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What's in a name? Dynasties, selection, and talent allocation among classical composers

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Abstract
A central question in economics is how talent is allocated across elite professions and whether access is shaped by family ties or by open, standardized systems of selection. We study these questions in Western classical composition, a setting in which family background historically influenced entry through both inherited skill and inherited privilege, and where rich biographical records make it possible to trace selection over multiple centuries. Using data on more than 16,000 composers from 450 CE to the present, we identify dynastic ties from *Grove Music Online* and measure prominence by biographical entry length. Dynastic composers are 15–21 percent less prominent than non-dynasts, conditional on country and birth cohort, and this discount is driven by descendants: founders perform about as well as non-dynasts, while descendants perform significantly worse. Archival manuscript evidence from the *Répertoire International des Sources Musicales* yields similar results, suggesting that the pattern is not an artifact of editorial selection. In the twentieth century, however, the dynasty discount reverses, consistent with the transition from informal, family-based entry to more standardized selection through conservatory training. Consistent with this interpretation, dynasts are less likely to have formal training mentioned in their biographies, more likely to be described as advancing through family connections, and face a smaller dynasty discount in regions and periods with conservatories. Taken together, the findings suggest that expanded access to standardized training can weaken inherited advantage, reshape elite formation, and improve talent allocation, with broader implications for long-run innovation and economic performance.

Keywords Talent allocation · Dynasties · Intergenerational mobility · Human capital · Classical composers

JEL Classification O15 · J24 · J62 · I25 · N30 · Z11

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1 Introduction

Family dynasties are common in high-status professions such as politics, medicine, and law (e.g., Dal Bó et al., 2009; Lentz and Laband, 1989; Raitano and Vona, 2021). Children enter these professions at rates far above population baselines, but what does this persistence signify? Dynasties may reflect the productive transmission of tacit knowledge and the advantages of early exposure (i.e., Becker and Tomes, 1979, 1986), or they may indicate selection failures in which access is shaped by family ties rather than ability (e.g., Aina and Nicoletti, 2018; Mocetti, 2016). Distinguishing these mechanisms is difficult because talent is unobserved, outcomes are noisy, and family ties affect entry thresholds, causing standard parent–child comparisons to conflate inherited ability with preferential access (see de la Croix and Goñi, 2024). The issue is further complicated by institutional change. In some eras, access to elite occupations depended heavily on patronage or hereditary privilege, while in others it was shaped increasingly by formal schooling and credentialing. These shifts influenced who entered the upper tiers of creative, political, and professional life, with potentially important consequences for talent allocation and aggregate innovation (e.g., Hsieh et al., 2019).

We study these questions in Western classical composition, a historical setting that offers unusual leverage for examining how family ties, training institutions, and selection interact over the long run. Composition offers a particularly useful lens for studying intergenerational persistence because, unlike more structured occupations, creative careers were historically less regulated and success was harder to verify. Whereas professions such as law or medicine are shaped by formal credentials, hierarchical progression, and more standardized performance metrics, musical careers depended more heavily on informal training, patronage, and subjective evaluation. As a result, both productive skill transmission and preferential access were especially salient: musical knowledge and technique could be passed informally within families, while family connections could ease access to commissions and employment opportunities. This makes composition a valuable setting for examining how inherited advantage shapes selection into elite occupations, a central concern in the literature on dynastic persistence and talent allocation (e.g., Galor and Tsiddon, 1997; Hassler and Mora, 2000; Hassler et al., 2007; de la Croix and Goñi, 2024).[1]

Another advantage of this setting is that composers' lives are unusually well documented. Biographical sources record extensive kin links—parents, siblings, cousins, and grandchildren—allowing us to identify dynasty founders and trace descendants across multiple generations.[2] These links extend far beyond the parent-child relationships typically observed in the literature, providing unusual leverage for studying how dynastic advantage operates within extended families. Combined with multiple, independent measures of success, they

[1] Classical music is one of humanity's most enduring art forms and a core component of Western cultural heritage. Historical clusters of composers predict higher contemporary cultural participation (Borowiecki, 2015), and classical music infrastructure has long-run effects on local labor markets (Falck et al., 2011). The tradition underpins key segments of today's global music and entertainment industries, which generate trillions in economic value (Borowiecki and Law, 2026). These features highlight the broader economic relevance of studying dynasties in this profession.

[2] Many celebrated figures in music history—including Johann Sebastian Bach, Wolfgang Amadeus Mozart, Henry Purcell, Domenico Scarlatti, and Johann Strauss II—came from musician families. In our data, dynastic composers comprised roughly 15 percent of all documented composers at their eighteenth-century peak, a share comparable to that in some modern professions with strong family pipelines (for example, about one in five physicians has a parent who is also a physician; Polyakova et al., 2020).

allow us to study dynasties at scale and over long historical horizons in a way that is rarely feasible in other creative or scientific settings.

Changes in musical training also offer a rare opportunity to observe how institutional reform reshapes the balance between inherited advantage and individual ability. For centuries, instruction was informal and family-based; beginning in the nineteenth century, conservatories introduced standardized curricula, broader access, and more competitive admissions. This transition parallels developments in other skilled occupations, such as law, medicine, and engineering, that moved from lineage-based apprenticeship toward formal training. It also aligns with theories of intergenerational mobility (e.g., Galor and Tsiddon, 1997; Hassler and Mora, 2000) which emphasize how new modes of knowledge transmission alter the relative importance of inherited background and individual ability. The rise of conservatories therefore allows us to examine how standardized training changed the role of family background in shaping entry and success.

To organize the empirical analysis, we develop a simple conceptual framework with two channels through which family background can influence creative success. On one hand, inherited human capital—the transmission of tacit knowledge and skills within families—raises productivity conditional on entry. On the other, inherited privilege—access to patronage, reputation, or professional networks—lowers entry costs, allowing less able individuals to enter the profession. These channels have opposite implications for average performance: the first strengthens selection on talent, while the second weakens it. The framework therefore yields two empirical predictions. If inherited human capital dominates, dynastic founders should outperform outsiders, with descendants gradually regressing toward the mean as inherited skills decay. If inherited privilege dominates, descendants should underperform, reflecting weaker selection on ability. The balance between these channels depends on the institutional environment. When training and access are informal, privilege is likely to matter more. As standardized training systems such as conservatories emerge, inherited advantages erode: formal instruction narrows gaps in music-specific human capital across families, while more open recruitment compresses lineage-based access advantages. This mechanism parallels models of dynastic persistence in changing institutional or technological environments, where the relative importance of inherited background and individual ability shifts as systems of knowledge transmission evolve (e.g., Galor and Tsiddon, 1997; Hassler and Mora, 2000; Hassler et al., 2007).

Using a newly constructed dataset of more than 16,000 Western classical composers from the fifth century to the present, we document systematic differences in prominence between dynastic and non-dynastic composers. Our main finding is that dynastic composers are, on average, less prominent than their non-dynastic peers, and that this pattern is robust when comparing composers born in the same countries and historical periods, exposed to similar local environments, and holding comparable occupational profiles. We measure prominence using the length of each composer's biographical entry in *Grove Music Online*, a leading encyclopedia of music and musicians, where entry length reflects expert assessments of historical significance and correlates with output, influence, and recognition (Borowiecki et al., 2023, 2025; Borowiecki and Law, 2026). Using documented family relationships in *Grove*, we distinguish between dynasty founders, who have no known older composer-relative, and descendants, defined as later-born members of the lineage.[3] This distinction is central to the

[3] Disaggregating descendants by kin type would be ideal, but most such cells are very small. Our main results are robust to splitting descendants by generational distance from the founder.

analysis because it allows us to separate the performance of those who establish dynasties from that of later family members.

Looking more closely, we find that the dynastic discount is driven entirely by descendants. Founders, who establish new dynasties, perform about as well as outsiders, whereas descendants perform significantly worse. Within our framework, this pattern is difficult to reconcile with inherited human capital alone but aligns more closely with weaker selection among family insiders, consistent with inherited privilege. In line with this interpretation, dynasts are less likely to have formal training mentioned in their *Grove* biographies and more likely to be described as advancing through family connections, based on keyword and semantic similarity analysis. While lower rates of formal training could in principle reflect early exposure within families, that explanation sits uneasily with the underperformance of descendants relative to non-dynasts.

A potential concern is that our results reflect editorial bias. Because *Grove* is a curated reference work, dynasts may have been more likely to be included because of family ties, causing the observed discount to reflect asymmetric inclusion thresholds rather than genuine differences in prominence. To address this concern, we replicate the analysis using the *Répertoire International des Sources Musicales* (RISM), an independent archival catalog of surviving musical manuscripts.[4] Because RISM records which composers' works were historically copied, preserved, and circulated, it provides an independent measure of success not shaped by modern editorial discretion. The dynasty discount persists in the RISM data and is again driven by descendants rather than founders, making it unlikely that our results are driven by editorial selection.

We next examine how the dynastic discount evolved over time. The pattern is not stable: in the twentieth century, the dynasty discount reverses, with dynastic composers becoming more prominent, on average, than their non-dynastic peers. This reversal coincides with the rise of conservatories, which replaced informal, family-based apprenticeship with standardized instruction and selective admissions (Weber et al., 2001). Within our framework, conservatories are expected to narrow entry-cost differences between insiders and outsiders and to compress gaps in music-specific human capital by offering formal training to those without family-based access to expertise. Consistent with this interpretation, the dynasty discount is smaller in settings where formal training systems were established. Placebo tests, falsification exercises, and text-based proxies for formal training reinforce this result.[5] Taken together, these findings suggest that the spread of conservatories reshaped selection in the composition profession, weakening inherited advantage and increasing the importance of merit and standardized credentials.

A growing body of work shows that insider ties—whether strictly familial or more broadly social—can distort the allocation of talent in elite settings. Evidence on family dynasties finds that dynastic scholars underperform in historical academia, an effect that fades in Protestant regions and in high-return scientific fields (de la Croix and Goñi, 2024).

[4] RISM focuses on sources from c. 1600–1850, when dynasties were most common and manuscript survival is highest. To overturn the dynasty discount, preservation would need to be systematically more complete for non-dynasts, the opposite of what one might expect, since dynastic families often had stronger incentives to preserve their legacies. Any survival bias is therefore likely to attenuate our results.

[5] While our framework predicts narrowing rather than complete reversal, the twentieth-century premium may also reflect forces beyond the model's scope, such as complementarities between early exposure and formal training, greater name recognition in a mass-media era, or selective discouragement of entry by less talented descendants.

