(1) Mechanism

Why this changes access or representation

(2) Metric

What will be measured

(3) Expected direction

Example:

Intervention: Composition-performance category
 Metric: % performers from <50th percentile income areas
 Prediction: +X% increase within 5 years

6. The key upgrade: from description → policy experiment

The paper should end with something like:

“We propose a set of rubric modifications that can be implemented and evaluated using a difference-in-differences framework comparing pre- and post-adoption cohorts.”

Now you have:

- A **natural experiment**
- A **causal pathway**
- A **research agenda**

7. Critical caution (important)

Your suggestions risk:

(A) Normative bias

- “innovation is better than tradition” → not universally accepted

(B) Confounding artistic merit with diversity goals

(C) Backfire effects

- Programs may:
 - tokenize diversity
 - game rubric metrics

👉 The paper must explicitly discuss these risks.

8. Bottom line

You are pointing at the **exact missing contribution**:

The manuscript diagnoses persistence but does not propose *structural levers to change it*.

But to elevate it scientifically, the author must:

- Formalize interventions
- Define mechanisms
- Specify measurable outcomes
- Propose evaluation strategy

Final verdict on your suggestion

- ✓ Conceptually strong
- ✓ Directionally correct

! Needs formalization to avoid being dismissed as editorial opinion

If you want, I can **rewrite the paper's Discussion/Conclusion section** into a **high-impact, reviewer-ready intervention framework** that would materially improve its acceptance chances.

not yet, give me a formalization for these ideas

Good—this is exactly where rigor matters. Below is a **formal, publication-ready framework** that converts your ideas into **operational variables, hypotheses, and testable interventions**.

1. Formal model of the system

Let:

- i : applicant
- t : year
- j : performance submitted

Outcome

$$Y_{it} = 1 \text{ if selected into program, else } 0$$

Latent selection score

$$S_{it} = f(T_{it}, R_{it}, I_{it}, C_{it}) + \epsilon_{it}$$

Where:

- T_{it} : technical proficiency (traditional rubric)
- R_{it} : repertoire canonicity
- I_{it} : interpretive originality
- C_{it} : compositional / structural innovation

Current system (implicit)

$$S_{it}^{(0)} \approx \alpha T_{it} + \beta R_{it}, \quad \beta > 0$$

→ favors canonical works and elite training pipelines

2. Intervention: rubric redesign

Define a new scoring function:

$$S_{it}^{(1)} = \alpha T_{it} + \beta R_{it} + \gamma I_{it} + \delta C_{it}$$

With:

- $\gamma > 0$: reward interpretation
 - $\delta > 0$: reward innovation
 - reduce β : decrease canonical bias
-

3. Operationalizing your ideas (rigorous variables)

(A) Repertoire Innovation Index (RII)

Measures departure from canonical dominance.

$$RII_{it} = 1 - I(\text{composer} \in \text{Top-20})$$

Extension:

$$RII_{it}^* = w_1(\text{living}) + w_2(\text{female}) + w_3(\text{minority}) + w_4(\text{non-canonical})$$

(B) Interpretive Innovation Score (IIS)

Quantifies deviation from canonical performance norms.

Let:

- θ_{it} : tempo profile
- ϕ_{it} : phrasing dynamics
- ψ_{it} : articulation structure

Define:

$$IIS_{it} = d((\theta_{it}, \phi_{it}, \psi_{it}), \text{canonical baseline})$$

Where $d(\cdot)$ is a distance metric (e.g., normalized Mahalanobis distance)

(C) Compositional Innovation Score (CIS)

Captures structural novelty.

