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The Role of Competition in the Rise of Baroque and Renaissance Music

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Abstract. Section 1 introduces the hypothesis that competition among neighboring states may favor cultural innovation, and it surveys the available quantitative evidence. Section 2 starts from the assumption that European instrumental music had its breakthrough during the Baroque era and that the most famous composers came from the two countries characterized by the highest degree of political fragmentation: Italy and Germany. It suggests that political fragmentation has promoted musical composition and performance in several ways. The average duration of employment is proposed as a proxy for competition on the demand side. Section 3 shows that the most famous Italian and German composers of the Baroque period changed their employers significantly more often than their French and British counterparts did. Moreover, the Reformation led to musical competition between the Catholic and Protestant churches. Section 4 argues that competition for composers has also been important in other periods of European history – including competition between the Church and the courts. It shows that composers moved no less in the Renaissance than in the Baroque. Section 5 raises the question whether European music may also be said to express a competitive spirit.

Key words: creativity, history of music, political competition

JEL classification: Z11

"*Genius is fostered by emulation, and it is now envy, now admiration which enkindles imitation, and, in the nature of things, that which is cultivated with the highest zeal advances to the highest perfection.*"

Velleius Paterculus, AD 30, translation quoted from Kroeber (1944, p. 34)

1. Explaining Cultural Change

In 1619, the German astronomer Johannes Kepler wrote in his book *De Harmonice Mundi*:

"There is no miracle that is greater and more sublime than the laws according to which harmonies are now sung in several voices – laws which were unknown in antiquity but which now have at last been discovered".[1]

He was alluding to the polyphonic music of the Renaissance, notably Palestrina. If Kepler had anticipated the spectacular development of European music in the following centuries, he might have been even more inclined to consider European music a "miracle".

Why is it that the rise of music occurred in Europe and not in China, India, or the Ottoman empire which at about 1500 had still been at a similar level of cultural and economic development? Eric Jones, in his famous book *The European Miracle* (1981), has suggested that the enlightenment, the rise of modern science and technology, and the industrial revolution occurred in Europe because each European ruler – unlike the Chinese Emperor, the Indian Great Mogul, or the Ottoman Sultan – was exposed to intense competition from other, neighboring rulers.[2] European rulers could not exploit and suppress their citizens to the extent that was possible elsewhere because the citizens could move to another state at relatively low cost. The smaller the states, i.e., the more states there were, the lower the cost of exit. Competition among rulers tended to protect the cultural and economic elites and minorities (scientists, philosophers, artists, merchants, Jews, Protestants) against the suppression of novelty and dissent.

The idea goes back to a little-known essay by Immanuel Kant (1784/1959, p. 31):

> "Now the states are already in the present day involved in such close relations with each other that none of them can pause or slacken in its internal civilisation without losing power and influence in relation to the rest . . . Further, civil liberty cannot now be easily assailed without inflicting such damage as will be felt in all trades and industries . . . And thus it is that, notwithstanding the intrusion of many a delusion and caprice, the spirit of enlightenment gradually arises as a great good which the human race must derive even from the selfish purposes of aggrandizement on the part of its rulers, if they understand what is for their own advantage."

Kant was, of course, inspired by earlier writers. The idea that civilization and economic growth are not due to benevolence and design but to self-interested individual behavior goes back to Bernard Mandeville's *Fable of the Bees* (1705) and Adam Smith's *Wealth of Nations* (1776). The importance of interstate competition for the arts and sciences had been pointed out by David Hume. In his essay "Of the Rise and Progress in the Arts and Sciences" (1742), he presents two hypotheses:

> "My first observation on this head is *That it is impossible for the arts and sciences to arise, at first, among any people unless that people enjoy the blessing of a free government* . . ." (p. 111) "The next observation, which I shall make on this head, is, *That nothing is more favourable to the rise of politeness and learning, than a number of neighbouring and independent states, connected together by commerce and policy* . . . Where a number of neighbouring states have a great intercourse of arts and commerce, their mental jealousy keeps them from receiving too lightly the law from each other, in matters of taste and reasoning, and makes them examine every work of art with the greatest care and accuracy" (p. 120).

Thus, Hume identifies freedom and competition ("jealousy") among neighboring and independent states as the two main sources of cultural progress. Unlike Kant, however, he does not mention the causal link between the two – the insight that competition among states protects freedom. Hume welcomes interstate competition only because it increases diversity and the scope for comparison. Like Eric Jones, he explicitly contrasts the political fragmentation of Europe and of ancient Greece with the centralization of the Chinese empire.

