

How should cultural diversity be measured? An application using the French publishing industry

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Received: 1 August 2005 / Accepted: 2 March 2007 / Published online: 3 April 2007
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Abstract Despite the lack of a clear definition of the concept, “cultural diversity” has remained a core issue for more than a decade (WTO, UNESCO, etc.). The aim of this paper is to begin to fill this gap. We argue that cultural diversity is a multi-dimensional concept and that accurate metrics must rely on three criteria: variety, balance and disparity. We also stress that supplied and consumed diversity have to be distinguished. We apply this set of multiple measures of diversity to publishing data for France over the period 1990–2003. Our main result is that the situation of the publishing industry in terms of cultural diversity is highly dependent on the dimension considered. Hence, diversity increases when variety is the sole consideration, whereas taking balance or disparity into account leads to the opposite conclusion. This issue raises a series of questions about the use of diversity measures in a policy debate concerned with furthering cultural diversity.

JEL Classification L82 · Z11

Keywords Books · Publishing industry · Diversity · Diversity measures · Cultural diversity · Cultural economics

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1 Introduction

The concept of “cultural diversity” has established its presence both in the drafting of international cultural law and in jurisprudential decisions dealing with competition in the field of cultural activities. In October 2005, UNESCO adopted almost unanimously a Convention on Cultural Diversity that clearly intends to lay the foundations of economic action on an international level, and to enable states to derogate from WTO rules in the field of cultural economics. The Convention aims to protect diversity across the globe by protecting fragile cultures. From a very different perspective, the European Commission competition authorities, when they were required to pass judgement on a merger between the two biggest French publishing firms, emphasized cultural diversity and chose to evaluate, for each of the relevant markets, the resulting degree of concentration and its likely “effects on cultural diversity” (European Commission 2004). The objective of diversity has also motivated the adoption by many countries, in a regulatory (inter-professional agreement) or legislative form, of a single-price system for books, on the model of the one introduced in France in 1981.¹ When this act was passed, it was argued that supply-side diversity could only be maintained by indirectly ensuring the survival of a diversified network of retail sales points. As a European Commission report observes (2005, p. 43, see also Flores 2006), “Fixed pricing is part of a wider range of strategies employed to assist diversity in certain member states.” Moreover, the French government claims to want to “protect diversity” by protecting French cultural goods and services, which are seen to be threatened by global (i.e., American) mass culture. These statements are made in a very political context, but they rely on economic considerations as well.

Oddly enough, even though the concept of cultural diversity assumes a central position in debates both on the efficiency of cultural policies and on the definition of fair competition, the concept itself remains fuzzy. The core issue is that “there are no established metrics for diversity” (European Commission 2005, p. 43, see also Flores 2006). As Acheson and Maule (2004) notice, “an imprecisely worded notion of cultural diversity [...] cannot provide any effective guidance for adjudication” (p. 253).

Aimed at beginning to fill this gap, this paper makes some suggestions as to how to accomplish such measurement. The paper provides a definition as well as a methodology to assess cultural diversity. We stress that cultural diversity is a multi-dimensional concept and that accurate metrics must rely on three criteria—variety, balance and disparity—and distinguish between supplied and consumed diversity. This methodology may be applied to a variety of fields. We study diversity in the French book industry between 1990 and 2003. The question of diversity has led to a certain number of evaluations (see especially Moreau and Peltier 2004) that discuss

¹ The RPM requires that each book be sold at the same price by all retailers, with the right to apply a maximum discount of 5% for a two year period. Austria, Denmark, France, Germany, Greece, Italy, the Netherlands, Portugal, Spain, and Hungary apply RPM. In the UK, an agreement restricted the level of discount between 1990 and 1997. The majority of the new member states in the European Union do not apply RPM.

public support for the music and film industry, but the case for the book industry has been almost ignored by academics. In the latter, diversity is often taken for granted. The number of new titles published increases every year. After all, only about 4,000 phonograms and 600 movies were released in France in 2003, but more than 30,000 new books were published. It is precisely this presumption of diversity, which requires a more thorough analysis.

In the next section of the paper, we present a brief survey of the literature dealing with cultural diversity. We present our methodology and data, then apply this framework to the book industry in order to assess the evolution of cultural diversity. Section 3 provides the main results. Section 4 emphasizes and interprets the ambiguous rise in diversity. Section 5 concludes.

2 Methodology

2.1 A brief literature review

In the field of cultural economics, the issue of measuring cultural diversity is almost forgotten. The concept of diversity of cultural products was introduced, first, in order to establish the link between diversity and market concentration, especially in the music industry, following the pioneer work of Peterson and Berger (1975) (see, among others, Burnett 1992; Alexander 1994, 1996; Lopes 1992; Dowd 2004). Some papers stress the concept through the consequences on product diversity of an industry's mode of financing (see, for example, on the television industry, Waterman 1990, or on the publishing industry, Gabszewicz et al. 2002, 2004). Other research has dealt with the impact of public regulation on diversity, e.g., Retail Price Maintenance (RPM) in the book industry (see especially Tirole 1993; Van der Ploeg 2004). Finally, some works intend to study the impact of trade opportunities on diversity (see, among others, Cowen 2002).