Binary + continuous hybrid:

$$CIS_{it} = \begin{cases} 0 & \text{pure performance of existing work} \\ \lambda_1(\text{original composition}) + \lambda_2(\text{hybrid performance-composition}) & \text{otherwise} \end{cases}$$

(D) Structural Paradigm Index (SPI)

Formalizes your "atonality / paradigm shift" idea.

$$SPI_{it} = \begin{cases} 1 & \text{non-tonal / modal / experimental system} \\ 0 & \text{traditional tonal system} \end{cases}$$

Or continuous via harmonic entropy:

$$SPI_{it} = H(\text{pitch distribution})$$

(E) Tempo-Tonality Quadrant Score (TTQ)

Your "four quadrants" idea formalized:

Let:

- τ : tempo (normalized)
- $k \in \{+1, -1\}$: major (+1), minor (-1)

Define quadrants:

$$Q_{it} = \begin{cases} 1 & (\tau > \tau^*, k = +1) \\ 2 & (\tau > \tau^*, k = -1) \\ 3 & (\tau \leq \tau^*, k = +1) \\ 4 & (\tau \leq \tau^*, k = -1) \end{cases}$$

Innovation score:

$$TTQ_{it} = I(\text{cross-quadrant reinterpretation})$$

(F) Collaboration Structure Variable (CSV)

Your "team-based composition" idea:

$$CSV_{it} = \begin{cases} 0 & \text{solo performer} \\ 1 & \text{performer + composer collaboration} \\ 2 & \text{multi-role team (composition + arrangement + performance)} \end{cases}$$

4. Revised selection rule

$$S_{it}^{(1)} = \alpha T_{it} + \beta R_{it} + \gamma_1 RII_{it} + \gamma_2 IIS_{it} + \delta_1 CIS_{it} + \delta_2 SPI_{it} + \delta_3 TTQ_{it} + \delta_4 CSV_{it}$$

5. Testable hypotheses

H1: Canonical concentration decreases

$$E[\text{Top-20 share}]_{post} < E[\text{Top-20 share}]_{pre}$$

H2: Access distribution shifts

Let SES_{it} be hometown percentile:

$$E[SES_{it} | Y = 1]_{post} < E[SES_{it} | Y = 1]_{pre}$$

→ indicates inclusion of less advantaged communities

H3: Diversity metrics increase

$$E[\text{minority composers share}]_{post} > E[\text{minority composers share}]_{pre}$$

H4: Variance in stylistic features increases

$$Var(\theta, \phi, \psi)_{post} > Var(\theta, \phi, \psi)_{pre}$$

H5: Pipeline diversification

$$P(\text{non-traditional training} | Y = 1)_{post} > P(\text{non-traditional training} | Y = 1)_{pre}$$

6. Identification strategy

Difference-in-differences

Define:

- Treatment group: post-rubric-change cohorts
- Control group: pre-change cohorts

$$Y_{it} = \beta_0 + \beta_1 Post_t + \beta_2 X_{it} + \epsilon_{it}$$

Where outcomes include:

- repertoire diversity
- SES distribution
- innovation scores

Optional: regression form

$$Y_{it} = \beta_0 + \beta_1 S_{it}^{(1)} + \beta_2 SES_{it} + \beta_3 X_{it} + \epsilon_{it}$$

7. Mechanistic interpretation

Your core idea becomes:

By increasing weights on **innovation dimensions (I, C)**, the selection function becomes less dependent on **early access to elite training (T, R)**.

Formally:

$$\frac{\partial Y}{\partial SES} \downarrow \text{ as } \gamma, \delta \uparrow$$

8. Risks (must be included)

(A) Gaming the rubric

- superficial “innovation” without substance

(B) Measurement error

- IIS and CIS require subjective scoring

(C) Artistic tradeoff

- possible decline in technical quality

(D) Selection distortion

- over-weighting novelty

9. Minimal formal conclusion statement

A publishable statement would read:

“We formalize a modified selection function incorporating interpretive and compositional innovation. Under plausible assumptions, increasing the weight on these dimensions reduces dependence on canonical repertoire and elite training pathways, generating testable predictions for changes in socioeconomic and repertoire distributions.”

Bottom line

You now have:

- **State variables**
- **Scoring function**
- **Quantified constructs**
- **Hypotheses**
- **Identification strategy**

This transforms your idea from:

“suggestion”

into:

a formal intervention model suitable for publication

If you want next, I can:

- turn this into a **clean 1–2 page “Methods: Policy Intervention Model” section**, or
- stress-test whether these variables are actually measurable in real data (some are non-trivial).

clean 1-2 page methods.....

Below is a **clean, journal-ready Methods section (≈1–2 pages)** that formalizes your intervention framework. It is written in a neutral, publication-appropriate tone and can be inserted directly into the manuscript.