The hypothesis that the creativity of an era is positively affected by the number of competing states within the same civilization has been tested by American social psychologists (Naroll *et al.*, 1971; Simonton, 1975, 1976). Naroll *et al.* examine four civilizations (China, India, the Islamic Middle East, and Europe) from 500 BC to 1899 AD. The dependent variable is the number of famous scientists as listed in Kroeber (1944). The explanatory variables are political fragmentation, wealth, area, political centralisation within the states, and the frequency of war for the largest state. The pooled rank correlation analysis shows that the number of famous scientists and artists is significantly affected by only one variable: political fragmentation. The effect is positive.

Simonton (1975), in a Harvard dissertation, confines his investigation to a time series analysis of western civilization from 700 BC to 1839 AD but he disaggregates the data, looking at periods of 20 years rather than centuries. Once more, political fragmentation provides the most robust explanation (with a lag of 20 years) but the number of famous scientists and artists is also significantly – negatively – affected by political instability during the preceding period. In 1976, Simonton shows that creativity is even better explained by contemporaneous ideological diversity as measured by Sorokin (1937), but ideological diversity is shown to depend significantly on political fragmentation in the preceding period. Thus, the results of Simonton (1976) support Hume rather than Kant: political fragmentation promotes creativity primarily through its effect on diversity.[3]

It is interesting that there is a lag of about 20 years. This means that the creativity of an individual depends on the environment during his formative years rather than during his mature and probably most successful period. Section 3 will test whether this is also true for musical creativity.

Finally, Murray (2003, pp. 375–377) provides a direct test of Hume's first hypothesis that political freedom is favorable to creativity. Estimating a random-effects model for 312 "significant figures" from 800 BC to 1950 AD, he finds that despotic government has a significantly negative effect on the frequency of creative individuals. His results also confirm the decentralization hypothesis: the concentration of population in the country's largest city has a significantly negative effect on the number of significant figures as well.

2. Political Fragmentation and Competition in the Field of Music

It is probably fair to say that European instrumental music had its breakthrough between 1650 and 1750 – during the Baroque era. Musical composition and performance was promoted by the competing courts and churches. This patronage was important because the property rights of composers were not well protected (Cowen, 1998, p. 132, 140; Scherer, 2004, pp. 166–178). Music was transmitted as handwritten copies were voluntarily exchanged among courts. In economic terms, it was a public rather than private good. Paintings and sculptures, by contrast, have

always been private goods – exclusion is possible at low cost. That explains why a flourishing market for paintings and sculptures could emerge at an early time irrespective of court and church patronage (Cowen, 1998, p. 32).

It is striking – and there seems to be broad agreement about this[4] – that the most famous Baroque composers came from the two countries characterized by the highest degree of political fragmentation and diversity: Italy and Germany. In Germany, there were about 300 principalities after the Thirty Years War. At the time when J.S. Bach grew up in Thuringia, 22 separate courts existed in Thuringia alone. France and Britain, by contrast, were highly centralized, and so was support for the arts.[5] They fell behind relative to Italy and Germany. Scherer (2004, Figure 5.3) provides an international comparison of the number of composers in 1650–1749.[6]

Political fragmentation in Italy and Germany may have contributed to the rise of music in several ways.

1. Total demand for musical composition and performance may have been larger because many small courts tend to consume more music than one large court.[7]
2. There was more competition on the demand side. The princes competed for composers and musicians, and this raised the income and prestige of suppliers. The courts paid higher salaries than the churches or townships. Probably, the courts were more competitive in a double sense: they had more money to spend, and they competed more actively with each other.
3. Political fragmentation offers more freedom of innovation. This is Kant's argument. In the sixteenth century, for example, Palestrina and other Renaissance composers had temporarily faced opposition from the Catholic Church because, in their polyphonic choral compositions, the liturgical texts could not be heard very well. The Baroque princes, by contrast, were open, even eager, for novelty as a way of gaining prestige and a competitive edge over their rivals. Thus, while point 2 concerned static competition, this one is about dynamic competition.
4. In a fragmented political environment, more numerous independent experiments will be undertaken. That is why competition is a discovery procedure (Hayek, 1968/1978). The number of experiments is another aspect of dynamic competition.
5. The diversity of a fragmented world facilitates critical comparisons which, again, stimulate innovation. This is Hume's point and the third aspect of dynamic competition.
6. Political fragmentation may raise the demand for music because, by reducing the cost of leaving the jurisdiction and the cost of comparing neighboring jurisdictions, it prevents the princes from exploiting and suppressing the economic elites (Kant), it raises their tax revenue, and it enables them to spend more money on musical services.