This literature does not offer a clear, homogeneous and practical definition of diversity. In the field of the book industry, diversity is generally viewed through the number of titles offered (Caves 2000; Cowen 2002). Van der Ploeg (2004) and Canoy et al. (2006) adopt the same implicit definition. For Tirole (1993), diversity is seen through the mix of popular and more difficult books, i.e., books that target a narrow readership. Schiffrin (2004) seeks to introduce a more qualitative approach. He raises the question of the standardisation of books and the impoverishment of their content but without giving any guidance to analyse that content.

In other fields of cultural products, the work of measuring diversity is far from unified, and therefore it is not possible to apply that work to other cultural industries.

As has typically been the case in the book industry, the evaluation of diversity is most often based on one sole dimension. This may be, for example, the number of products supplied, the number of programme genres broadcast, the diversity of opinions expressed, etc. (see, among others, Lacy 1989 for the press and Lin 1995, Van der Wurff 2004 and Li and Chiang 2001 for television programming). The question of the measurement of diversity has been much more discussed with respect to the recording industry. For example, Peterson and Berger (1975) measure

diversity in terms of the number of different songs in the top 10 of the hit parade over the period 1948–1954 in the United States, while Alexander (1996) evaluates diversity in terms of the dissimilarity between the scores² of songs in the top 10 over the period 1955–1987. According to this author, the measurement of diversity proposed by Peterson and Berger is deceptive “because the hit charts can have many songs of a similar product type, or conversely, they may have a small number of more disparate products (i.e., fewer hits but greater product diversity)” (p. 172).

Despite its policy importance, the literature on diversity of cultural products does not offer a universal definition of diversity and has rarely employed multivariate analysis. This leads us, by contrast, to adopt a multi-dimensional conception of cultural diversity inspired by research conducted in biology and in the economics of technological change (see, among others, Saviotti 1996; Weitzman 1992, 2000). As in the field of culture, the main topic is the choice between the costs and benefits of the preservation of diversity and a situation in which there would be reduced variety and greater standardisation. In bioculture, for example, the choice between concentrating on few varieties with high returns and maintaining enough diversity to prevent the risk of generalised infection (Weitzman 2000) presents a difficult dilemma. By analogy, for the book industry, there is a choice between producing few books of the same type to realise economies of scale and publishing a wide variety of books of different types to guarantee the pluralism of creation. To take the analogy further, the standardisation of products could be seen as a symptom of “generalised infection.”³

2.2 The three dimensions of diversity: variety, balance, disparity

The literature on biodiversity and technological diversity highlights three key properties of diversity (see Stirling 1999, for a survey). These three properties, which establish necessary but individually insufficient conditions for the existence of diversity, are variety, balance and disparity. According to Stirling, variety refers to the number of categories into which a quantity can be partitioned. Balance refers to the pattern in the distribution of that quantity across the relevant categories. Disparity goes beyond these measurement schemes by accounting for the nature of the categorization scheme and adjusting for the degree to which the categories are different from each other. The greater the variety, the balance and the disparity of a system, the larger its diversity.

The concept of disparity seems to be the most difficult to implement. It suffers “naturally” from the arbitrary nature of a system of classification. Hence, Stirling (1999) notices “disparity is an intrinsically qualitative, subjective and context-dependent aspect of diversity. Notions of disparity depend on the particular frame of reference which is adopted for any given purpose” (p. 40). To minimize this drawback, we adopt the most widely used system of classification for the book

² The criteria are tempo, size, form, accent, harmonic structure and melody.

³ Weitzman (1998) makes an analogy between biodiversity and the diversity of libraries in which “books are very roughly analogous to the gene pool of the species itself (p. 1281).”

industry in France, one that is very close to the systems adopted in other developed countries. We are aware of the intrinsic limits of any classification scheme, but this one appears to be a rather reliable one, as it is built on objective criteria and works by exploiting clear segmentations in the book market. But Stirling's definition of disparity has to be supplemented in order to become operational. All other things being equal (e.g., identical variety and balance), when a quantity of cultural production is distributed across categories very close to each other, diversity as measured by disparity is lower than in a situation in which that quantity is distributed across categories clearly differentiated from each other. This is due to the fact that disparity is lower. This is because an accurate measure of the disparity among a population has to take into account the disparity of categories as well as the distribution of the population across these categories. Hence, the definition of disparity we use in this paper, turns out to be a weighted measure of balance.