That study also offers a formal framework for distinguishing between nepotism and mean reversion, showing that dynastic underperformance is driven more by lower-ability sons than by exceptionally talented fathers. Studies of other inherited or socially mediated ties point to similar misallocations: firms run by family heirs earn lower returns (Pérez-González, 2006); connected candidates win election to elite science academies yet publish less (Fisman et al., 2018); and personal connections boost promotion chances in academia but reduce ex-post productivity (Zinovyeva and Bagues, 2015). Related work finds that credentialing reforms in Italy eliminated the advantage once enjoyed by dynastic lawyers, suggesting that changes in entry standards can mitigate inherited privilege (Raitano and Vona, 2021). Together, these findings motivate our analysis of musical dynasties and how credentialing reforms—via conservatories—altered the selection of talent over several centuries.

We extend this literature by focusing on a historical creative profession and by introducing several innovations in measurement and conceptualization. First, we distinguish between dynasty founders and descendants, enabling us to assess whether inherited access is associated with lower entry thresholds and weaker selection within families. Second, we define dynasties using extended kin networks—including siblings, cousins, and multigenerational links—rather than limiting attention to direct patrilineal succession, as is common in prior work. Third, we draw on a comprehensive biographical encyclopedia to map those kin networks, pair them with an independent archival catalogue (RISM), and develop text-based measures of formal training; this strategy broadens coverage beyond formal organizations, provides complementary outcome measures, and makes key human capital investments observable. Finally, we develop a simple model linking family background and training regimes to occupational sorting, which helps interpret observed changes in dynastic performance and generates testable predictions about selection dynamics.

Our results speak to research on human capital formation and credentialing. In Roy-style models, individuals sort into occupations or markets based on ability and returns, with patterns shaped by training costs, entry barriers, or migration incentives (e.g., Roy, 1951; Borjas, 1987; Heckman and Honoré, 1990). Conservatories acted as a credentialing reform: proximity to one narrows the dynasty discount, echoing evidence that modern credentials curb insider advantage in other professions by equalizing entry costs and lowering barriers for talented outsiders (e.g., Raitano and Vona, 2021). Similar patterns arise in academia, where changing entry barriers shifted the selection margin for women, producing a U-shaped pattern in relative performance (Iaria et al., 2024). We contribute to broader debates on how institutions shape the transmission of tacit knowledge. de la Croix et al. (2017) show how clan-, guild-, and market-based training systems influence the intergenerational transfer of skill. Our findings point to a similar change in music with the shift from family apprenticeship to conservatory training restructuring how musical knowledge was passed across generations. Building on recent text-as-data methods (see Gentzkow et al., 2019, for an overview), we convert historical biographies into structured measures—using keyword counts and sentence-embedding scores—to create novel proxies for formal training and broaden the toolkit for studying human capital investments in historical settings.

Finally, we contribute to cultural economics by analyzing how changing training structures affected access to creative careers. Prior work shows that copyright laws and agglomeration influenced creative output (Borowiecki, 2013; Giorcelli and Moser, 2020), while teacher-student linkages shaped stylistic transmission (Borowiecki, 2022). Our focus on dynastic access complements recent evidence that conservatories helped reduce gender gaps

in musical prominence (Borowiecki et al., 2025). By combining family linkages with editorial and archival measures of success, we show how artistic training systems shaped the allocation of creative talent.

The remainder of the paper proceeds as follows. Section 2 presents a Roy-style model that links family background, training regimes, and performance, highlighting how inherited privilege and inherited skill jointly shape selection into composition. Section 3 describes the data, explains how dynasties are identified, and details our two prominence measures. Section 4 presents the core finding: a dynasty penalty, driven by descendants, and confirmed with both *Grove* and RISM data. Section 5 turns to training. We show, first, that dynastic composers are less likely to have formal instruction mentioned in their biographies and that their *Grove* entries also place greater narrative emphasis on family connections as a route to advancement; second, that the dynasty discount flips to a premium after conservatories spread; and third, that the penalty is attenuated in times and places where conservatories are present. Section 6 concludes and offers a back-of-the-envelope estimate of the welfare loss from dynastic misallocation.

2 Conceptual framework

We develop a simple Roy-style model to illustrate how family background shapes both selection into composition and subsequent performance. Family ties can influence two parameters: the cost of entering the profession and the amount of music-specific human capital inherited prior to entry. These two channels jointly determine who becomes a composer and how successful those entrants are, on average. The model is deliberately stylized, intended to organize empirical predictions rather than provide a fully structural representation of dynastic transmission.

Each individual has a general ability a, which is productive both in composition and in alternative occupations. This ability is drawn from a common distribution $F(a)$, identical across all lineage types. In composition, effective ability ($\tilde{a_j}$) depends on general ability and inherited, music-specific human capital (h_j):

$$\tilde{a}_j = a + h_j,$$

where $j \in \{n, f, d\}$ indexes non-dynasts (n), founders (f), and descendants (d). Non-dynasts have no inherited musical human capital ($h_n = 0$) and face an entry cost c_n.[6] Founders may possess inherited musical capital ($h_f \geq 0$)—for instance, through early exposure or family involvement in music—but face similar entry costs as non-dynasts ($c_f \approx c_n$).[7] Descendants, by contrast, benefit from lower entry costs through family reputation, patronage, or networks ($c_d < c_f$) while inheriting a fraction of the founder's musical human capital ($h_d = \rho h_f$, with $0 < \rho < 1$).

[6] We normalize the inherited musical human capital of non-dynasts to zero without loss of generality. Only *differences* in inherited human capital across groups affect entry thresholds and comparative statics, so shifting all h_j by a constant has no effect on the model's predictions. This treatment is consistent with the occupational-choice and dynastic-persistence literature, such as Galor and Tsiddon (1997) and de la Croix and Goñi (2024), in which relative, not absolute, inherited advantages govern selection.

[7] Note that $h_f > 0$ does not require a composer ancestor. Early exposure to music in the household or informal instruction from family members who sang, played an instrument, or were otherwise involved in musical life is sufficient to generate an inherited human capital advantage.

An individual chooses between composing and pursuing an outside occupation. Expected payoffs are

$$\pi_C = r(a + h_j) - c_j, \qquad \pi_O = wa,$$

where r and w denote the returns to ability in composition (C) and outside work (O). The individual enters composition if

$$a \geq \tau_j = \frac{c_j - rh_j}{r - w}.$$

Lower entry costs or higher inherited human capital both reduce the threshold and make entry more likely.

The model yields three testable implications. First, founders face essentially the same entry costs as non-dynasts ($c_f \approx c_n$) but may possess additional inherited musical human capital ($h_f > 0$). Because the entry threshold is $\tau_j = (c_j - rh_j)/(r - w)$, this inherited skill lowers the threshold for founders relative to outsiders even though their entry costs are the same. As a result, founders and non-dynasts undergo nearly identical selection on innate ability, and any performance advantage for founders must come from h_f rather than from differences in entry cost. When inherited musical human capital is the dominant channel, this structure implies a founder premium: founders should outperform non-dynasts because their inherited skill augments effective ability without meaningfully altering selection on innate ability.[8] Second, descendants inherit lower entry costs ($c_d < c_f$) but possess less music-specific human capital ($h_d = \rho h_f$); weaker selection then leads them to underperform founders on average. Third, the relative performance of descendants and non-dynasts depends on the balance of these effects: when inherited skill dominates ($rh_d \gg c_n - c_d$), descendants may outperform non-dynasts (a human-capital effect), whereas when access advantages dominate, ($c_d \ll c_n$ and rh_d modest), descendants enter with lower innate ability and underperform (a privilege effect). Over time, inherited musical capital decays, generating mean reversion if family transmission is primarily skill-based; if privilege dominates, selection weakens and dynastic underperformance persists.

The institutional environment in which composers are trained shapes these dynamics. In particular, if conservatories reduce lineage-based access advantages by standardizing admissions and shrinking entry-cost differentials ($c_n - c_d$), and if they also narrow differences in music-specific human capital ($h_d - h_n$) by providing formal training to those without family-based instruction, then selection should become increasingly ability-based. Under these conditions, the performance gap between dynastic and non-dynastic composers is predicted to narrow following the spread of conservatories.[9]

[8] Formally, expected effective ability for lineage type j is $E[a + h_j \mid a \geq \tau_j] = E[a \mid a \geq \tau_j] + h_j$. Since $\tau_f = (c_f - rh_f)/(r - w) \leq \tau_n$, founders face a weakly lower selection threshold, implying $E[a \mid a \geq \tau_f] \leq E[a \mid a \geq \tau_n]$. Founders outperform outsiders when inherited musical capital h_f exceeds this difference in selected innate ability, a condition that can hold for realistic distributions of a.

[9] Online Appendix A presents two extensions of the framework. First, we allow returns to musical ability to differ across lineages: descendants who inherit positions or reputations may face flatter returns to talent ($r_d < r_n$), whereas founders and outsiders may operate in more competitive environments where returns are steeper ($r_f, r_n > r_d$). Second, we incorporate lineage-specific non-pecuniary motives for composing—such as family prestige—which lower entry thresholds analogously to a reduction in entry costs. These extensions increase the realism of the framework without altering its main comparative predictions.

3 Data

3.1 Sources and sample construction

Our primary dataset is constructed from *Grove Music Online*, an authoritative reference work on music and musicians. *Grove* includes entries on composers, performers, ensembles, genres, instruments, and musical terminology. As of 2024, the database contains over 60,000 entries, of which nearly 35,000—or approximately 57 percent—are biographical. Within this biographical subset, we identify more than 16,000 individuals whose occupational description includes "composer." This subset forms the basis for our analysis.

Each *Grove* biography follows a standardized format, typically including a main biographical section as well as additional sections such as "Works," "Writings," and "Bibliography." The main narrative provides a chronological account of the composer's life, including details about education, professional appointments, compositional milestones, and their influence on music history. Because this section is available for all individuals in our sample, we use its word count as our primary measure of prominence. This measure reflects editorial judgments about the subject's historical importance and is strongly correlated with other indicators of recognition, such as compositional productivity, scholarly attention, and inclusion in multiple reference sources.