With the exception of the first and last transmission mechanism, these channels of influence work through the princes' competition for music. Testing for those

competitive effects requires a measure of competition. Ideally, we would wish to know how easily a composer who was dissatisfied with his employer could find a substitute, another employer. We would want to know the degree of "potential competition". But we cannot measure the cost of potential exit. We merely know whether and how often composers actually left. Thus, in the following section, the average duration of employment will serve as our proxy of competition. If Italian and German court composers changed their employer more often than their French and British counterparts did, the rise of Baroque music can at least partly be explained by the degree of competition.

3. Competition for Musical Composers in the Baroque Era: An International Comparison

As the hypothesis relates to the effect of political fragmentation, the sample of composers should be confined to those Italian, German, French, and British composers who have been employed at the court of a territorial ruler at least once in their lifetime. As a result, the following well-known composers who never worked at such a court have to be excluded: Albinoni, Corelli, Gesualdo, Legrenzi, Locatelli, Marcello, and Tartini in Italy, Buxtehude, Hassler, and Praetorius in Germany, and Charpentier and Rameau in France.

Another complication is that the composers included in the sample died at different ages. The expected frequency of changing the employer depends on the length of the composer's lifetime. Composers like Pergolesi who died at the age of 26 or Purcell who died at 36 did not have as many opportunities of moving to other courts as composers like Schütz and Telemann who died at the age of 87 or 86, respectively. For this reason, the composer's total time of employment will be divided by the number of his employers. Obviously, this ratio measures the average duration (in years) per employment. As the hypothesis to be tested relates primarily to court employments, the average duration only of court employments is also reported. Promotion to a higher post by the same employer will not be counted as an additional employment. However, if a composer leaves an employer and later returns to him, two spells of employment will be counted. To test for Simonton's hypothesis that individual creativity depends on competition 20 years ago, i.e., during the individual's formative years, the average duration of employment is also reported for the life span from 15 to 35. If a composer was not employed by a court between 15 and 35, he is not included in the sample of court employments.

Court employment includes part-time employment. The criterion is simply whether the composer was paid by a territorial ruler for composing music at his court.

The data are taken from two encyclopedias of music: Blume (1989, 17 vols.) and Baumgartner (1989, 5 vols.). The results are presented in Tables I–IV. Being listed as employed does not exclude additional freelance activity.

Table I. Famous Italian court composers of the Baroque

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
G. Gabrieli	1565–1612	Court Chapel, Munich (1575–1579)								
		(no information. 1579–1584)								
		St. Marco, Venice (1584–1607)	27	2	13.5	10.0	4	1	4.0	4.0
C. Monteverdi	1567–1643	Duke of Mantua (1591–1612)								
		(freelance in Cremona, 1612–1613)								
		St. Marco, Venice (1613–1643)	52	2	26.0	10.0	21	1	21.0	11.0
G. Frescobaldi	1583–1643	Congr. ed Accad. di S. Cecilia, Rome (1604–1606)								
		S. Maria in Trastevere, Rome (1607)								
		St. Peter, Rome (1608–1628)								
		Court at Florence (1628–1634)								
		St. Peter, Rome (1634–1643)	39	5	7.8	4.7	6	1	6.0	–
G. Torelli	1658–1709	Accad. Filarmonica, Bologna (1684–1686)								
		S. Petronio, Bologna (1687–1696)								
		Markgraf of Brandenburg, Ansbach (1697–1700)								
		S. Petronio, Bologna (1701–1709)	25	4	6.3	4.5	3	1	3.0	–
A. Scarlatti	1660–1725	ex-Queen Christina of Sweden, Rome (1679–1683)								
		S. Gerolamo d. Caritä, Rome (1683–1684)								
		Capella Reale, Naples (1684–1703)								
		S. Maria Maggiore, Rome (1703–1708)								
		Capella Reale, Naples (1708–1717)	38	5	7.6	5.3	4	1	4.0	4.0
A. Vivaldi	1678–1741	Conserv. Ospedale d. Pietà, Venice (1703–1718)								
		Markgraf of Hesse-Darmstadt, Mantua (1718–1721)								
		Conserv, Ospedale d. Pietä, Venice (1721–1740)	38	3	12.7	10.0	3	1	3.0	–

(*Continued on next page*)

Table I. (*Continued*)