For the case of the book industry, we measure the three properties of diversity—variety, balance, disparity—according to three forms of categorization of the population of the individual books (our basic unit of analysis): the title, the genre and the original language.⁴

- According to the first form of categorization each book is considered unique. Diversity increases in direct proportion to the number of titles published (which reflects variety). Diversity is maximized when all the titles have similar market shares (balance) and when the contents of each title are as “different” as possible (disparity).
- According to the second form of categorization, the genre, diversity increases in direct proportion to the number of genres available (categories: literature, travel guides, academic books, comics, art books, etc.), the extent to which they are equally well represented among published books and the extent to which the genres are clearly differentiated from each other.
- Finally, for the third form of categorization, original language, we make the hypothesis that the market of books translated from foreign languages is a signal of the degree of openness of French culture vis-à-vis other cultures, which is a key element in cultural diversity. According to this third form of categorization, book diversity increases in direct proportion to the number of different original languages (categories) available, the extent to which these languages are equally well represented and the extent to which they display marked specificities that distinguish them clearly from each other.

The hypothesis that balances in genres or linguistic origins is a signal of diversity may be debated, of course. We postulate that diversity is higher when 2,000 books written in French and 2,000 books translated from English are available rather than when only 4,000 French books are available. Of course, the implicit assumption that consumers' preferences are uniformly distributed on all the categories of each form

⁴ For UNESCO, the promotion of cultural diversity is essentially a question of preserving language diversity. In the same way, we mainly understand the diversity of origin in terms of the languages in which the books are written and not in terms of the native countries of their authors.

of categorization may be challenged. However, the choice of any other specific non-uniform distribution of preferences would not be less arbitrary.

Finally, a less subjective goal for the balance of books offered is to compare it to the balance of books consumed. Therefore, the gap between supplied and consumed diversity also has to be considered.

2.3 The distinction between supplied diversity and consumed diversity

Van der Wurff and Van Cuilenburg (2001) make a distinction between open diversity and reflective diversity. Open diversity corresponds to the concept of supplied diversity. Reflective diversity measures the degree of response of supply to demand. The postulate underlying reflective diversity is that the diversity supplied should reflect the diversity demanded. However, in the cultural industries it is rational to supply a greater level of diversity than the level that will ultimately be consumed. As Caves (2000) points out, faced with uncertainty about the future success of any given product (the “nobody knows” property of cultural products), it is rational to “overproduce” with the aim of maximising the chances of success. Therefore, we prefer to distinguish between the diversity supplied and the diversity consumed and analyse the extent to which the diversity supplied correlates with the diversity consumed.

What definition of cultural diversity emerges from this discussion? The cultural diversity in a country means the quantitative and qualitative diversity of the production *and* consumption of cultural goods and services. It represents the possibilities open to consumers for gaining access to a large supply of a cultural product (in terms of quantity), including segments (in terms of genres and original languages) of relatively well-balanced sizes and as diversified as possible. It also represents the effective consumption of these numerous and diversified cultural product.

2.4 The variables

Ideally, the assessment of cultural diversity in the book industry should rely on both supplied and consumed diversity, on the three dimensions (variety, balance and disparity) and on at least three forms of categorization (title, genre, original language), giving a $2 \times 3 \times 3$ matrix. Unfortunately, this matrix of indicators of cultural diversity is not simple to complete for the book industry.⁵

In terms of variety, only the “title” and “original language” forms of categorization have been used. With respect to title, variety supplied is measured by the annual number of titles published.⁶ Similarly, variety consumed is evaluated on the basis of number of copies sold by title. One can object that consumption also relies on libraries. Books in libraries are taken into account in the number of copies

⁵ As far as we know, no economic analysis of diversity has made use of all three criteria. In the field of technological diversity, priority is given to variety (Cohendet et al. 1992; Saviotti 1996), whereas in the field of biodiversity disparity is considered (Weitzman 1992, 1998).

⁶ The SNE survey has aggregated “new works” and “new editions” since 2001. This tends to over-inflate publishing diversity somewhat by not treating new works separately.

sold, but we were not able to collect data on consumption in libraries. Therefore the diversity consumed only takes into account the variety consumed through purchases. In contrast, Internet sales, which represent only 3.7% of sales,⁷ are included in the data on consumption. In the matter of variety, we study the “original language” on the supply side. On the demand side, however, we have left out the variety of “original language”, because the available data restrict the analysis to the taxonomy of “French-speaking books/English-speaking books/other books”. In other words, the dimension of variety is neutralised, because the result is always three.⁸ Nevertheless, in order to analyse the supply in terms of linguistic origin, we evaluate the number of different languages from which new books are translated.

Balance is studied using all three forms of categorization: “title”, “genre” and “original language”. At the title level, we look only at the distribution of copies sold for bestsellers. This indicator of consumed diversity makes it possible to study whether consumption is concentrated or, to the contrary, each title obtains a similar number of sales. Given the limits on the available data, we have used the ratio of the market share of the top 10 books to the total number of the 50 bestsellers.⁹ From the perspective of the genre and linguistic origin of books (both supplied and consumed), balance is measured using the Herfindhal–Hirschmann index (HHI), traditionally used to measure industrial concentration in a market.^{10,11} These calculations reflect the degree of concentration of the books published and sold to consumers by genre and original language. The higher the value of the index, the weaker the balance. The share of translated books in our samples composed of bestsellers does not express the strength of consumers’ inclination for translated works, but it gives some idea of the preference for diversity by origin in the “general public” sector of the market.