We identify dynastic composers using *Grove*'s dedicated family entries, which provide structured accounts of prominent musical lineages.[10] A composer is classified as a dynast if they are listed within one of these family entries. Using this approach, we are able to identify a total of 247 musical dynasties consisting of a total of 670 composers. We designate as the *founder* the earliest-born individual in each family group; all others are treated as descendants. This classification relies exclusively on inclusion in *Grove*'s family entries and does not incorporate inferred or unverified kinship ties.[11]

To supplement our prominence measures, we incorporate data from the Répertoire International des Sources Musicales (RISM), which catalogs surviving musical manuscripts and printed sources. For each composer, we record the number of sources attributed to their name. This count provides an independent proxy for compositional output and historical circulation, capturing a dimension of prominence distinct from editorial assessments. Whereas *Grove* reflects curated evaluations of biographical significance, RISM offers a window into the documentary footprint of a composer's work. Consistent with this distinction, the Pearson correlation between *Grove* word count and RISM source counts is approximately 0.39, indicating that while the two measures capture related aspects of prominence, they are not interchangeable. This moderate correlation is helpful for our purposes: it shows that RISM provides genuinely independent information rather than simply replicating *Grove*'s editorial assessment.

One advantage of using *Grove* and RISM is the breadth and consistency of coverage they provide across historical periods and geographic regions. *Grove*'s editorial oversight ensures structured entries and clearly defined family groupings. RISM, in turn, contributes a complementary perspective by documenting the physical survival of musical works.

[10] See Online Appendix Fig. A.8 for an example of a *Grove* family entry.

[11] We also experimented with identifying dynasties by linking individuals based on shared surnames, conditional on geographic and temporal proximity, but this approach produced too many false positives due to common family names.

Because its source counts are based on archival cataloging rather than narrative curation, RISM is especially valuable for capturing the historical footprint of lesser-known composers who may receive limited biographical treatment in *Grove*. A key limitation, however, lies in the uneven availability of biographical information about family connections. Prominent composers have more detailed biographical entries and, are therefore more likely to be included in family groupings if applicable. In contrast, dynastic ties may go unrecorded for obscure individuals in two ways: their relatives—such as composer-parents—may not be included in *Grove* at all, or their entries may omit mention of familial relationships even when both individuals are present. This generates a form of non-classical measurement error, in which the likelihood of correctly identifying a dynast increases with prominence. As a result, true dynasts are more likely to be misclassified at the lower end of the prominence distribution. We return to this issue when interpreting our main results.

To examine broader changes in the training of composers, we supplement our dataset with information on the founding dates of music conservatories. These data are drawn from the International Directory of Music & Music Education Institutions (IDMMEI), an initiative affiliated with UNESCO that compiles information on post-secondary schools offering degrees in music or music education. From this source, we identify 2,174 conservatories worldwide, recording each school's name, location (city, state, and country), and founding year. Founding dates are extracted manually from the descriptive text associated with each entry, and all locations are geocoded. These data allow us to track the historical expansion of formal music training and to examine how the growth of conservatories relates to the decline of family-based transmission within the profession

3.2 Descriptive statistics

Table 1, Panel A reports summary statistics for individual composers. The sample includes more than 16,000 composers born between 450 CE and the end of the twentieth century, with mean birth and death years of 1825 and 1848. Roughly four percent are identified as dynasts, meaning they appear in a *Grove* family entry, though this likely understates the true prevalence of dynastic ties among lesser-known figures. The average composer in the sample was therefore born during the Romantic era, when the number and visibility of professional composers expanded substantially.

Grove also reports composers' additional occupations, many of which overlap. About ten percent are identified as conductors and another ten percent as pianists or organists, with smaller shares listed as teachers, violinists, or singers. Such overlap is especially common among earlier composers, who often combined composing with performing, church music, and teaching, whereas twentieth-century composers were more likely to specialize.

Prominence is measured using word counts from the main sections of *Grove* entries. The average main biographical entry contains 490 words, though the distribution is highly skewed: Beethoven's exceeds 50,000. The "Works," "Bibliography," and "Writings" sections show similar dispersion. The average number of RISM sources is 151, but this too varies widely, from zero to several thousand.

Panel B reports summary statistics at the dynasty level. The average dynasty contains just over four composers, with the largest including 18. Dynastic composers are concentrated in earlier periods: their mean birth and death years are 1737 and 1771, placing the average dynast in the late Baroque or early Classical era, before the rise of nineteenth-century

Table 1 Summary statistics

	Obs.	Mean	SD	Min	Max
Panel A: Composer-level					
Birth year	13,999	1,824.50	132.92	450.00	1,995.00
Death year	11,588	1,848.14	143.35	360.00	2,023.00
Dynastic	16,076	0.04	0.20	0.00	1.00
Additional occupations					
Conductor	16,076	0.10	0.31	0.00	1.00
Organist	16,076	0.10	0.30	0.00	1.00
Pianist	16,076	0.10	0.30	0.00	1.00
Teacher	16,076	0.08	0.27	0.00	1.00
Violinist	16,076	0.05	0.22	0.00	1.00
Singer	16,076	0.04	0.20	0.00	1.00
Prominence measures					
Main description	16,076	489.57	1,383.57	11.00	51,289.00
Works	16,076	230.37	807.26	0.00	36,340.00
Bibliography	16,076	102.00	366.67	0.00	12,249.00
Writings	16,076	12.17	52.46	0.00	1,328.00
Number of sources (RISM)	5,488	150.76	586.08	0.00	18,306.00
Panel B: Dynasty-level					
First birth	239	1,737.42	93.32	1,499.00	1,956.00
Last birth	239	1,770.85	91.82	1,508.00	1,956.00
Last death	241	1,829.90	96.57	1,432.00	2,010.00
Size	247	4.18	1.94	2.00	18.00
Avg. word count	247	640.15	1,206.03	57.00	10,836.50
Max. word count	247	1,443.81	4,132.45	57.00	42,133.00

Notes: The prominence measures "Main description," "Works," "Bibliography," and "Writings" refer to the word count of the corresponding sections in *Grove* biographies. "Number of sources" refers to the count of sources associated with the composer in RISM. "Avg. word count" and "Max. word count" refer to the average and maximum number of words, respectively, in the main description for members of a given dynasty in Grove

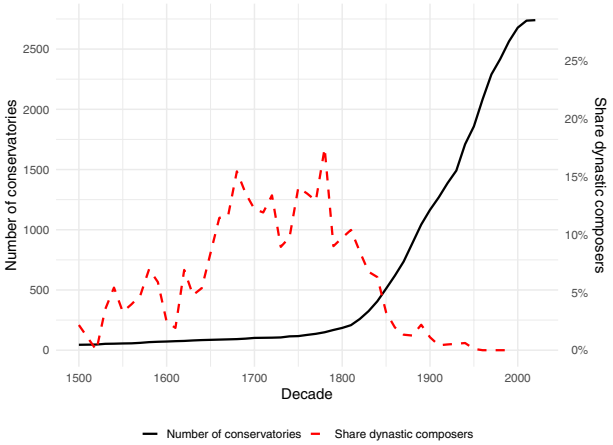
conservatory training. *Grove* entries for dynasty members are longer on average than those in the full sample, but the gap between mean and maximum word count within dynasties indicates substantial internal heterogeneity, with many families containing one especially prominent figure alongside lesser-known relatives.

3.3 Dynastic patterns over time

The presence of dynastic composers has varied substantially over the course of music history. As shown in Fig. 1, dynastic representation rose from an average of 4.5 percent in the sixteenth century to 8.5 percent in the seventeenth and just over 12 percent in the eighteenth-century, before falling sharply after 1800 to 4.2 percent in the nineteenth century and only 0.5 percent in the twentieth. This pattern suggests that family-based transmission played a much larger role in earlier periods of musical life than in the modern era.

Figure 1 also shows that this decline coincided with the spread of formal music education. Conservatory openings remained limited until the nineteenth century and then increased rapidly, especially after 1850, as the dynastic share of composers fell. This divergence is

Fig. 1 The decline of dynasties and the rise of conservatories



Notes: This figure plots the fraction of composers in each birth cohort who are part of a dynasty and the cumulative number of conservatory openings.

Table 2 Representation of dynastic composers by region

Region	Share dynastic (%)
France	8.65
Low Countries	8.30
Germanic Countries	8.09
Italy	5.37
British Isles	5.23
Russia	2.11
USA	0.51
Rest of World	2.12
Global average	**4.17**

Notes: This table shows the share of composers identified as dynastic according to *Grove* family groupings by geographical region. The global average is reported for comparison

consistent with the view that conservatory-based training reduced the importance of family-based transmission by broadening access to formal instruction.

Table 2 shows substantial regional variation in dynastic representation. Dynastic affiliation was most prevalent in France, the Low Countries, and the Germanic countries, where over 8 percent of composers were dynasts. Shares were lower in Italy and the British Isles and much lower in Russia, the United States, and the rest of the world. One possible explanation is that Russia and the United States entered the Western classical tradition later, when formal training had become more important and dynastic transmission had less scope to become entrenched.[12]

Figure 2 plots the lifespan of each dynasty with at least one composer recorded in *Grove*. Dynasty lifespans are measured from the birth year of the founder to the death year of the last descendant. Each horizontal line represents a single dynasty, sorted vertically by the birth year of its founder. The figure reveals a concentration of dynasties between 1600 and

[12] For example, Pyotr Ilyich Tchaikovsky (1840–1893) was among the first graduates of the Moscow Conservatory in the 1860s, while Edward MacDowell (1860–1908) trained at conservatories in Paris and Frankfurt. These cases suggest that prominent composers from later-emerging national traditions often came of age after formal training was already available, leaving less scope for dynastic transmission to become entrenched.

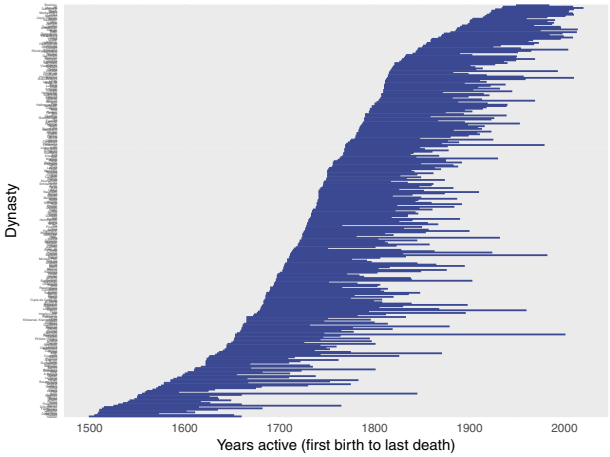


Fig. 2 Lifespan and historical clustering of composer dynasties

Notes: Each horizontal line represents a dynasty, defined as a *Grove* family entry with at least one composer. Lines span from the birth year of the founder to the death year of the last descendant in the family. Dynasties aresorted vertically by founding date.