Methods: Intervention Framework for Rubric Redesign

1. Conceptual Framework

This study extends the descriptive analysis of access and representation by introducing a formal model of how selection criteria may influence observed participation patterns. We conceptualize selection into elite youth classical music platforms as a function of a latent scoring process applied to each applicant’s submission.

Let i index applicants and t index year. The probability of selection is determined by an unobserved selection score:

$$Y_{it} = \mathbf{I}(S_{it} \geq \kappa)$$

where Y_{it} is an indicator for selection and κ is a threshold.

We model the baseline scoring function as:

$$S_{it}^{(0)} = \alpha T_{it} + \beta R_{it} + \epsilon_{it}$$

where:

- T_{it} : technical proficiency
- R_{it} : canonical repertoire alignment
- ϵ_{it} : idiosyncratic evaluation factors

This formulation reflects conventional audition practices that prioritize technical execution and established repertoire. Under this structure, selection outcomes may disproportionately reflect access to long-term, resource-intensive training pathways.

2. Rubric Redesign: Innovation-Augmented Scoring

We propose an augmented scoring function that incorporates additional dimensions capturing interpretive and structural innovation:

$$S_{it}^{(1)} = \alpha T_{it} + \beta R_{it} + \gamma_1 \text{RII}_{it} + \gamma_2 \text{IIS}_{it} + \delta_1 \text{CIS}_{it} + \delta_2 \text{SPI}_{it} + \delta_3 \text{TTQ}_{it} + \delta_4 \text{CSV}_{it} + \epsilon_{it}$$

where newly introduced components are defined below. The parameters γ and δ represent weights on innovation-related dimensions, while β may be reduced relative to the baseline model to decrease reliance on canonical repertoire.

3. Operational Measures

3.1 Repertoire Innovation Index (RII)

The Repertoire Innovation Index captures the extent to which performed works deviate from historically dominant composers:

$$RII_{it} = 1 - I(\text{composer} \in \text{Top-20})$$

An extended formulation incorporates multiple diversity dimensions:

$$RII_{it}^* = w_1(\text{living composer}) + w_2(\text{female composer}) + w_3(\text{minority composer}) + w_4(\text{non-canonical composer})$$

3.2 Interpretive Innovation Score (IIS)

Interpretive Innovation measures deviation from canonical performance norms. Let performance features include tempo (θ), phrasing (ϕ), and articulation (ψ). The score is defined as:

$$IIS_{it} = d((\theta_{it}, \phi_{it}, \psi_{it}), \bar{X}_{canonical})$$

where $d(\cdot)$ is a normalized distance metric from a canonical reference distribution.

3.3 Compositional Innovation Score (CIS)

The Compositional Innovation Score captures the degree to which submissions include original or collaborative creative content:

$$CIS_{it} = \lambda_1 \cdot I(\text{original composition}) + \lambda_2 \cdot I(\text{composition-performance hybrid})$$

This variable distinguishes purely performative submissions from those involving compositional authorship or collaboration.

3.4 Structural Paradigm Index (SPI)

The Structural Paradigm Index captures departures from traditional tonal systems:

$$SPI_{it} = \begin{cases} 1 & \text{non-tonal, modal, or experimental structure} \\ 0 & \text{traditional tonal structure} \end{cases}$$

Alternatively, a continuous formulation based on harmonic entropy may be used.

3.5 Tempo–Tonality Quadrant Score (TTQ)

To capture structural reinterpretation within traditional works, we define a tempo–tonality classification:

Let τ_{it} denote normalized tempo and $k_{it} \in \{+1, -1\}$ denote major or minor tonality. Performances are classified into four quadrants based on tempo and tonality. The TTQ score is defined as:

$$TTQ_{it} = I(\text{reinterpretation involves cross-quadrant transformation})$$

This measure captures innovative recontextualization within canonical repertoire.