The last dimension, disparity, turns out to be much more difficult to assess. Whatever the subject of analysis—biodiversity, technological diversity or cultural diversity—the measurement of disparity first requires the establishment of a taxonomy, in other words the partition of a set of elements into exhaustive and separate categories. Widely accepted taxonomies of cultural goods that could serve as the basis for analysis already exist (by genre or by original language, for example). However, a crucial problem arises: how can we analyse the mutual

⁷ Source: data gathered by the firm GFK, in *Livres Hebdo*, 631, 3 February 2006.

⁸ The taxonomy of genres and therefore the variety by genre are constrained by the categories used in collecting the available data.

⁹ It is impossible to calculate the Herfindhal–Hirschmann index ($HHI = \sum s_i^2$, with s_i the market share of each statistical individual) in this case, because the complete set of data on the distribution of copies sold by title is unavailable.

¹⁰ For our purposes, we prefer to rely on the Herfindhal–Hirschmann index (HHI) rather than others indicators such as the entropy index for two reasons. First of all, the HHI is more widely used. Secondly, the HHI takes much better account of the “market shares” among categories than the number of categories. Given that the number of entities (genres and original languages) is exogenously given by the available data, we believe it is preferable to work with the HHI.

¹¹ It should be noted that the HHI is an indicator that simultaneously measures variety and balance. When two firms have equal shares in a market, the HHI is higher than when three firms have equal shares in the same market. However, in our analysis—when the taxonomies of genres and languages are given—the HHI is simply an indicator of balance.

disparity among all the different books in each form of categorization? A tool is required for evaluating the *distance* between the different books in terms of their genres, original language or title.

The most successful of such economic studies, carried out by Weitzman (1992, 1998) in the field of the preservation of biodiversity, cannot be applied to the question of cultural diversity. The measurement of disparity put forward by Weitzman is only effective for perfect taxonomies, taxonomies whose distance is ultra-metric (the disparity changes at an equal rate among the different branches of the taxonomy). We face a double problem. In addition to the vast scale of the calculations required, highlighted by Solow et al. (1993), the hypothesis of ultra-metric distance dramatically restricts the practical scope of such a tool. In the context of cultural diversity, this would mean, for example that we would have to consider the disparity between an Italian book and a French book to be of the same scale as that between an Italian book and a Korean book, or that the disparity between an art book and a novel is identical to that between a novel and a travel guide!

In order to evaluate disparity for “titles,” we do not try to study the contents of books, which would be largely subjective; instead, we analyse the propensity of consumers to buy titles written by a small set of authors. The best-selling novels and essays lists provide an appraisal of the concentration of individual preferences for a certain number of authors.¹² The more numerous the authors of the titles purchased by consumers, the higher the disparity, and conversely. We use the concentration of authors in the bestseller lists during a selected period as an indicator of disparity.

To study the evolution of the disparity in the supply of foreign works, we use the matrix of linguistic distances among Indo-European Languages proposed by Dyen et al. (1992).¹³ Based on lexicographic methods, linguistic distance evaluation seems to be an objective and reasonable way to analyse a part of disparity. For any given year, the average linguistic distance of titles purchased is calculated using the average distance between French and each of the other languages, this distance is then used to weight the share of each language in the titles purchased.

The evaluation of distances between genres is trickier. Given the absence of any reference work proposing a method to evaluate distances between genres, we have chosen a qualitative approach. In order to carry out this analysis, we partition the book market into five segments on the basis of a twofold contrast involving the consumption of, and the decision to buy, a book: the first contrast arises from the clear distinction between reference books and books intended to be read, and the second one separates prescribed books from more spontaneous purchases. This framework leads to a distinction between “practical books”, “school books, university books, documentation, dictionaries and encyclopaedias”, and “literature, news, youth and comics”. Another criterion based on segmentation by the population of readers, leads us to separate “literature and news” from “youth and

¹² This sample has a certain importance: the sales of these 50 novels represent 19% of total sales of hard-cover books in 2003.

¹³ The Indo-European languages taken as reference are: German, English, Danish, Spanish, Greek, Italian, Portuguese and Dutch.

comics.”¹⁴ Lastly, we collect the minor segments of the book market (religion, esoteric books and art books) together in a composite “minorities” category.

Table 1 summarises the resulting measurement of diversity variables and provides an idea of the progress yet to be made to achieve an exhaustive measurement system for cultural diversity in the book industry. Appendix 1 provides a synthesis of the different sources and data.

3 Results

In this section, we report the results of our analysis of the evolution, over the period 1990–2003, of diversity in the French publishing industry assessed using the above framework. We do this to demonstrate that diversity cannot be analysed with a unique criterion or with a mere synthetic indicator.