1800, with particularly dense activity in the eighteenth century. The relatively steep slope of the curve during this period reflects a rapid rate of dynasty formation. In contrast, the curve flattens after 1800, indicating that new dynasties became increasingly rare. Most dynasties were relatively short-lived, typically spanning about 80 to 130 years, or roughly three to five generations.[13] The overall pattern confirms that dynasties were historically concentrated in earlier periods, when musical training and employment were often mediated by family ties.

How large were dynasties in terms of membership? Fig. 3 reports the distribution of dynasty sizes. Most dynasties were small: nearly half consisted of exactly three composers, and the number declines steadily as family size increases. Large dynasties were rare, although a few—most famously the Bach family—contained more than ten composers. This pattern suggests that dynastic transmission in composition was typically limited to a few closely connected relatives rather than sustained through very large lineages.

4 Dynasty and prominence: empirical analysis

4.1 Baseline estimates of the dynasty effect

To estimate the relationship between dynastic background and a composer's prominence, we begin with the following general specification:

$$\log(Y_i) = \beta \cdot Dynastic_i + \alpha_c + \delta_t + \theta_o + \eta_j + \varepsilon_i \tag{1}$$

In this equation, Y_i denotes a measure of prominence for composer i. Our primary specification uses the natural logarithm of the word count in the main biographical entry in *Grove Music Online*, but we also estimate parallel regressions using the number of sources attributed to each composer in the Répertoire International des Sources Musicales (RISM),

[13] The distribution of dynasty lifespans peaks around 100–110 years, and only 15 dynasties persist for more than 200 years.

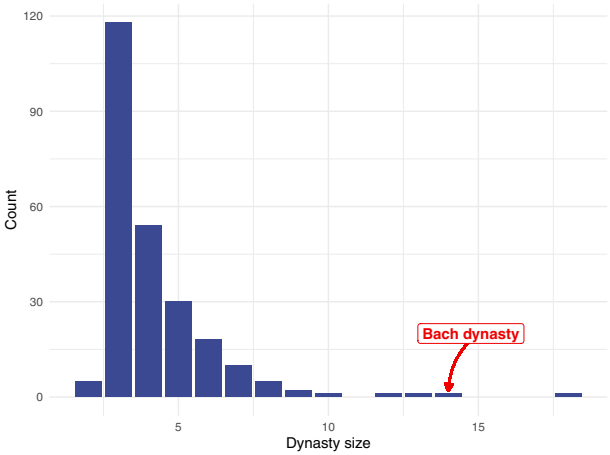


Fig. 3 Distribution of dynasty size by number of members

Notes: This histogram shows the distribution of dynasty sizes, measured by the number of composer-members identified within each Grove family entry.

applying the transformation $log(Y_i + 1)$ in that specification to accommodate zero values in the number of sources. The variable $Dynastic_i$ is a binary indicator equal to one if composer i is listed as part of a musical family based on *Grove*'s family entries. The specification includes fixed effects for country of birth (α_c), to control for geographic variation in opportunities and documentation; for half-century-of-birth cohort (δ_t), to absorb long-run historical changes in the size and structure of the composer population and to account for differences in average prominence across musical eras; for occupation (θ_o), to capture systematic differences in prominence across occupational categories; and—when using *Grove* as the outcome—for biographical author (η_j), to control for stylistic variation across contributors. Standard errors are clustered at the country level.[14]

Columns (1) to (4) of Table 3 presents the results using *Grove* word count as the outcome variable. In the baseline specification (column 1), which includes country and cohort fixed effects, the coefficient on the dynastic indicator is negative and statistically significant, implying that dynastic composers are less prominent than their non-dynastic counterparts. Adding occupation fixed effects in column (2) does little to alter the estimate, suggesting that the discount is not driven by systematic differences in the types of roles dynasts held.[15] Column (3) adds author fixed effects to account for variation in contributor style. The estimated discount increases slightly in magnitude to 0.156 log points, equivalent to a 14.4 percent reduction in word count. When all fixed effects are included (column 4), the magnitude increases slightly, to 0.162 log points (15 percent discount). The dynasty discount is also robust to alternative specifications that use word counts from other *Grove* sections—including "Works," "Writings," and "Bibliography"—as dependent variables (see Online Appendix Table A.5). These sections capture different facets of historical recognition: productivity

[14] Occupation fixed effects are constructed as non-exclusive binary indicators based on the six most frequent occupations in *Grove*. These categories cover the majority of cases while avoiding sparse dummies that would add noise and inflate dimensionality. Our results remain unchanged when we instead include dummies for every occupation occurring in at least 100 biographies.

[15] In an alternative specification (not shown), we control directly for the number of occupations instead of including occupation fixed effects. The results are nearly identical, indicating that occupational diversification does not explain the dynasty discount.

Table 3 Dynasty premium

	log(word count)				log(num. sources + 1)	
	(1)	(2)	(3)	(4)	(5)	(6)
Dynastic	-0.091^{**}	-0.093^{**}	-0.156^{***}	-0.162^{***}	-0.261^{**}	-0.244^{**}
	(0.045)	(0.046)	(0.048)	(0.047)	(0.100)	(0.110)
Country FE	✓	✓	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓	✓	✓
Occupation FE		✓		✓		✓
Author FE			✓	✓		
Observations	13,387	13,387	11,081	11,081	5,092	5,092
Adjusted R^2	0.045	0.048	0.311	0.315	0.267	0.270

Notes: The dependent variable in columns (1)–(4) is the natural logarithm of the number of words in the main description of composer *i* in Grove. The dependent variable in columns (5)–(6) is the natural logarithm of one plus the number of sources in RISM associated with composer *i*. *Dynastic* is a binary variable equal to one if composer *i* is part of a dynasty. Standard errors are clustered at the country level. Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$

(works), scholarly contributions (writings), and later citations or biographical treatments (bibliography). The findings from *Grove* are therefore consistent with the inherited privilege channel dominating: the negative coefficient suggests that lower entry costs weakened selection on innate ability, leading to reduced average prominence as reflected in expert assessments.

Columns (5) and (6) of Table 3 present analogous regressions using RISM source counts as the dependent variable. As with the *Grove* results, dynastic composers appear less prominent than their non-dynastic counterparts. In the baseline specification (column 5), the dynasty coefficient is -0.261, corresponding to 23.0 percent fewer sources. When occupation fixed effects are included (column 6), the magnitude remains similar (-0.244 log points, or 21.6 percent fewer sources). That a similar dynasty discount emerges using a completely independent measure of prominence helps to alleviate concerns that measurement error in our primary success measure is driving the results.

These results help address two additional empirical concerns. First, our primary measure of prominence—*Grove* entry length—may be subject to editorial bias. Dynastic composers, especially descendants, might be included for the sake of genealogical completeness, while non-dynasts must clear a higher bar, producing a mechanical dynasty discount. Our inclusion of RISM mitigates this concern by providing an outcome based on archival evidence of source survival rather than editorial curation. That the discount persists—and indeed appears more pronounced—when using RISM suggests the pattern is not simply an artifact of asymmetric inclusion thresholds. Second, dynastic status is likely measured with error: some composers may be misclassified as non-dynasts either because relatives are omitted from *Grove* or because family ties are unreported. If this error is classical, it attenuates the coefficient toward zero; if non-classical—e.g., if prominent figures are more likely to have documented family ties—it biases our estimates upward. In either case, the true dynasty discount is likely larger than what we report, reinforcing our interpretation that dynastic composers, especially descendants, were on average less prominent than their peers.[16]

[16] We addressed survivorship bias in RISM earlier, noting that any such bias would likely attenuate our estimates, making the observed dynasty discount a lower bound.

4.1.1 Robustness checks

To assess the stability of the dynasty discount, we estimate two additional sets of specifications that tighten the comparison groups. First, we include country-by-cohort fixed effects, which absorb broad cross-country differences in historical institutions—such as copyright regimes, patronage systems, and modes of musical training—as well as period-specific editorial practices in *Grove*. Second, because country-level categories can mask important local variation (and because national borders shifted over the long period we study), we re-estimate the models with sub-national fixed effects at the city, municipality, or district of birth.[17] These finer controls compare composers from the same locality and absorb persistent regional differences in training or market conditions. As shown in Online Appendix Tables A.6 and A.7, the dynasty discount remains negative and statistically significant.[18]

A second set of robustness checks examines whether the dynasty discount depends on the functional form used to model prominence. Specifically, we supplement the baseline log specification with two common alternatives to the log transformation: percentile ranks and the inverse hyperbolic sine (IHS). Percentile ranks place composers on a uniform 0–1 scale that is unaffected by extreme values, while the IHS provides a smooth, log-like transformation that naturally accommodates zero observations. As shown in Online Appendix Table A.8, the estimated dynasty coefficients remain negative and of comparable magnitude using both approaches—the percentile-rank regressions imply a decline of roughly 5–10 percentile points, and the IHS estimates show similarly sized penalties—indicating that the dynasty discount is not driven by the choice of transformation.

A final robustness check uses unconditional quantile regressions (Firpo et al., 2009) to examine whether the dynasty discount varies across the prominence distribution (see Online Appendix Fig. A.9). For *Grove*, the estimated effect is negative at low quantiles, hovers around zero through most of the middle, and turns positive only at the very top, where a handful of exceptionally prominent dynasts drive the reversal. For RISM, the dynasty effect is negative across nearly the entire distribution, becoming imprecise only at the extreme upper tail. This pattern suggests that, on average and for most of the distribution, the privilege channel dominates the human-capital channel for dynasts: more marginal, lower-prominence composers are drawn into the profession under weaker selection thresholds. The fact that a few dynastic families (e.g., the Bachs) reach very high prominence shows that dynastic background can also coincide with unusually strong within-family advantages, but these cases are the exception rather than the rule.

4.2 Founders versus descendants

The dynasty discount estimated in Section 4.1 reflects the average prominence gap between composers from dynastic families and their non-dynastic peers, but this average may mask differences within dynasties themselves. Distinguishing between *founders*—the first family

[17] Sub-national administrative boundaries are obtained from Runfola et al. (2020), which provides globally consistent boundary definitions.