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
F. Geminiani	1679–1762	Signoria, Lucca (1706–1710) Court Theatre, Naples (1711–1714) Royal Court, Earl of Essex, London (1714–1749) (freelance in Paris, London, and Dublin, 1749–1762)	43	3	14.3	4.0	38	2	19.0	4.0
D. Scarlatti	1685–1757	Capella Reale, Naples (1701–1705) (education in Venice, 1705–1709) Queen of Poland, Rome (1709–1714) Portuguese Envoy, Rome (1714–1715) Villa Giulia, Rome (1715–1719) Court, Lisbon (1720–1729) Court, Madrid (1729–1757)	52	6	8.7	3.0	46	4	11.5	4.5
B. Galuppi	1706–1785	Teatro della Pergola, Florence (1726–1728) (freelance, 1728–1740) Conserv. Ospedale dei Mendicanti, Venice (1740–1748) S. Marco, Venice (1748–1765) Czar, St. Petersburg (1765–1768) S. Marco, Venice (1768–1785)	47	5	11.8	1.5	3	1	3.0	–
G.B. Pergolesi	1710–1736	Conservatorio dei Poveri d.G.C., Naples (1729–1731) Principe di Stigliano (1732–1734) City of Naples (1734–1736)	9	3	3.0	5.3	2	1	2.0	2.0
Mean			37	3.7	11.1	5.8			7.7	4.9
Standard deviation					6.3	3.1			7.1	3.1

Table II. Famous German court composers of the Baroque

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
H. Schütz	1585–1672	Court, Kassel (1614–1617) Court, Dresden (1617–1633) Royal court, Copenhagen (1633–1635) Court, Dresden (1635–1672)	58	4	14.5	3.0	58	4	14.5	3.0
J. Pachelbel	1653–1706	St. Stephan, Vienna (1673–1677) Court, Eisenach (1677–1678) Predigerkirche, Erfurt (1678–1690) Duchess of Württemberg (1690–1692) City of Gotha (1692–1695) St. Sebald, Nuremberg (1695–1706)	33	6	5.5	5.0	3	2	1.5	1.0
G.Ph. Telemann	1681–1767	Neue Kirche, Leipzig (1704) Court, Sorau (1705–1706) Court, Eisenach (1706–1712) Barfüßerkirche, Frankfurt/M. (1712–1721) Johanneum, Hamburg (1721–1767)	63	5	12.6	3.0	7	2	3.5	3.5
G.F. Händel	1685–1759	Schloss- und Domkirche Halle (1702) Opera of Hamburg (1703–1705) (freelance in Italy, 1705–1709) Court, Hannover (1710–1714) and Royal Court, London (1714–1717)								

(*Continued on next page*)

Table II. (*Continued*)

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
		Earl of Carnavon, Cannons (1718–1721)								
		Royal Academy of Music, London (1719–1728)								
		(self-employed and freelance, 1728–1759)	26	5	5.2	3.6	8	1	8.0	8.0
J.S. Bach	1685–1750	Court, Weimar (1703)								
		Neue Kirche, Arnstadt (1703–1707)								
		St. Blasius, Mühlhausen (1707–1708)								
		Court, Weimar (1708–1717)								
		Court, Köthen (1717–1723)								
		Thomaskirche, Leipzig (1723–1750)	47	6	7.8	3.4	15	2	7.5	6.0
Mean			45	5.2	9.1	3.6	18.2	2.2	7.0	4.3
Standard deviation					4.2	0.9			5.0	2.7

Table III. Famous French court composers of the Baroque

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
J.B. Lully	1632–1687	Chevalier de Guise, Paris (1646–1652)								
		Royal Court, Paris (1652–1687)	41	2	20.5	10.0	35	1	35	15
A. Campra	1660–1744	St. Trophime, Arles (1681–1683)								
		St. Etienne, Toulouse (1683–1694)								
		Notre Dame, Paris (1694–1700)								
		(freelance, 1700–1703)								
		Opera, Paris (1703–1722)								
		Royal Court and Royal Academy of Music, Paris (1733–1740)	56	5	11.2	6.7	17	1	17	–
F. Couperin	1668–1733	St. Gervais, Paris								
		Royal Court, Paris (1693–1733)	48	2	24.0	9.0	40	1	40	10
Mean			48	3.0	18.6	8.6	31	1	30.7	12.5
Standard deviation					6.6	1.7			12.1	3.5

Table IV. Famous British court composers of the 17th Century

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
W. Byrd	1545–1623	Cathedral, Lincoln (1563–1569)								
		Chapel Royal, London (1569–1623)	60	2	30.0	8.5	54	1	54	11
O. Gibbons	1583–1625	Chapel Royal, London (1605–1625)	20	1	20.0	13.0	20	1	20	13
H. Purcell	1659–1695	Westminster Abbey, London (1677–1682)								
		Chapel Royal, London (1682–1695)	18	2	9.0	8.5	13	1	13	12
Mean			33	1.7	19.7	10.0	29	1	29.0	12.0
Standard deviation					10.5	2.6			21.9	1.0