3.1 Variety by titles supplied and consumed

Over the period 1990–2003, the French publishing sector supplied an almost continually increasing number of new titles (Table 2). Slightly above 20,000 new works and new editions were published in 1990. This figure reached nearly 31,000 in 2003, a rise of 53%. Is this greater variety of titles supplied actually consumed? Over all, despite rather erratic variations over the period concerned, the number of copies of books sold rises (+20%). But this rise is far smaller than the rise in the number of copies produced over the same period (+38.7%).

3.2 Balance and disparity consumed by title

The balance by title is only calculated for bestsellers. For novels, the ratio between the annual sales of the ten bestselling novels and the total sales of the 50 bestsellers shows a tendency to fall, from 42.6% in 1998 to 36.2% in 2002, then to rise after 2002. In 2004, particularly due to the unprecedented success of the *Da Vinci Code* by Dan Brown, the 10 bestselling novels comprised 47.1% of total sales of the 50 bestsellers in this category. Even in the absence of a “Da Vinci Code”, the trend towards concentration in the sale of essays is even more pronounced. The share of the top 10 essays as a percentage of the top 50 rises almost constantly, from 34% in 1998 to 41.8% in 2004.

As far as disparity is concerned, the trend—a recent one for novels—towards concentration among bestsellers is accompanied by a low level of change among successful authors, a sign of weak disparity. Analysis of the top 20 bestsellers demonstrates the concentration of individual preferences on a few dozen authors. More precisely, 119 different authors (for a total of 260 appearances) appeared at

¹⁴ The same separation has been adopted by the European commission in its analysis of relevant markets in the book industry.

Table 1 Variables measuring cultural diversity in the Book industry, and data collected

Dimensions Forms of categorization	Variety		Balance		Disparity	
	Supplied	Consumed	Supplied	Consumed	Supplied	Consumed
Title	Number of newly published books and new editions	Number of copies sold	– (Data unavailable)	Market share of top 10 novels and essays over the top 50	– (Methodology unavailable)	Concentration of authors in best sellers lists
Source	SNE (1990–2003)	SNE (1990–2003)		<i>Livres Hebdo</i> (1998–2004)		<i>Livres Hebdo</i> (1992–2004)
Genre	– (The number of different genres is given)	– (The number of different genres is given)	HHI calculated on distribution of newly published books and new editions	HHI calculated on distribution of books sold	Qualitative Approach (No quantitative measure possible)	Qualitative Approach (No quantitative measure possible)
Source			SNE (1990–2003)	SNE (1990–2003)		
Original language	Number of different languages from which new books are translated	–	HHI calculated on distribution of total acquired titles and of titles in literature by original language	HHI calculated on distribution of the top 50 sales of novels by original language	Average linguistic distance of the rights acquired	– (Data unavailable)
Source	SNE (1997–2003)		SNE (1997–2003)	<i>Livres Hebdo</i> (1998–2004)		

Table 2 Diversity in the French publishing industry (form of categorization: title)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Number of new books and new editions supplied	20,252	20,383	20,717	21,059	21,472	21,998	23,903	24,522	27,936	24,485	25,832	26,499	30,557	30,963	–
Average number of copies supplied per title	10,483	10,228	9,509	9,065	9,744	10,024	10,194	9,679	9,181	9,250	9,405	9,581	8,740	9,411	–
Number of copies purchased (in thousands)	324,213	299,526	296,114	303,221	304,032	304,466	321,012	342,502	346,803	332,974	353,582	359,460	374,000	388,917	–
Average number of copies purchased per title	8,302	7,584	7,668	7,411	7,315	7,081	6,932	7,254	6,808	6,685	6,816	6,606	6,225	5,916	–
Top 10/Top 50 (novels) ^a	–	–	–	–	–	–	–	–	42.6	43.5	36.4	41.0	36.2	37.9	47.1
Top 10/Top 50 (essays) ^b	–	–	–	–	–	–	–	–	34.0	37.1	34.0	34.7	37.6	42.4	41.8

^a Number of copies sold of all books belonging to top 10 divided by total number of copies sold of all books belonging to top 50 (novels)

^b Number of copies sold of all books belonging to top 10 divided by total number of copies sold of all books belonging to top 50 (essays)

Source: Annual surveys of Syndicat National de l'Édition

least once among the top twenty bestselling novels during the period 1992–2004.¹⁵ Each author therefore appeared 2.2 times on average over this period. 66.4% only appeared once, and they occupied only 30.4% of the positions. Conversely, the ten authors who appeared most often in the top twenty (8.4% of the authors) monopolised 35% of the positions.

3.3 Balance and disparity supplied by genre

Over this period, the balance supplied by genre rose slightly (Table 3). The HHI lost 160 points between 1990 and 2003, ending up at 2,499.¹⁶ This trend towards increasing diversity supplied conceals significant developments in the level of disparity. Although the number of new books rose in every genre, this increase was noticeably higher than average in the sectors of “practical” books and “youth” books (+86% and +75%, respectively between 1990 and 2003). Consequently, while the share of “minority genres” (religion, esotericism, art, etc.) remained stable over this period, the share of practical books rose from 10.7% to 13%, and the share of books for young readers (including comics) rose from 14.8% to 17%. On the other hand, the share of literature and, to a lesser extent, that of school and university books showed an overall decrease. In 2003, literature comprised less than 20% of titles published, as compared with 27% in 1990. The overall increase in publishing supply depends essentially on reference books rather than on reading and/or on “easy access” books, particularly those for young readers. Even if the number of literature or school and university books is still increasing in absolute terms, the fall in their share creates a stronger competition that can threaten their chances of reaching consumers.