[18] Because the gender composition of composers varies over time and may be correlated with dynastic status, it is also useful to verify that gender differences do not drive our results. Including a female indicator in the baseline regressions leaves the magnitude, sign, and statistical significance of the dynasty premium essentially unchanged.

members to achieve recognition—and their *descendants* helps disentangle the two mechanisms outlined in Section 2. If dynastic persistence arises mainly through inherited human capital, founders should outperform non-dynasts, reflecting both individual talent and early exposure, with descendants gradually regressing toward the mean as inherited skills decay. If instead it stems from inherited privilege, founders—who faced similar entry barriers as outsiders—should perform about the same as non-dynasts, while descendants, benefiting from name recognition or family connections that lowered entry costs, should underperform.[19]

To assess which mechanism dominates, we next estimate regressions that separately identify the performance of founders and descendants relative to non-dynasts:

$$\log(Y_i) = \beta_1 \cdot Founder_i + \beta_2 \cdot Descendant_i + \alpha_c + \delta_t + \theta_o + \eta_j + \varepsilon_i \tag{2}$$

As before, Y_i is a measure of the prominence of composer *i*—either the word count of their *Grove* entry or the number of sources attributed to them in RISM. The variable $Founder_i$ is an indicator equal to one for the first born member of a dynasty, while $Descendant_i$ is an indicator equal to one for any subsequent member of a dynasty. The reference group is therefore the set of non-dynastic composers (i.e., those for whom both indicators are equal to zero). Under this coding, the coefficient β_1 captures the average difference in prominence between founders and non-dynasts, while β_2 captures the difference between descendants and non-dynasts. The difference between founders and descendants is therefore given by the $\beta_1 - \beta_2$. We also include country-of-birth fixed effects (α_c), half-century of birth fixed effects (δ_t), occupation fixed effects (θ_o) and—when using Grove word count as the outcome—author fixed effects (η_j).

Columns (1) to (4) of Table 4 present the results using Grove word count as the dependent variable, while columns (5) and (6) report the corresponding estimates based on the number of sources in RISM. Regardless of specification or measure of prominence, founders are statistically indistinguishable from non-dynasts, while descendants are significantly less prominent than non-dynasts by between 16 and 28 percent. The difference between founders and descendants is statistically significant in the *Grove* regressions, indicating that descendants are less prominent than the founders of their lineages. This pattern suggests that dynastic underperformance reflects weaker selection among later-born entrants rather than family background per se. The fact that founders are roughly average while descendants are below average is also difficult to square with the human capital channel, which predicts exceptional founders followed by mean reversion toward average descendants. Instead, the pattern is more consistent with family ties lowering entry thresholds for later generations.

To examine how prominence varies across successive generations within dynastic families, we further disaggregate descendants according to their generational distance from the founder. Birth-year spacing provides a natural way to approximate lineage positions: composers born within roughly 20 years of the founder (generation 0) are most plausibly younger siblings or cousins; those born 20–40 years later (generation 1) are typically children, nephews, or nieces; those born 40–60 years later (generation 2) correspond to grandchildren or grand-nephews; and those born more than 60 years later (generation 3+) represent later

[19] In many early modern contexts, musical appointments were transmitted informally within families; in Thuringia, for example, where the Bach family was active in the seventeenth and eighteenth centuries, the name "Bach" became so closely associated with musical employment that it was commonly used as a synonym for "musician" (Hanning, 2014, p. 274).

Table 4 Founders and descendants relative to non-dynasts (pooled descendants)

	log(word count)				log(num. sources + 1)	
	(1)	(2)	(3)	(4)	(5)	(6)
Founder	0.030	0.022	−0.009	−0.019	−0.127	−0.119
	(0.055)	(0.053)	(0.079)	(0.078)	(0.111)	(0.099)
Descendant	−0.179**	−0.177**	−0.278***	−0.282***	−0.349*	−0.326*
	(0.078)	(0.079)	(0.056)	(0.054)	(0.175)	(0.188)
Country FE	✓	✓	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓	✓	✓
Occupation FE		✓		✓		✓
Author FE			✓	✓		
p-value (β_1 - $\beta_2 = 0$)	0.057	0.064	0.002	0.002	0.354	0.382
Observations	13,387	13,387	11,081	11,081	5,092	5,092
Adjusted R^2	0.046	0.049	0.313	0.317	0.267	0.270

Notes: The dependent variable in columns (1)–(4) is the natural logarithm of Grove word count. The dependent variable in columns (5)–(6) is the natural logarithm of the number of RISM sources plus one. *Founder* is a binary indicator equal to one for the first-born composer in a given dynasty. *Descendant* is a binary indicator equal to one if a composer is a dynast descendant. The omitted category is *non-dynasts*. The p-value is from an F-test that the difference of the coefficients on *Founder* and *Descendant* equals zero. Standard errors are clustered at the country level. Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

collateral branches. This decomposition allows us to assess whether the prominence gap between founders and later family members narrows, widens, or remains stable across generations, thereby clarifying the generational pattern underlying dynastic persistence.

Across all specifications and for both measures of prominence, the estimates in Table 5 display a clear pattern. Founders remain statistically indistinguishable from non-dynasts, while most descendant generations are substantially less prominent than non-dynasts. The magnitude of underperformance is largest for the groups closest to the founder, particularly generation 0 and generation 1; for later generations, the point estimates remain mostly negative but become increasingly imprecise, reflecting smaller sample sizes.[20] This pattern is difficult to reconcile with a pure inherited human capital story, which would predict exceptionally prominent founders and a gradual regression toward the mean. Instead, descendants underperform relative to outsiders from the earliest descendant cohort onward, consistent with weaker selection thresholds for entry into the profession. The generational decomposition therefore reinforces the main conclusion from the founder–descendant analysis: dynastic persistence reflects lowered barriers to entry rather than the intergenerational transmission of unusually high ability.[21]

To this point, our analysis has compared founders and descendants to non-dynasts in the full sample. While informative, these comparisons may still reflect systematic differences

[20] The fact that the generation 0 group, likely comprising younger siblings or cousins who entered under conditions similar to the founder's, already performs well below non-dynasts is especially consistent with lowered entry thresholds rather than inherited ability.

[21] Online Appendix B reports a related exercise based on intergenerational elasticities in prominence, estimated by generational distance from the founder. The estimated elasticities are generally modest, though they vary across generations and between *Grove* and RISM, while the main-effect coefficients are typically negative, indicating that descendants tend to be less prominent than founders on average. Because both inherited ability and inherited privilege can generate positive intergenerational association, we treat these estimates as descriptive benchmarks rather than evidence for one mechanism over another.

Table 5 Founders and descendants relative to non-dynasts by generational distance

	log(word count)				log(num. sources + 1)	
	(1)	(2)	(3)	(4)	(5)	(6)
Founder	0.030	0.022	−0.008	−0.018	−0.126	−0.119
	(0.055)	(0.053)	(0.077)	(0.076)	(0.111)	(0.099)
Descendants (by generational distance from founder)						
Descendant, gen. 0	−0.282***	−0.291***	−0.273***	−0.285***	−0.643***	−0.626***
	(0.060)	(0.058)	(0.075)	(0.073)	(0.138)	(0.142)
Descendant, gen. 1	−0.264***	−0.269***	−0.311***	−0.323***	−0.391***	−0.363**
	(0.096)	(0.096)	(0.083)	(0.083)	(0.117)	(0.142)
Descendant, gen. 2	−0.134	−0.111	−0.339***	−0.323***	−0.320	−0.299
	(0.134)	(0.122)	(0.107)	(0.105)	(0.413)	(0.407)
Descendant, gen. 3+	0.115	0.126	−0.095	−0.096	0.147	0.164
	(0.188)	(0.193)	(0.086)	(0.087)	(0.406)	(0.418)
Country FE	✓	✓	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓	✓	✓
Occupation FE		✓		✓		✓
Author FE			✓	✓		
Observations	13,387	13,387	11,081	11,081	5,092	5,092
Adjusted R^2	0.046	0.050	0.313	0.317	0.268	0.271

Notes: The dependent variable in columns (1)–(4) is the natural logarithm of Grove word count. The dependent variable in columns (5)–(6) is the natural logarithm of one plus the number of RISM sources linked to composer *i*. *Founder* is an indicator equal to one for the first-born member of a dynasty. The descendant indicators classify dynastic composers by their generational distance from the founder: generation 0 (born within 20 years of the founder), generation 1 (20–40 years later), generation 2 (40–60 years later), and generation 3+ (more than 60 years later). The omitted category is non-dynastic composers. All specifications include country-of-birth and half-century-of-birth fixed effects; columns (2), (4), and (6) additionally include occupation fixed effects, and columns (3) and (4) include author fixed effects. Standard errors are clustered at the country level. Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

across families—some lineages are simply more visible, more extensively documented, or more historically esteemed than others. To verify that this difference is not driven by variation across families, we estimate a within-dynasty specification that includes dynasty fixed effects and restricts the sample to composers from dynastic lineages. This design compares founders and descendants from the same family while holding constant dynasty-level prominence and editorial inclusion thresholds. By absorbing family-specific visibility and reputation effects—for instance, the greater editorial attention or name recognition accorded to prominent lineages such as the Bachs—the within-dynasty approach yields a more credible estimate of the prominence gap attributable to founder status.

We implement this strategy by estimating the following within-dynasty regression model:

$$\log(Y_{id}) = \beta \cdot Founder_{id} + \gamma_d + \alpha_c + \delta_t + \varepsilon_{id} \tag{3}$$

Here, $\log(Y_{id})$ denotes a measure of the prominence of composer *i*'s within dynasty *d*, proxied either by the word count of their *Grove* entry or by the number of sources attributed to them in RISM. The variable $\mathrm{Founder}_{id}$ is a binary indicator equal to one if composer *i* is the earliest-born member of their dynasty. The model includes dynasty fixed effects γ_d, which

absorb all family-level characteristics that are shared by members of the same lineage, as well as country-of-birth fixed effects (α_c) and half-century-of-birth cohort fixed effects (δ_t).

The results, displayed in Table 6, confirm that founders are substantially more prominent than other members of their family. In the *Grove* regressions, founders have biographical entries that are more than 50 percent longer than those of their dynastic descendants. The effect is even larger in the RISM regressions, where founders have at least 80 percent more surviving sources. These results are robust to the inclusion of additional controls for chronological position within the family, such as the number of years since the birth of the dynasty founder and an indicator for whether the composer is the last-known member of their dynasty. Because these estimates are identified from within-dynasty variation, they provide stronger evidence that the prominence gap between founders and descendants reflects real differences in selection, not unobserved variation across dynasties.

As a further check, we examine how a composer's prominence varies with their position in the birth order within the dynasty. Rather than relying solely on a binary founder–descendant distinction, we estimate a model in which each dynasty member is categorized based on their chronological position within the family. Figure 4 plots the resulting coefficients, using the founder (first-born) as the reference group and including dynasty, country, and cohort fixed effects. All descendant categories lie well below zero, confirming that later family members are, on average, less prominent than the dynasty founder.