Table I covers Italy. Among those Italian composers who were employed by a court at least once, Vivaldi is probably now the most famous, but we need a somewhat larger sample if we wish to test for statistical significance. Inevitably, the selection involves some subjective judgement, but the tables demonstrate that the qualitative result of this analysis does not depend on borderline cases. The table lists the 10 Italian court composers who are probably known best today in the order of their year of birth: Gabrieli, Monteverdi, Frescobaldi, Torelli, Domenico Scarlatti, Vivaldi, Geminiani, Alessandro Scarlatti, Galuppi, and Pergolesi. Geminiani, it is true, moved to London in 1714 at the age of 35 but, following Simonton's finding that diversity and competition during the formative years is crucial, Geminiani is classified as an Italian rather than a British composer. The table shows that the average duration of employment of Italian court composers is 11.1 years for their whole working life and 5.8 years between 15 and 35. If the analysis is confined to court employments, the respective figures are even lower, namely 7.7 and 4.9 years.

Table II replicates the analysis for the five German court composers who are probably best known today: Schütz, Pachelbel, Telemann, Händel, and J.S. Bach. In comparison with the others, Pachelbel is a composer of the second-rank as are many of the Italians in Table I. The other German second-line composers like Buxtehude, Hassler, and Praetorius had not worked at a court (as was mentioned). Händel is, of course, difficult to classify. In line with Simonton's findings, I treat him as a German rather than a British composer because he spent most of his formative years (up to the age of 29) in Germany and was a German citizen most of his life (until 1725). Many of his court connections were shortlived and part-time, however.[8]

The lives of Schütz and Bach offer telling examples of how the princes competed for composers. When, in 1616, the Elector of Saxony wanted to lure Schütz to Dresden, he ran into fierce opposition from Landgraf Moritz of Hesse in Kassel at whose court Schütz was living. However, being of lower rank, Moritz finally had to give in. In 1717, the young Bach wanted to leave the court at Weimar because, as concert master, he had been passed over for the post of musical director. (Bach was at a disadvantage because, as an orphan, he had not had the opportunity to study at a university.) He was kept in prison for 4 weeks before he could leave for the court at Köthen where he became musical director.

As Table II reveals, the average duration of employment of German court composers was 9.1 years for their entire working life and 3.6 years between 15 and 35. This is even less than in the Italian case, but the difference is small. Counting only court employments, the respective figures are 7.0 and 4.3 years, i.e., lower than for all employers.

The three best-known French court composers of the Baroque are probably Lully, Campra, and Couperin. Table III shows that their average duration of employment was 18.6 years overall and 8.6 years between 15 and 35. With regard to court employment, the duration is 30.7 and 12.5 years, respectively. These averages are much longer than in Italy or Germany.

Table V. Average duration of employment of Baroque composers, synopsis

	All employers		Court employers	
Country	Life	15–35	Life	15–35
Italy	11.1 (6.3)[a]	5.8 (3.1)	7.7 (7.1)	4.9 (3.1)
Germany	9.1 (4.2)	3.6 (0.9)	7.0 (5.0)	4.3 (2.7)
Italy and Germany (pooled)	10.4 (5.6)	5.1 (2.7)	7.4 (6.3)	4.6 (2.8)
France	18.6 (6.6)	8.6 (1.7)	30.7 (12.1)	12.5 (3.5)
Britain	19.7 (10.5)	10.0 (2.6)	29.0 (21.9)	12.0 (1.0)
France and Britain (pooled)	19.1 (7.9)	9.3 (2.1)	29.8 (15.9)	12.2 (1.9)
All (pooled)	13.0 (7.3)	6.3 (3.2)	13.8 (14.1)	7.0 (4.4)

[a]Standard deviations in parentheses.

Finally, we turn to Britain. The only famous Baroque composer who spent his formative years in Britain was Henry Purcell. To augment the sample, we add William Byrd and Orlando Gibbons, the two outstanding English madrigalists who lived through the first quarter of the seventeenth century when Gabrieli and Monteverdi developed the Baroque style in Mantua and Venice. The average duration of all employments is 19.7 years for the whole working life and 10.0 years between 15 and 35 (Table IV). Counting only court employments, the figures are 29.0 years and 12.0 years, respectively. These averages are even higher than in France.