3.4 Balance and disparity consumed by genre

Between 1990 and 2003, although sales progressed favourably in every domain except the category “school, university, encyclopaedias and dictionaries”, the dynamism of the publishing sector was driven by “practical” books (+86.3% over the period) and “youth” books (+66.2%). Although these different rhythms of growth did not produce any appreciable change in the concentration of sales by genre (the HHI loses only 100 points over the period, ending at 2,409), they nevertheless resulted in a certain rebalancing in the shares of each genre in total sales. Thus, the share of the “practical” category gained two percentage points between 1990 and 2003, ending up at 15.6%. The share of “youth” books grew from 19% to 26.4%. The shares of the other three categories fell. The “literature/news” category dropped three percentage points to 29%, although it remained the dominant genre. The fall in the “school and university” genre was even more

¹⁵ Unlike the study of the concentration of sales, this analysis can be carried out for the whole period 1992–2004, insofar as that it only concerns the ranking of successful authors and not the number of copies sold.

¹⁶ A variation of less than 150 points in the HHI is considered by antitrust authorities as insignificant.

Table 3 Diversity in the French publishing industry (form of categorization: genre)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of books supplied:														
Practical ^a	2,161	2,241	2,355	2,165	2,657	2,364	2,989	2,936	3,142	2,904	3,114	3,134	4,020	4,026
School/University/... ^b	7,657	8,016	8,402	8,548	8,658	9,098	10,042	10,380	11,161	9,518	9,680	10,023	11,725	11,419
Minor genres ^c	1,626	1,584	1,604	1,503	1,649	1,739	2,047	1,954	2,076	1,740	2,067	2,080	2,395	2,615
Literature/News	5,801	5,556	5,559	6,122	5,665	5,739	5,458	5,672	7,221	6,580	6,787	6,811	7,357	7,653
Youth/Comics	3,007	2,986	2,797	2,721	2,843	3,058	3,367	3,538	4,336	3,743	4,184	4,451	5,040	5,250
In % :														
Practical ^a	10.7	11.0	11.4	10.3	12.4	10.7	12.5	12.0	11.2	11.9	12.1	11.8	13.2	13.0
School/University/... ^b	37.8	39.3	40.6	40.6	40.3	41.4	42.0	42.3	40.0	38.9	37.5	37.8	38.4	36.9
Minor genres ^c	8.0	7.8	7.7	7.1	7.7	7.9	8.6	8.0	7.4	7.1	8.0	7.8	7.8	8.4
Literature/News	28.6	27.3	26.8	29.1	26.4	26.1	22.8	23.1	25.8	26.9	26.3	25.7	24.1	24.7
Youth/Comics	14.8	14.6	13.5	12.9	13.2	13.9	14.1	14.4	15.5	15.3	16.2	16.8	16.5	17.0
HHI	2,649	2,685	2,736	2,816	2,709	2,762	2,714	2,742	2,687	2,658	2,566	2,575	2,562	2,499
Average number of copies supplied per title:	10,483	10,228	9,509	9,065	9,744	10,024	10,194	9,679	9,181	9,250	9,405	9,581	8,740	9,411
Practical ^a	15,451	14,042	13,473	13,848	13,065	12,918	13,243	12,749	13,249	14,168	13,568	12,924	6,722	11,508
School/University/... ^b	7,094	6,468	6,164	6,243	6,487	7,146	6,992	6,528	6,250	5,667	5,908	5,987	7,067	6,112
Minor genres ^c	6,563	5,473	5,451	5,818	5,522	5,898	7,344	5,787	5,438	5,202	4,959	4,618	4,102	5,173
Literature/News	13,785	15,117	14,182	11,620	15,258	14,385	14,908	14,543	11,613	12,638	12,522	12,683	12,327	12,445
Youth/Comics	11,295	10,883	9,260	10,168	8,021	10,507	11,128	10,840	11,520	10,466	11,538	12,895	10,544	12,667