5 Training and access pathways, conservatories, and the transformation of dynastic advantage

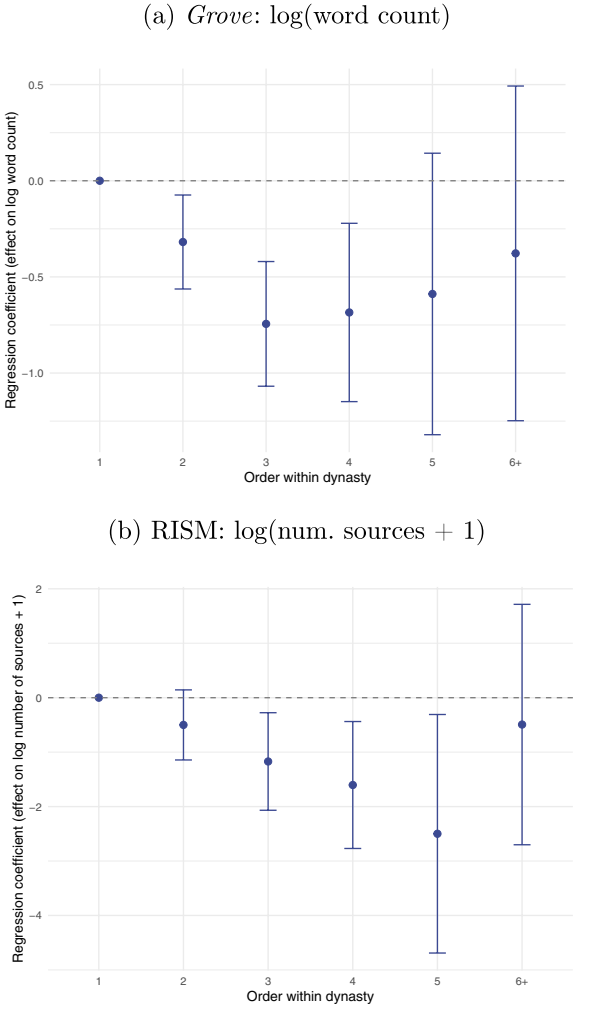
The evidence presented so far shows that dynasty founders are, on average, no more prominent than non-dynasts, while their descendants perform markedly worse. This pattern sits uneasily with mean reversion and aligns more naturally with the view that dynastic ties lowered entry thresholds for later generations. However, that interpretation is based on outcomes, not on the investments or pathways that led to them. To probe the mechanism more directly, we turn to text evidence from *Grove* biographies.

Table 6 Within-dynasty premium

	log(word count)			log(num. sources + 1)		
	(1)	(2)	(3)	(4)	(5)	(6)
Dynasty founder	0.418^{***}	0.424^{***}	0.424^{***}	0.640^{**}	0.585^{*}	0.648^{**}
	(0.107)	(0.105)	(0.112)	(0.277)	(0.281)	(0.300)
Years since founder		0.001			−0.007	
		(0.004)			(0.008)	
Last member			−0.037			−0.782
			(0.131)			(0.586)
Country FE	✓	✓	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓	✓	✓
Dynasty FE	✓	✓	✓	✓	✓	✓
Observations	501	501	497	311	311	307
Adjusted R^2	0.206	0.204	0.204	0.230	0.227	0.231

Notes: *Years since founder* is the difference in birth years of composer *i* in dynasty *d* and its founder. *Last member* is a binary indicator equal to one if composer *i* is the last-born member of dynasty *d*. Standard errors are clustered at the country level. Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Fig. 4 Effect of order within dynasty on prominence



Notes: Each panel reports coefficients from regressions of the displayed prominence measure on within-dynasty order, controlling for dynasty fixed effects, country fixed effects, and half-century fixed effects. Error bars show 95% confidence intervals. Panel (a) uses *log(word count)* ; Panel (b) uses *log (num. sources + 1)*.

Our text-analysis approach allows us to examine two complementary dimensions of early-career formation. First, we analyze the extent to which biographies emphasize formal musical training, using both keyword-based measures and semantic similarity metrics. If dynastic composers—especially descendants—entered under weaker selection thresholds, we would expect their biographies to devote less attention to structured instruction, either because they received less of it or because such training was less essential for securing early opportunities. Second, we construct a semantic measure of how strongly a biography emphasizes family connections or patronage in explaining a composer's entry into the profession. Whereas the training measures speak to investments in skill acquisition, this connection-oriented index speaks to the channels of opportunity and advancement. Together, these text-based indicators characterize the pathways through which dynastic composers

entered the profession and allow us to assess whether their routes differed systematically from those of non-dynasts.

While the textual analysis sheds light on whether dynasts relied on lower-cost or less formal entry routes, it does not, by itself, reveal how the prominence gap between dynasts and non-dynasts changed as the broader training environment evolved. To investigate how these developments shaped the dynasty effect, we proceed in two steps. First, we estimate cohort-specific dynasty coefficients to trace how the prominence differential shifted over time as conservatories expanded across Europe and North America. Second, we test whether the discount varied across space by linking composers' birthplaces and dates to a proxy for local access to formal training. In the Roy framework developed earlier, the spread of conservatories should narrow the advantage of dynastic background by reducing differences in both entry costs and acquired human capital between dynasts and outsiders. Thus, the dynasty gap should shrink in periods and places where formal training became more accessible.

5.1 Training and access pathways into the profession

We use two complementary approaches to measure the emphasis on formal musical training in *Grove* biographies. The first relies on keyword analysis. We identify references to formal training in each composer's entry using a curated list of training-related terms.[22] Specifically, we code whether a biography contains any training reference, the number of times such keywords appear, and the fraction of words in the biography devoted to training-related content per 100 words. The keyword list is derived from word frequencies in the IDMMEI database's descriptions of conservatories, academies, and other music schools. Because these profiles emphasize the core features of credential-based instruction, the most frequent terms provide a data-driven proxy for the language of formal musical education. To ensure relevance, we remove common stopwords and retain only terms that appear at least five times across all profiles. Keywords that could refer to informal or familial contexts (e.g., "training" or "student") are excluded to ensure that the list reflects formal educational pathways rather than more diffuse learning environments. To validate this approach, we plot the share of *Grove* composer biographies with training-related keywords by birth-decade cohort against the number of conservatory openings by decade. The two series track each other closely ($r = 0.92$), supporting the use of keywords as a proxy for exposure to formal training.[23]

The second approach constructs a continuous index using pre-trained sentence embeddings from the Sentence Transformers library.[24] Each biography is represented as a vector that captures the contextual meaning of its sentences. We score these vectors based on their alignment with a semantic axis running from informal to formal training, defined by contrasting sets of anchor sentences such as "He earned a degree in composition from a prestigious institution" versus "He picked up piano by ear with no formal instruction." This method improves on the keyword-based approach by capturing semantic meaning even when biographies use varied phrasing or implicitly refer to formal instruction. It also avoids misclassification in cases where keywords like "conservatory" appear in a negated context.

[22] See Online Appendix C for more details

[23] See Online Appendix C, Fig. A.1.

[24] See Online Appendix D for more details on the construction of this index as well as for validation tests.

We focus initially on the first quarter of each biography, where early-life education and training are most likely to be discussed. This segment provides the clearest window into the conditions under which composers entered the profession, making it the most relevant for assessing whether founders, descendants, and non-dynasts followed different preparatory pathways. To evaluate the scope and persistence of any differences, we also replicate the analysis using the full text of each biography. This serves as a diagnostic check: if the dynastic gap is concentrated in the early part of the text and attenuates thereafter, it supports the interpretation that dynasts were less reliant on formal training at the point of entry, rather than reflecting systematic differences in the overall depth or structure of biographical coverage. This logic applies to both the keyword-based and embedding-based measures, each of which is computed separately for the first quarter and the full biography. All regressions control for log word count and include fixed effects for country and birth cohort to ensure comparability across biographies of different lengths, regions, and historical contexts.

Panel (a) of Table 7 reports the results for the first quarter of each biography, where early-life education is typically described. Relative to non-dynasts, dynastic descendants are about 15 percentage points less likely to have any mention of formal musical training, a sizable gap given the sample mean of 0.56. They also have significantly fewer training-related words, a lower fraction of training references, and a smaller score on the embedding-based formality index. Founders fall in between: they are more likely than descendants, but less likely than non-dynasts, to have formal training documented. This gradient suggests that formal instruction played a smaller role within dynastic families—most notably among descendants—consistent with the idea that inherited musical knowledge and access tended to substitute for credentialed education.

Panel (b) extends the analysis to the full biographies. The estimated differences remain statistically significant in most specifications but are smaller than in the early-life results. Dynastic descendants are about 11 percentage points less likely than non-dynasts to have any mention of formal training, a decline of roughly 30 percent relative to the first-quarter estimate. The count and fraction of training-related keywords also shrink in magnitude, and the embedding-based index shows a similarly attenuated gap. Founders fall between descendants and non-dynasts, suggesting that differences in formal instruction diminished gradually across dynastic generations. The attenuation of the dynast–non-dynast gap when the full biography is used likely reflects the inclusion of mid- and late-career references—such as teaching appointments or honors—that dilute the signal from early training. Even so, the persistence of significant differences, particularly for descendants, supports the interpretation that family background increasingly substituted for credentialed instruction in shaping entry into the profession.[25]

To complement the analysis of formal training, we examine whether dynastic composers are described in *Grove* as advancing through family connections. Using the same sentence-embedding approach introduced above, we construct a semantic index that captures the

[25] Online Appendix Fig. A.10 visualizes differences in training references across thresholds defined by the portion of each *Grove* biography scanned for keywords (e.g., first 10 percent, 25 percent, etc.). Dynasts are consistently less likely to have formal training mentioned, and the gap is largest in the earliest sections, where educational background is typically introduced. For the most interpretable measures (e.g., training mention and training fraction), the effect attenuates as more of the biography is included, consistent with the interpretation that dynasts were less reliant on credentialed training at the point of entry. A similar pattern appears with the embedding-based index, which also shows the largest differences in the earliest sections. See Online Appendix D, Fig. A.4.