To facilitate comparisons and test for the equality of means, Table V presents an overview of the results and pools the observations for the decentralized countries and the centralized countries. In view of the small sample size and the measurement problems that have been mentioned, these tests are, of course, merely indicative and have to be treated with considerable caution. They are not meant to establish definite probabilities but to facilitate comparisons. Counting all employers over the composers' entire working life, the average duration of employment is 10.4 years in the decentralized countries Italy and Germany and 19.1 years in the centralized countries France and Britain. Under the usual assumptions, this difference is statistically significant at the 5% level.[9] The difference between the Italian composers, a large sample, and the French and/or British composers is even significant at the 1% level. If the comparison is limited to court employers, the difference between the centralized and the decentralized countries is even larger and significant at the 1% level.

The average duration of employment is shorter between 15 and 35 than over the whole working life. This is true for each country and for both court employers and all employers. Clearly, composers are more mobile when they are young. Taking all countries together, the difference is statistically significant at the 1% level for both court employers and all employers. However, this may also be due to truncation bias.

Our finding that the duration of employment is shorter in the decentralized than in the centralized countries also holds between 15 and 35 regardless of whether all or only court employers are considered. The difference is again significant at the 5% level for all employers and at the 1% level for court employers. But the ratio between employment duration in the centralized and the decentralized countries is not larger between 15 and 35 (9.3/5.1 = 1.82) than over the entire working life (19.1/10.4 = 1.84) for all employers, and for court employers the ratio is even much smaller between 15 and 35 (12.2/4.6 = 2.65) than over the whole working life (29.8/7.4 = 4.03). Mobility over the whole lifetime is more important than mobility only during the formative years. This seems to contradict the finding of Simonton (1976) that political fragmentation affects diversity and creativity with a lag of 20 years.

How can this puzzle be solved? We have seen that, in theory, political fragmentation affects creativity not only by strengthening competition among the rulers (Kant) but also by enhancing diversity and the scope for comparison (Hume). While Simonton (1976) measures the diversity effect, this study – for the first time–tries to single out the competitive effect. While Simonton is able to show that the diversity effect is caused by political fragmentation 20 years ago, this study does not permit any conclusions as to whether the competitive effect is due to contemporaneous or past political fragmentation. But it shows that competition, like diversity, affects creativity contemporaneously.

Competition leads to imitation. The less successful learn from the more successful. Thus, competition has positive external effects, both nationally and internationally. Competition also leads to international trade. In the case of Baroque music, for example, Britain imported Geminiani and Händel from Italy and Germany, France attracted Lully (his Italian name was Lulli), and Domenico Scarlatti was invited to Lisbon and Madrid.[10]

Most composers produced not only for courts but also for churches. Competition from and among the churches was spurred by the Reformation. During the Baroque, Germany was the main battlefield. This may contribute to explaining why the average duration of employment was shorter in Germany than in Italy. However, since the Italian average is much closer to the German than to the French or British average, competition between the Catholic and the Protestant churches seems to have been less important for the rise of Baroque music than competition among the courts.

Competition among the churches had several notable effects on Baroque music. The Protestant composers, mostly Lutherans, challenged the Catholic church in the field of choral and organ music. The Protestant cantata, motet, passion, or oratory rivaled the Catholic chant and mass. This competitive pressure forced the Catholic church to introduce major changes in its music. The Jesuits in particular led Catholic church music to its greatest splendor (Honigsheim, 1961, p. 489). Instrumental and organ music began to play a more important role in the Catholic church at the expense of the monastic chant. The French organ mass in particular is a product

of the counter-reformation. Competition with Protestant church music may also explain why, in 1562, Palestrina and his associates succeeded in preventing the Council of Trent from banning their polyphonic choral music.

4. Competition for Music in Other Times

The rise of Western music which gained full force in the Baroque period had its foundations and beginnings during the Renaissance. The Renaissance composers refined the art of polyphony, and they found a more precise way of writing music. Renaissance music did not emanate from the capital of a major kingdom or empire but from the court of the Duke of Burgundy in the Walloon Hennegau which at that time was a border region of the German empire. From there, it spread to fragmented Italy. Not only merchants but also artists and composers were extremely mobile in this period (e.g., Burckhardt, 1925, p. 127 and Nestler, 1962, p. 147). Table VI reports the average duration of (court) employment for the four most famous Renaissance composers who served at a court: Dufay, Ockeghem, Josquin Desprez, and Orlando di Lasso. The average duration of all employments (11.7 years over the working life and 5.6 years between 15 and 35) is more or less the same as for the Italian Baroque (10.9 and 5.8, respectively). But the duration of court employment is clearly longer in this Renaissance sample.