Table 3 continued

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of copies purchased (thousands)														
Practical ^a	44,043	40,761	42,783	46,633	49,643	47,636	45,858	50,726	54,522	56,724	59,609	58,593	63,363	60,603
School/University/... ^b	97,344	91,708	89,473	93,422	90,026	91,938	95,140	98,132	96,280	87,826	89,809	87,202	89,982	96,242
Minor genres ^c	16,071	12,783	13,355	12,964	12,779	11,943	14,968	14,249	14,775	14,063	16,128	15,459	16,786	16,837
Literature/News	104,288	96,404	97,351	96,423	98,554	98,320	99,492	100,945	101,263	101,538	106,646	109,490	112,611	112,735
Youth/Comics	61,661	57,368	53,035	53,295	52,999	54,629	65,154	77,030	79,500	72,373	81,390	88,715	91,260	102,500
In % :														
Practical ^a	13.6	13.6	14.4	15.4	16.3	15.6	14.3	14.8	15.7	17.0	16.9	16.3	16.9	15.6
School/University/... ^b	30.0	30.6	30.2	30.8	29.6	30.2	29.6	28.7	27.8	26.4	25.4	24.3	24.1	24.7
Minor genres ^c	5.0	4.3	4.5	4.3	4.2	3.9	4.7	4.2	4.3	4.2	4.6	4.3	4.5	4.3
Literature/News	32.2	32.2	32.9	31.8	32.4	32.3	31.0	29.5	29.2	30.5	30.2	30.5	30.1	29.0
Youth/Comics	19.0	19.2	17.9	17.6	17.4	17.9	20.3	22.5	22.9	21.7	23.0	24.7	24.4	26.4
HHI	2,507	2,544	2,544	2,524	2,516	2,537	2,477	2,432	2,414	2,406	2,390	2,410	2,388	2,409

^a Home, health, leisure, nature, travel, etc.

^b School books, university books, documentation, dictionaries and encyclopaedias.

^c Religion, esoteric books and art books.

Source: Annual surveys of Syndicat National de l'Édition

pronounced, as it fell from 30% to 24.7%. Finally, the “minorities” genre dropped from 5% to 4.3%.

It is worth noting that the balance of genres is systematically higher on the demand side than on the supply side. The main explanation for this lies in the plethoric supply of “school and university” books (36.9% of books published in 2003) in relation to their share of sales (24.7%). Conversely, “literature/news” books only represent 24.7% of the supply, compared with 29% of sales. “Youth” and “practical” books have a smaller share on the supply side, compared with their share of demand (17% and 26.4% for youth books; 13% and 15.6% for practical books). Finally, the downward trend in the two indices of concentration (titles per genre and copies sold per genre) can be explained by the fall in market share of the dominant genres, “literature/news” and “school and university”, to the benefit of “youth” and “practical” books, on both the demand and supply sides.

3.5 Variety, balance and disparity supplied by language of origin

Variety by origin is measured by the number of languages from which books are translated. The number of languages represented grew from 23 in 1997 to 34 in 1998, and then fell back to finish at 29 in 2003 (Table 4).¹⁷ We analyse the balance supplied quite simply by observing the change in the number of titles acquired abroad as a percentage of the total number of titles published. The variations from one year to the next (with an exceptionally low share in 2000 and exceptionally high shares in 1998 and 2002) suggest that these results should be interpreted with prudence. Nevertheless, it appears that the average number of titles acquired abroad fell by 23% between 1997 and 2003. This fall in the market share of works of foreign origin in the French publishing supply is even more striking when we consider that it took place at a time when the total number of new books being published was rising strongly.

Closer analysis of the purchase of publishing rights for literature over the period 1997–2003 brings out several elements worth noting. In 2003, literature comprised more than 48% of total purchases¹⁸ while the share of titles purchased in foreign languages comprised about 10% of new books in the literature category, as compared with 15.6% in 1997. This downward trend was offset somewhat by a movement toward rebalancing between the various origins. The fall in the supply share of works of foreign origin did not affect all the different origins equally. The most striking fact is the relative decline in works of Anglo-American origin between 1997 and 2002, followed by their spectacular recovery in 2003. The share of Anglo-American works in the supply of titles of foreign origin stood at 75% in 1997 and 63.9% in 2003. The progression of the HHI for the distribution by language of the supply of works of foreign origin is erratic, but with a downward trend, which suggests that the diversity of linguistic origins, in the sense of the balance between languages, has tended to rise. Lastly, we can observe a trade-off between the

¹⁷ The same profile can be seen when we study the number of different countries. It rises from 35 in 1997 to 52 in 1998 before falling back to 49 in 2003.

¹⁸ However, this share is falling, as it was close to 60% in 1997.

Table 4 Diversity in the French publishing industry (form of categorization: original language)