3.6 Collaboration Structure Variable (CSV)

To capture collaborative and interdisciplinary submissions:

$$CSV_{it} = \begin{cases} 0 & \text{solo performance} \\ 1 & \text{performer–composer collaboration} \\ 2 & \text{multi-role team (composition, arrangement, performance)} \end{cases}$$

4. Hypotheses

The proposed rubric redesign generates several testable hypotheses:

- **H1 (Repertoire diversification):** The share of works by non-canonical composers increases post-intervention.
- **H2 (Access shift):** The socioeconomic profile of selected performers shifts toward lower percentile communities.
- **H3 (Diversity increase):** Representation of living, female, and minority composers increases.
- **H4 (Stylistic variance):** Variance in performance features (tempo, phrasing, articulation) increases.
- **H5 (Pipeline diversification):** The proportion of participants from non-traditional training pathways increases.

5. Empirical Strategy

To evaluate the effects of rubric redesign, we propose a quasi-experimental framework using a difference-in-differences (DiD) design:

$$Y_{it} = \beta_0 + \beta_1 \text{Post}_t + \beta_2 X_{it} + \epsilon_{it}$$

where:

- Post_t indicates periods after rubric implementation
- X_{it} includes control variables (instrument, age, etc.)

Outcome variables include:

- repertoire composition metrics
- socioeconomic percentiles of hometowns
- innovation scores defined above

6. Mechanistic Interpretation

The redesigned scoring function reallocates weight from traditional dimensions (T, R) toward innovation-based dimensions (I, C). Under plausible assumptions, this reduces dependence on long-term access to elite training pathways and increases the relative competitiveness of applicants with alternative musical backgrounds.

Formally, increasing weights γ and δ is expected to reduce the marginal dependence of selection probability on socioeconomic advantage:

$$\frac{\partial P(Y_{it} = 1)}{\partial SES_{it}} \downarrow \quad \text{as} \quad \gamma, \delta \uparrow$$

7. Limitations

Several limitations apply to this framework:

- Measurement of interpretive and compositional innovation may involve subjective evaluation
- Rubric changes may introduce strategic behavior or “gaming”
- Trade-offs between technical rigor and innovation may arise
- Data on applicant pools may still be required for full causal identification

8. Summary

This framework formalizes how modifications to evaluation criteria can be translated into measurable variables and empirically testable hypotheses. By embedding innovation directly into the selection function, the model provides a structured approach to evaluating whether institutional rubric design can influence patterns of access and representation in elite youth classical music.

If you want next, I can convert this into a **Discussion section that tightly links back to the paper's actual results (so it feels fully integrated rather than appended)**.

convert to discussion

Below is a **journal-ready Discussion section** that integrates your intervention framework with the paper's empirical findings. It is written to *replace or substantially upgrade* the current Discussion, linking results → mechanism → testable interventions.

Discussion: From Persistent Patterns to Testable Institutional Interventions

The results of this study show that access and representation in elite youth classical music exhibit a combination of persistence and incremental change. Performers' hometowns remain concentrated in highly educated communities, and expansion into new locations does not fundamentally alter this profile. At the same time, repertoire diversity has increased modestly, particularly with respect to living, female, and minority composers, although programming remains concentrated among a relatively small set of canonical composers.

These findings are consistent with prior literature documenting structural inequalities in access to classical music training and the persistence of a canon-centered repertoire. However, the present analysis adds an important institutional dimension: even within a nationally prominent platform that has expanded geographically and diversified its programming to some extent, the overall structure of participation remains largely unchanged.

5.1. Interpreting Persistence: The Role of Selection Mechanisms

A key implication of these results is that observed patterns may not be solely a function of upstream inequalities (e.g., early access to training), but also of downstream institutional selection criteria. The persistence of high college-attainment percentiles and concentration in metropolitan, resource-rich communities suggests that the selection process may implicitly favor attributes associated with long-term, intensive training pathways. These pathways are typically aligned with performance of canonical repertoire and adherence to established interpretive norms.

Under this interpretation, the selection process can be conceptualized as a scoring function that places substantial weight on technical proficiency and canonical repertoire alignment. Because these attributes are themselves products of cumulative access to resources, the selection mechanism may reinforce, rather than attenuate, upstream inequalities. This provides a plausible explanation for why expansion into new geographic areas does not substantially alter the socioeconomic profile of participants.

5.2. Repertoire Diversification Without Structural Change

The observed increase in works by living, female, and minority composers indicates that repertoire diversification is occurring along certain dimensions. However, the continued dominance of a small group of canonical composers suggests that these changes are

additive rather than transformative. In other words, diversification appears to operate at the margins of an otherwise stable core repertoire.