Table 7 Mentions of formal training in biography

Panel A. First quarter of biography				
	Mention	Count	Fraction	Index
	(1)	(2)	(3)	(4)
Founder	-0.103^{***}	-0.232^{**}	-0.317^{***}	-0.043^{***}
	(0.027)	(0.093)	(0.070)	(0.004)
Descendant	-0.154^{***}	-0.435^{***}	-0.505^{***}	-0.055^{***}
	(0.020)	(0.070)	(0.070)	(0.003)
Biography length	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓
Mean dep. var	0.557	1.353	1.507	0.002
Observations	13,387	13,381	13,387	13,387
Adjusted R^2	0.265		0.284	0.156
Pseudo R^2		0.257		
Panel B. Full biography				
	Mention	Count	Fraction	Index
	(1)	(2)	(3)	(4)
Founder	-0.062^{*}	-0.157^{**}	-0.064	-0.031^{***}
	(0.032)	(0.075)	(0.045)	(0.003)
Descendant	-0.111^{***}	-0.165^{***}	-0.161^{***}	-0.038^{***}
	(0.020)	(0.052)	(0.022)	(0.003)
Biography length	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓
Mean dep. var	0.704	2.795	0.833	-0.009
Observations	13,387	13,387	13,387	13,387
Adjusted R^2	0.209		0.282	0.133
Pseudo R^2		0.268		

Notes: This table reports estimates of the likelihood of having musical training mentioned in *Grove* biographies by dynasty status. *Founder* is a binary indicator equal to one for the first-born composer in a given dynasty. *Descendant* is a binary indicator equal to one for later-born dynasts. Panel A restricts the analysis to the first quarter of each biography, where early-life training is most likely to be mentioned. Panel B uses the entire biography for comparison. "Mention" refers to whether any of the terms in our keyword list appear at least once; "Count" is the number of keyword matches; and "Fraction" refers to the proportion of words in the biography that match our training-related terms (per 100 words). "Index" refers to the "Formality-of-training" score described in Online Appendix D. The regressions in columns (1), (3), and (4) are estimated using OLS, while column (2) is estimated using Poisson regression. All regressions include the logarithm of the word count as a control. Significance levels:$^{***}p < 0.01$;$^{**}p < 0.05$;$^{*}p < 0.1$

extent to which each biography uses language associated with family-based or patronage-driven access rather than merit-based advancement.[26] Table 8 shows that both founders and descendants receive substantially higher nepotism scores than non-dynasts. The coefficients—ranging from roughly 0.06 to 0.08 for founders and 0.07 to 0.09 for descendants—are large relative to the mean value of the index (about 0.05 in the first-quarter sample and 0.03–0.04 for the full biography). The larger coefficients for descendants suggest that biographers more frequently describe their careers in terms of inherited advantages and family

[26] See Online Appendix E for details on the construction of the semantic nepotism index.

Table 8 Mentions of family-based advancement in biography

	Nepotism score			
	Full biography		First quarter of biography	
	(1)	(2)	(3)	(4)
Founder	0.060***	0.055***	0.074***	0.074***
	(0.005)	(0.006)	(0.004)	(0.005)
Descendant	0.071***	0.066***	0.090***	0.089***
	(0.004)	(0.007)	(0.006)	(0.006)
Biography length	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓
Occupation FE		✓		✓
Author FE		✓		✓
Mean dep. var.	0.034	0.034	0.052	0.052
Observations	13,387	11,081	13,387	11,081
Adjusted R^2	0.529	0.599	0.477	0.556

Notes: This table reports OLS estimates of the relationship between dynasty status and the nepotism index extracted from *Grove* biographies. The dependent variable is the semantic score of either the full text (columns 1–2) or the first quarter of the biography (columns 3–4). Standard errors are clustered at the country level. Higher values of the index indicate language more closely aligned with family-based or patronage-driven advancement. Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

networks. The positive coefficient on founders may partly reflect the construction of the measure, since a founder's biography can register family-based advancement when it notes that he helped a later relative enter the profession. Taken together, these linguistic patterns indicate that dynastic composers are portrayed as advancing through family-based channels. This narrative emphasis aligns with the view that dynastic persistence operated primarily through inherited access rather than unusually high inherited ability.

5.2 Temporal patterns in dynastic advantage

To determine whether the dynasty effect shifted over time, we re-estimate our baseline *Grove* specification (i.e., Eq. 1) separately by century of birth. This cohort-based approach allows us to trace how the prominence gap between dynastic and non-dynastic composers evolved across periods marked by major changes in professional training that reduced entry costs for dynasts relative to non-dynasts. For each century, we estimate multiple versions of the model that vary in their inclusion of country, cohort, and author fixed effects, providing a robustness check on the resulting pattern.

Figure 5 plots the estimated coefficients on the dynastic indicator for each century, across the different fixed effects specifications. The results show a marked dynasty discount in the eighteenth and nineteenth centuries, where dynastic composers appear systematically less prominent than their peers. In the twentieth century, however, the dynasty effect reverses direction: the estimates turn positive, and in some cases statistically significant, despite smaller sample sizes. This shift suggests that the historical relationship between dynastic

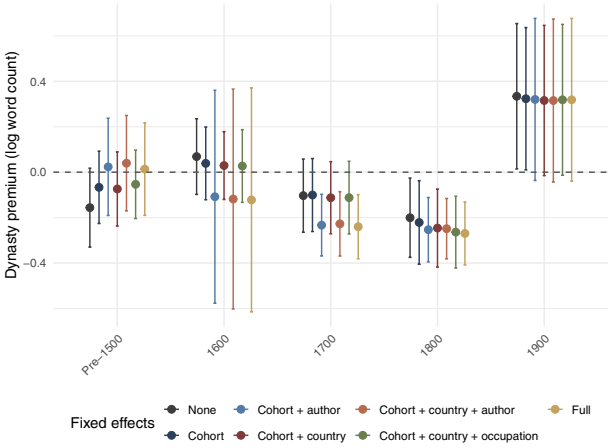


Fig. 5 Temporal variation in the dynasty effect

Notes: This figure shows the estimated coefficients from regressions of *log (word count)* on *Dynastic*, a binary indicator equal to one if composer *i* is part of a dynasty. The legend details the fixed effects included in the respective regressions. Error bars indicate 95% confidence intervals.

background and prominence was not constant but evolved over time, potentially in response to broader changes in how composers entered the profession.

This temporal pattern also offers a useful test of a concern raised earlier: that the dynasty discount found in *Grove* might reflect editorial bias, specifically, a tendency to include dynasts for genealogical reasons, even when their accomplishments were limited. If this were the case, we would expect the estimated dynasty effect to persist or even grow more negative over time, especially as genealogical information became more complete and editors were better able to identify family relationships. Later dynasts, particularly those born in the twentieth century, would then be even more prone to inclusion at low thresholds of prominence. Yet we find the opposite: the dynasty discount disappears and becomes a premium. This reversal is difficult to reconcile with the editorial bias hypothesis.

A more plausible explanation is that the selection mechanism into musical composition changed over time. In earlier centuries, dynastic background often granted access to positions through family ties, patronage, or informal training networks.[27] By the twentieth century, however, access increasingly depended on formal instruction and credentialed evaluation. The spread of conservatories may have narrowed entry-cost differentials by providing outsiders with structured pathways and reduced human-capital differentials by offering systematic training that partially substituted for music-specific knowledge historically transmitted within families.[28] When standardized training sufficiently diminishes dynasts' relative access advantages—or even raises their effective thresholds—the model admits a reversal: only high-ability dynasts choose to enter, allowing inherited musical capital to dominate weakened privilege. Although we do not explicitly model these mechanisms, the disappearance of the dynasty penalty is consistent with a broader shift from inherited roles

[27] Training within dynastic families may also have differed in scope and diversity. Whereas dynasts were often apprenticed within the family, non-dynasts typically trained with a broader and more varied set of mentors, exposing them to a broader range of influences. An investigation of this channel is beyond the scope of this paper.

[28] Possible channels include lower barriers for non-dynasts, higher effective costs for dynasts due to standardized admissions and tuition, and formal training that reduced the value of family-based instruction.

to competitive credentialing. At the same time, other institutional and technological changes also shaped musical careers in this period, making the precise sources of the reversal difficult to isolate. The resulting dynasty premium should therefore be interpreted cautiously.[29]

5.3 Conservatories and dynastic prominence

To explore further whether the prominence of dynastic composers is shaped by access to formal training, we estimate regressions that interact dynastic status with exposure to conservatories. The goal is to test whether the dynasty discount varies systematically across different training environments. We proxy conservatory access using a binary indicator for whether composer *i* was born in a location and time period where a conservatory existed. The specification includes an interaction term to capture whether the prominence gap between dynasts and non-dynasts is attenuated—or even reversed—under formal training regimes:

$$\begin{aligned}\log(Y_i) = \beta_1 \cdot Dynasty_i + \beta_2 \cdot Conservatory_i \\ + \ \beta_3 \cdot (Dynasty_i \times Conservatory_i) + \alpha_c + \delta_t + \varepsilon_i\end{aligned} \tag{4}$$

As before, Y_i denotes the prominence of composer *i* measured using either *Grove* word counts or the number of RISM sources. The coefficient β_1 captures the average dynasty discount in settings without conservatory access, while β_3 captures how that discount changes in the presence of formal training institutions. All regressions include fixed effects for country of birth and half-century of birth. In some specifications, we also include occupation fixed effects and fixed effects for *Grove* author. If conservatories narrow entry cost differentials and human capital gaps between dynasts and non-dynasts, we expect $\beta_1 < 0$ (a dynasty discount in the absence of conservatories) and $\beta_3 > 0$ (an attenuation of that discount when conservatories are present).

There are several reasons to treat this analysis cautiously. First, conservatories were not randomly placed; founding decisions reflected local politics and demand, and the resulting bias could go in either direction. Second, exposure is measured coarsely: any composer born within 100 km of an operating conservatory by age 15 is coded as treated, although actual enrollment is unobserved. Accordingly, non-differential misclassification will attenuate estimates toward zero.[30] Third, the binary indicator conflates elite academies with small teaching schools, and many conservatories were founded in regions with few dynasts (e.g., Russia and North America), both of which further bias the interaction toward zero. Finally, the twentieth century also saw major changes in musical labor markets, including the rise of public funding bodies, recording and broadcasting technologies, and copyright regimes that altered the returns to talent and reputation in ways we cannot separately identify from conservatory access. Some of these forces likely worked in the same direction as conser-

[29] As discussed previously, factors may include complementarities between conservatory training and early exposure, reputational advantages in an age of mass media, or greater awareness among dynastic families of the risks of a musical career.

[30] As a robustness check, we redefined exposure using either birthplace or deathplace: a composer is coded as exposed if either location lies within 100 km of an active conservatory at the time the composer was age fifteen. This alternative measure relaxes the assumption that training opportunities must be tied to birthplace and partly addresses concerns about mobility. Using this broader definition, the estimated interaction between dynastic status and conservatory exposure becomes somewhat larger in magnitude but remains qualitatively similar to the baseline results.

vatories in weakening lineage-based privilege, while others may have offset it. In light of these limitations, we interpret the conservatory results as descriptive rather than causal. The measurement issues we highlight (coarse exposure and the heterogeneity of institutions) imply that, to the extent conservatories did narrow dynastic gaps in training and access, our estimated attenuation is probably conservative. But we remain cautious about attributing the full reversal of the dynasty discount solely to conservatory expansion, given the broader set of institutional and technological changes unfolding over the same period.