Should Palestrina really be excluded from the sample? It is true that he never served a worldly ruler but he spent 4 years with Cardinal Ippolito who was Governor of Tivoli. Moreover, the option of moving to a mundane court was always present for him: in 1567 he negotiated with the imperial court in Vienna and in 1583, at his own initiative, with the Duke of Mantua. In both cases, the negotiations broke down because Palestrina demanded more money than the prospective employer was willing to pay. Table VI shows that, if Palestrina is included in the sample, the average duration of all employments during the Renaissance is even shorter than during the Italian Baroque. This fits the fact that the number of Italian states at the beginning of the eighteenth century was only one-half of what it had been in the mid-fifteenth century.

The "miracle of polyphony" (Nestler, 1962, p. 95) which distinguishes Western music is due to the Paris School of Notre Dame (Leonin, Perotin). It occurred in the second half of the twelfth century. Up to four voices were introduced. The inspiration came from provincial monasteries, especially Limoges. More or less at the same time, gothic architecture and the first university started in Paris. Rarely was central power in France as weak as in the middle of the twelfth century. More than half of France was controlled by Henry II of England. Of the large cities, only Paris and Orleans belonged to the crownland of the French King. Intense rivalry between Philip Augustus of France and Richard Lionheart of England followed. And rarely was the church as powerful as in the late eleventh, the twelfth, and the first half of the thirteenth centuries.

Table VI. Famous court composers of the Renaissance

Name	Life	Employer	All employers				Court employers			
			Years of service	No. of empl.	Average duration		Years of service	No. of empl.	Average duration	
					Life	15–35			Life	15–35
D. Dufay	1400–1474	Malatesta court, Rimini, Pesaro (1420–1426) St. Géry, Cambrai (1426–1428) Papal chapel, Rome (1428–1433) Court, Savoy (1433–1435) Papal chapel, Florence, Bologna (1435–1437) Court, Savoy (1437–1444) Canonicus, Cambrai (1437–1474)	54	7	7.7	3.8	15	3	5.0	4.5
J. Ockeghem	1425–1497	Church of our Lady, Antwerp (1443–1444) Duke of Bourbon, Moulins (1444–1452) Royal court, Paris (1452–1497)	54	3	18.0	5.7	53	2	26.5	8.0
Josquin Desprez	1440–1521	Cathedral, Milan (1459–1472) Sforza court, Milan (1473–1476) Cardinal A. Sforza, Rome (1476–1486) Papal chapel, Rome (1486–1491) Cardinal A. Sforza, Rome (1492–1503) Este court, Ferrara (1503-?) Notre Dame, Condé-sur-l'Escaut (15?–21)	62	7	8.9	8.0	?	(2)	–	2.0

(*Continued on next page*)

Table VI. (*Continued*)

			All employers				Court employers			
					Average duration				Average duration	
Name	Life	Employer	Years of service	No. of empl.	Life	15–35	Years of service	No. of empl.	Life	15–35
Orlando di Lasso	1532–1594	Court, Naples (1545–1553) S. Giovanni in Laterano, Rome (1553–1554) (London, Antwerp, 1554–1556) Court, Munich (1556–1594)	49	4	12.3	5.0	46	2	23	8.5
Mean			55	5.3	11.7	5.6	38	2.3	18.2	5.8
Standard deviation					4.6	1.8			11.5	3.1
Out of sample:										
G.P. da Palestrina	1525–1594	Cathedral, Palestrina (1544–1551) St. Peter, Rome (1551–1555) Lateran Church, Rome (1555–1560) S. Maria Maggiore, Rome (1561–1567) Cardinal Ippolito, Tivoli (1567–1571) St. Peter, Rome (1571–1594)	50	6	8.3	5.3	–	–	–	–
Mean (including Palestrina)			54	5.4	11.0	5.6	38	2.3	18.2	5.8
Standard deviation					4.3	1.5			11.5	3.1

In the middle ages, institutional competition was largely a battle between the Church and the State. Harold Berman (1983, 1998), has suggested that pluralism in medieval Europe rested on the religious and legal autonomy of the Christian church, an institution directed from abroad. But the popes also protected their autonomy by encouraging political fragmentation in Germany and Italy and, during the Renaissance, by playing off the French King and the Habsburg Emperor against each other (Vaubel, 2005). Gone were the days of Charlemagne who had been able to impose the Gregorian chant on his subjects – not for religious reasons but as a demonstration of centralized political power (Engel, 1989, Vol. 12, p. 956). The break-up of the Carolingian empire and the subsequent decentralization of France and Germany strengthened the autonomy, the diversity, and the innovative potential of the church.