This pattern is consistent with a system in which canonical alignment remains a central evaluative criterion, while diversity is incorporated as a secondary consideration. As a result, repertoire diversification may not be sufficient, on its own, to alter broader patterns of access and representation. Structural change would likely require modifications to the underlying criteria by which performances are evaluated and selected.

5.3. Rubric Design as a Lever for Change

The findings of this study point to rubric design as a potential institutional lever for influencing participation patterns. If selection criteria disproportionately reward attributes that are strongly correlated with resource-intensive training pathways, then modifying those criteria may alter the distribution of selected participants.

We formalize this idea by conceptualizing selection as a function of multiple dimensions, including not only technical proficiency and repertoire alignment, but also interpretive and compositional innovation. Within this framework, increasing the weight placed on innovation-related dimensions may reduce reliance on canonical training pathways and expand the range of competitive submissions.

Several categories of rubric modification follow from this framework:

(1) Repertoire Innovation

Explicitly rewarding performances of non-canonical works, including works by living, female, and minority composers, may increase the share of repertoire outside the historically dominant canon. This would build on the observed diversification trends while potentially accelerating their trajectory.

(2) Interpretive Innovation

Incorporating evaluation criteria that reward originality in tempo, phrasing, and articulation may reduce the advantage conferred by highly standardized elite training. By valuing deviation from canonical norms, such criteria could increase stylistic diversity and broaden the range of acceptable performance approaches.

(3) Compositional and Hybrid Forms

Introducing categories that include original compositions or composition–performance collaborations may broaden access by creating alternative pathways for participation. Because compositional work may be less dependent on long-term access to elite performance instruction, such categories could diversify the pool of applicants.

(4) Structural and Paradigmatic Innovation

Recognizing works that depart from traditional tonal systems or explore alternative musical structures may reduce reliance on historically dominant frameworks. This could further weaken the link between canonical repertoire and selection outcomes.

(5) Structured Reinterpretation Within Canonical Works

Even within traditional repertoire, rubric criteria could reward reinterpretation, such as alternative tempo–tonality relationships or cross-structural transformations. This approach allows for innovation without requiring a complete departure from the canon.

Taken together, these modifications represent a shift from a predominantly performance-centered evaluation model toward a more multidimensional framework that incorporates creativity, originality, and structural experimentation.

5.4. Testable Predictions and Empirical Evaluation

The proposed rubric modifications generate a set of testable predictions. If implemented, they would be expected to:

- Increase the share of repertoire outside the most frequently performed composers
- Increase representation of living, female, and minority composers
- Increase variance in performance characteristics (e.g., tempo, phrasing)
- Shift the socioeconomic distribution of performers' hometowns toward a broader range of communities

These predictions can be evaluated using a quasi-experimental design, such as a difference-in-differences approach comparing pre- and post-implementation cohorts. Such an approach would allow for empirical assessment of whether changes in selection criteria lead to measurable changes in participation patterns.

5.5. Limitations and Trade-offs

Several considerations are important in evaluating potential rubric changes. First, measures of interpretive and compositional innovation may involve subjective judgment, raising questions about reliability and consistency. Second, increasing emphasis on innovation may introduce trade-offs with technical rigor, depending on how criteria are weighted. Third, changes to evaluation criteria may induce strategic responses from applicants, including attempts to optimize for rubric-defined metrics rather than underlying artistic quality.

Finally, as with the present analysis, the absence of data on applicant pools would limit the ability to fully disentangle changes in access from changes in selection. Future research incorporating applicant-level data would strengthen causal inference in evaluating such interventions.

5.6. Implications

The results of this study suggest that persistent patterns of access and representation in elite youth classical music are not solely the result of upstream inequalities, but may also be shaped by institutional selection criteria. While recent trends indicate modest progress in repertoire diversification, more substantial changes in participation patterns may require deliberate modification of evaluation frameworks.

By formalizing rubric design as a measurable and adjustable component of the system, this study highlights a pathway through which institutions can move beyond descriptive assessments of inequality toward experimentally testable strategies for change.