Regression results are shown in Table 9. In columns (1)-(4) the dependent variable is *Grove* word count while in columns (5) and (6) it is RISM source counts. We report Conley standard errors, which account for spatial correlation in unobservables that decay with distance (Conley, 1999).[31] This adjustment is important because treatment is geographic: composers born near the same conservatory may share unobserved regional advantages not fully absorbed by country or cohort fixed effects. In all specifications, the interaction between dynastic status and conservatory exposure is positive. This suggests that the dynastic discount narrows in settings where formal training was more accessible. The interaction remains consistently positive and of a similar order of magnitude when we vary the distance used to define exposure (from 20 to 200 km).[32] These results align with our Roy model: credential-based entry appears to reduce outsiders' cost disadvantage and narrow the selection gap, thereby diminishing the dynasty penalty.

To test whether the conservatory interaction reflects genuine selection rather than omitted advantages, we run three checks. First, we ask whether dynastic composers in conservatory regions live longer—using age at death as a health proxy—and find the interaction term is indistinguishable from zero. Second, we repeat the exercise with an elite social status index built from sentence embeddings of the opening lines of each *Grove* biography; this interaction term is small and statistically insignificant.[33] Both results indicate that healthier or better-connected dynasts are not driving our main finding. Third, we create an *exposed too late* variable that equals one if a conservatory first opened within 100 km of the composer's birthplace only after the composer had turned 30—too late to affect training. If geography rather than access explained the pattern, the interaction between dynastic and *exposed too late* should still be positive; instead it turns negative (and is sometimes significant), reinforcing the view that timely conservatory access, not regional advantages, narrows the dynasty gap. See Online Appendix Tables A.9–A.11 for full results).

Finally, as a robustness check, we re-estimated our interaction regressions using a proxy for exposure to formal musical training based on the density of formal training-related keywords in the first quarter of each *Grove* biography.[34] This keyword-based measure complements our geographic exposure strategy and yields consistent results: the interaction between dynastic status and training exposure is positive and statistically significant across

[31] When computing the distance at which the correlation between units is assumed to be zero, we rely on the default rule-of-thumb approach implemented in the R package *fixest*. The algorithm derives an automatic cutoff by summing the medians of (i) the minimum distances to the three nearest neighbors when sorting observations by latitude and (ii) when sorting by longitude, ensuring that each unit has a small set of nearby neighbors within the implied radius.

[32] See Online Appendix Fig. A.11.

[33] Online Appendix F provides details on the construction of the social status index.

[34] We use the number of training-related keywords per 100 words, rather than raw keyword counts, to reduce the risk of reverse causality stemming from the fact that longer biographies are mechanically more likely to contain more keywords.

Table 9 Conservatories and dynastic prominence

	log(word count)				log(num. sources + 1)	
	(1)	(2)	(3)	(4)	(5)	(6)
Dynastic	-0.221^{**}	-0.227^{**}	-0.249^{***}	-0.252^{***}	-0.499^{***}	-0.456^{***}
	(0.100)	(0.096)	(0.047)	(0.043)	(0.130)	(0.139)
Exposure	-0.032	-0.032	-0.021	-0.020	-0.124^{**}	-0.122^{*}
	(0.021)	(0.022)	(0.024)	(0.026)	(0.062)	(0.065)
Dynastic × Exposure	0.155^{*}	0.160^{**}	0.111^{**}	0.106^{**}	0.289	0.258
	(0.081)	(0.075)	(0.056)	(0.052)	(0.197)	(0.199)
Country FE	✓	✓	✓	✓	✓	✓
Half-century FE	✓	✓	✓	✓	✓	✓
Occupation FE		✓		✓		
Author FE			✓	✓		✓
Observations	13,387	13,387	11,081	11,081	5,092	5,092
Adjusted R^2	0.045	0.048	0.311	0.315	0.267	0.271

Notes: The dependent variable in columns (1)-(4) is the natural logarithm of the total word count, while the dependent variable is the natural logarithm of the number of sources reported in RISM plus one in columns (5) and (6). Conley standard errors are reported throughout; the implied cutoff distance is 390 km for columns (1)-(4) and 270 km for columns (5)-(6). Significance levels: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

both Grove word count and RISM source count specifications, reinforcing the conclusion that access to formal training mitigates the dynasty penalty.[35]

6 Conclusion

This paper examines how family background shaped entry into the profession of classical composition over a millennium of music history. Drawing on new data covering over 16,000 composers, we link dynastic status to long-run measures of recognition and archival presence. We find that dynastic composers are, on average, less prominent than their non-dynastic peers, but this discount is driven entirely by descendants. Founders—those who initiated a musical lineage—perform on par with non-dynasts, while descendants underperform both. The empirical pattern we uncover—average founders and underperforming descendants—points toward nepotism rather than inherited ability as the primary force sustaining dynastic persistence.

To shed further light on how dynasts entered the profession, we analyze the biographical narratives in *Grove* using text-based indicators of training and entry pathways. Dynastic composers, particularly descendants, receive less emphasis on formal instruction and more on family-based advancement, suggesting that connections often substituted for conventional training. To investigate how the prominence gap between dynasts and non-dynasts evolved as the broader training environment changed, we trace the dynasty discount across cohorts and across regions with differing access to conservatories. Consistent with the idea that credentialing reforms narrowed gaps in both entry costs and human capital between

[35] See Online Appendix Table A.12. The coefficient on exposure is negative in most specifications, particularly when RISM is the outcome. This may reflect shifts in the occupational profile of formally trained composers, who were more likely to engage in teaching, administration, or scholarly writing than in composing music.

dynasts and outsiders, we find that the dynasty discount is smaller in regions and periods with greater access to conservatory training. While not a causal design, the association survives placebo and timing falsification tests, holds under text-based proxies for training exposure, and aligns with the model's predictions, lending support to the interpretation that credentialing reforms helped level the playing field.

To assess the broader implications of dynastic underperformance, we conduct an illustrative counterfactual exercise that combines two components: the average shortfall in measures of composer prominence among dynastic descendants, and a stylized estimate of the loss from excluding exceptionally high-ability outsiders who might otherwise have entered the field. The first component is based on regression-adjusted gaps in prominence—24 percent in *Grove* word counts and 30 percent in RISM archival source counts (see Table 4)—under the assumption that dynastic descendants performed as well as average non-dynasts. Given that descendants comprise 2.8 percent of our sample, this implies baseline losses of 0.67 percent in *Grove* and 0.83 percent in RISM. To this, we add an estimate of tail losses, assuming that dynastic entry displaced ten individuals who would have been two standard deviations above the mean and one who would have been three standard deviations above, consistent with a normal distribution applied to a group of 456 displaced non-dynasts. Because creative impact is highly skewed, even a few such exclusions can generate disproportionately large losses. Including these tail losses and adjusting the baseline to avoid double-counting, we estimate combined welfare losses of 1.05 percent in *Grove* and 1.40 percent in RISM. If the share of dynastic descendants were as high as 15 percent—a conservative figure, well below the roughly one-fifth to one-quarter prevalence documented for European craft guilds and late-medieval Flemish trades (Prak et al., 2020; Stabel, 2007)—the implied welfare losses would rise to 5.67 percent for *Grove* and 7.5 percent for RISM. See Online Appendix G for a full derivation of these estimates.

These estimates are conservative in several respects. First, the descendant–non-dynast performance gap is estimated over the full sample, including the twentieth century, when the dynasty discount reverses. The true gap in earlier centuries, when family background and informal training dominated, was likely larger. Second, we assume a normal distribution of talent to approximate tail losses, but the actual distribution of creative impact is almost certainly more fat-tailed. This makes the assumed tail-loss scenario conservative, and suggests that the real consequences of lost genius may be substantially greater (Jones, 2014; Merton, 1968).[36] Third, our calculations assume one-for-one displacement of non-dynasts by dynastic composers, but dynastic dominance may also have discouraged broader participation, either by reducing the expected returns to training or by shaping social norms around who belonged in the profession.[37] These general equilibrium effects

[36] If we assume a Pareto distribution of prominence with shape parameter $\alpha = 1.5$—a value commonly observed in empirical studies of citations, fame, and creative success (e.g., Clauset et al., 2009)—tail losses rise to 0.52 percent in Grove and 0.74 percent in RISM, and combined welfare losses increase to 1.19 and 1.64 percent, respectively. If prominence follows a Zipf distribution ($\alpha = 1$), the corresponding figures rise further to 1.36 and 1.85 percent. Under a 15 percent descendant share, total losses reach 6.38–7.29 percent (*Grove*) and 8.79–9.91 percent (RISM). See Online Appendix G for details.

[37] Historical evidence suggests that dynasties created quasi-hereditary pipelines into compositional careers, limiting opportunities for outsiders. In Paris, the Couperin family held the organist post at Saint-Gervais for over 170 years. In Restoration England, the Purcell family held successive appointments at court and the Chapel Royal. The Scarlatti family secured prestigious musical posts across Italy, Portugal, and Spain, often through court patronage. And in nineteenth-century Vienna, the Strauss family dominated the waltz scene for decades. Such dynastic control likely deterred outsiders from entering the field, especially in periods without formal credentialing.

are not captured in our estimates but could magnify the long-run consequences of restricted entry (e.g., Heckman and Honoré, 1990; Hsieh et al., 2019). Fourth, our outcome measures reflect only the most visible forms of historical significance, and do not account for lost stylistic diversity, interrupted pedagogical lineages, or the broader cultural costs of excluding high-ability outsiders.

More generally, these findings contribute to a growing literature on the allocation of talent and the conditions under which inherited advantage either facilitates or distorts achievement. While our study focuses on classical music, the mechanisms we identify—linking family background, selection thresholds, and career outcomes—apply broadly across high-skill professions. Recent empirical work shows that family background and early exposure shape who enters innovative and high-impact careers, limiting the realization of latent talent among disadvantaged groups (Bell et al., 2019). Theoretical and quantitative research further demonstrates that such distortions in the allocation of talent can have substantial aggregate consequences for innovation and long-run growth (e.g. Murphy et al., 1991; Jones, 2014; Hsieh et al., 2019). Understanding when lineage enhances performance and when it undermines selection is essential for evaluating how talent is cultivated and deployed over time. Although historical misallocations cannot be reversed, they offer a powerful lens for understanding the costs of inefficient talent allocation and the potential gains from expanding opportunity.

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Declarations

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