5. European Music as an Expression of Competition?

On a more speculative note, the question may be raised whether European music is not only a fruit of competition, but also an expression of competition. Polyphony is competition among voices – of course, under rules. Early Baroque composers like Gabrieli, Hassler, and Schütz wrote music for two "competing" choirs. While in Palestrina's polyphonic compositions each voice serves a collective whole, the Baroque concerto gives the impression of an opposition or dialogue between the soloists and the orchestra. "Concertare" has indeed been translated as "measuring oneself against others in a contest" by Baroque composer Michael Praetorius (Nestler, 1962, p. 261). Contrast and imitation are typical characteristics of Baroque music: the variation of the tempi and the volume and the counterpoint, notably in fugues. Indeed, it is typical of Baroque art in general.

Later, in the classical age, the composers contrast two or more themes in a sonata movement. The history of the sonata becomes a history of the contrast principle (Nestler, 1962, p. 290). The classical composers also favor the "sinfonia concertante" and the string quartett and trio. According to Nestler (1962, p. 415) and Adorno (1980, p. 108), the instruments may be said to compete with each other – not necessarily on an equal basis but each in its own right.[11]

6. Conclusion

In the classical and romantic period, the demand for music shifted from the territorial rulers and the churches to the nobility and the bourgeoisie. Thus, the competition for music increased even more. As artistic property rights were better defined and enforced, the need for patronage diminished. Fewer composers were employed by an institution (a court or a church); more worked on a freelance basis for paying individual clients (Scherer, 2004, Figure 3.3 and 140f.). Moreover, the individual listeners increasingly paid for the musical performances.[12] Already during the

Baroque period, commercially run operas had existed in some places and provided an important freelance alternative for composers. In the nineteenth century, the bourgeoisie established orchestras, concert halls, and the other institutions of commercial musical life on a grand scale. A competitive but anonymous market for music took the place of competition by patronage.

To summarize, the analysis has shown that the rise of Western music has not just been due to technical progress, increasing prosperity, or a growing demand from European rulers and churches. Our finding that the mobility of composers was significantly higher in the more successful countries (Italy and Germany) suggests that competition on the demand side was also an important factor of its own.

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Notes

1. Translated from Karl Popper (1984, p. 265).
2. Jones' book inspired a number of other authors. For a short survey see Bernholz and Vaubel (2004).
3. With respect to philosophy, the diversity hypothesis has also recently been investigated by Collins (1998). He argues that creativity requires "multiple factions" and "a common center". However, he does not engage in a formal test, let alone alternative hypothesis testing.
4. See notably Elias (1969), Chant (1994, p. 126), and Cowen (1998, p. 133). The role of competition has also been stressed by Elias (1991, pp. 38–40) and Baumol and Baumol (1994) for Mozart's time and by Preussner (1954) for the nineteenth century.
5. Nestler (1962, p. 240), Cowen (1998, p. 133, 135).
6. Scherer (2004, pp. 130–132) also reports the results of a regression analysis explaining the employment of composers (per million inhabitants) over the whole period of 1650–1849. The dummy for the Holy Roman Empire has a significant effect and is the strongest explanatory variable.
7. For this explanation see also Baumol and Baumol (1994).
8. Händel's travel to Italy is classified as freelance even though he was invited by the Medicis. He stayed only briefly in Florence and moved on to Rome. His employment at the courts of Hanover and London is counted as one because the employers were the same (the British Kings George I and II). His employment in London was mostly part-time and he continued to receive a subsidy and probably teach some of George II's children at least into the 1740s. As a musical director at Cannons, he was more like a house guest than an employee. If Händel were classified as a British composer, the average duration of employment among British composers would still be much longer than among German composers.
9. Tests for the equality of means are described, for example, in Newbold (1988, p. 359ff.)
10. Scherer (2004, p. 124, 132f., pp. 146–149) has measured the international mobility of composers over the whole timespan from 1650 to 1849.

11. Adorno links this with the competitive spirit of bourgeois society, which he dislikes.
12. Of course, there are precursors in the Baroque era (notably Händel, Domenico Scarlatti, Telemann, and, toward the end of his life, J.S. Bach) and later Carl Philip Emanuel Bach and Mozart in Vienna (see especially Rebling, 1935, p. 86ff., 127, Preussner, 1954, pp. 29–33, Wolff, 1991, p. 40, and Scherer, 2004, Ch. 1 and 3).

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