	1997	%	1998	%	1999	%	2000	%	2001	%	2002	%	2003	%
Foreign rights bought	1,321		1,636		1,090		927		1,269		2,216		1,290	
German	74	5.6	98	6.0	75	6.9	68	7.3	98	7.7	169	7.6	89	6.9
English/American	984	74.5	1,079	65.9	696	63.8	630	68.0	697	54.9	797	36.0	825	63.9
Danish	1	0.1	4	0.2	2	0.2	2	0.2	5	0.4	12	0.5	7	0.5
Spanish	34	2.6	57	3.5	31	2.8	20	2.2	76	6.0	139	6.3	69	5.3
Greek	4	0.3	4	0.2	3	0.3	1	0.1	9	0.7	51	2.3	4	0.3
Italian	160	12.1	173	10.6	146	13.4	129	13.9	105	8.3	193	8.7	72	5.6
Portuguese	5	0.4	9	0.5	10	0.9	3	0.3	36	2.8	78	3.5	13	1.0
Dutch	9	0.7	4	0.2	10	0.9	9	1.0	18	1.4	59	2.7	20	1.5
Others	50	3.8	110	6.7	229	21.0	149	16.1	344	27.1	959	43.3	256	19.8
HHI	5,748		4,555		4,755		5,130		3,926		3,365		4,595	
Average linguistic distance ^a	701.5		642.8		574.0		661.0		475.0		441.6		520.1	
Different languages	23		34		25		17		32		42		29	
Share of foreign books in books published ^b		5.4		5.9		4.5		3.6		4.8		7.3		4.2
Share of literature in foreign books published ^c		59.3		57.9		47.4		36.8		41.1		36.1		48.4
Share of foreign literature in literature published ^d		15.6		14.4		8.9		5.8		8.8		12.7		10.2

Table 4 continued

	1997	%	1998	%	1999	%	2000	%	2001	%	2002	%	2003	%
Literature rights bought	714		913		440		304		411		613		546	
German	20	2.8	32	3.5	25	5.7	18	5.9	32	7.8	53	8.6	22	4.0
English/American	623	87.2	714	78.2	277	62.9	232	76.3	189	46.0	218	35.6	297	54.4
Danish	0	0.0	2	0.2	2	0.4	2	0.7	2	0.5	4	0.6	6	1.1
Spanish	18	2.5	32	3.5	22	5.0	11	3.6	33	8.0	53	8.6	50	9.2
Greek	3	0.4	3	0.3	1	0.2	0	0.0	4	1.0	21	3.4	3	0.5
Italian	15	2.1	22	2.4	47	10.7	13	4.3	26	6.3	45	7.3	45	8.2
Portuguese	1	0.1	5	0.5	6	1.4	3	1.0	11	2.7	22	3.6	11	2.0
Dutch	5	0.70	5	0.5	6	1.4	5	1.6	7	1.7	19	3.1	12	2.2
Others	29	4.1	98	10.7	53	12.0	20	6.6	86	20.9	178	29.0	100	18.3
HHI	7,649		6,262		4,284		5,938		2,729		2,346		3,473	

^a Average linguistic distance of acquired books = mean of the distances of each language to French weighted by the share of this language in the total number of acquired foreign books.

^b Titles acquired divided by titles produced (new titles and new editions) (%).

^c Titles acquired in literature divided by titles acquired, whatever the genre (%).

^d Titles acquired in literature divided by total titles produced in literature (%).

Source: Annual surveys of Syndicat National de l'Édition

purchase of publishing rights to English-language books and the purchase of rights to works in the “other languages” category (i.e., in languages other than French, German, English, Danish, Spanish, Greek, Italian, Portuguese or Dutch), so that the period of decline in the influence of Anglo-American publishers almost automatically finds expression in a rise in the number of “other language” titles published. To put it slightly more provocatively, the loss of influence of the English-speaking world is immediately expressed by an increase in the diversity of the languages of origin of translated books, and vice versa. Indeed, the decline in English is not offset by any one language, but a whole range of different ones (just to quote some particularly diverse ones for the year 2002: Bahasa Indonesia, Bosnian, Khmer, Tamil and Latvian).

If we focus on literature, the core sector of publishing, we see that the HHI was much higher in 1997 and much lower in 2003 than it was for all titles taken together. This means that the rise in linguistic variety in the “literature” category was significantly higher than it was for all books taken together. At the same time, there was a very sharp slump in the number and share of titles of English origin (with some recovery in 2003, but to a level much lower than was the situation in 1997).

The average linguistic distance of titles purchased (see above) gives some insight into the evolution of disparity. It experienced a strong downward trend, with the average distance falling from 701.5 in 1997 to 520 in 2003, mainly due to the growing share of titles purchased in close languages (Italian, Spanish and Portuguese). Finally, looking beyond our analysis of the relative shares of works of Indo-European origin, the evolution in the share of works purchased in more distant languages (Japanese and, more generally, Asian languages) is disappointing, bearing witness to a distinct lack of French openness towards this continent. For literature, the number of Asian titles purchased was 21 in 1998, 15 in 1999, 2 in 2000, 16 in 2001, 19 in 2002 and 17 in 2003.

3.6 Balance consumed by language of origin

The relative share of works in French, English and “other languages” in samples composed of bestsellers remained stable during the period 1998–2004 (Table 5). Works of French-speaking origin continued to dominate the sales of literature, with the share usually oscillating around 65%, compared with about 30% for English and 5% for the “others”.

Table 5 Linguistic origin of bestselling novels

	1998	%	1999	%	2000	%	2001	%	2002	%	2003	%	2004	%
French novels	36	72	24	48	34	68	31	62	31	62	34	68	35	70
English-American novels	12	24	17	34	14	24	14	28	14	28	13	26	13	26
Others	2	4	9	18	5	8	5	10	5	10	3	6	2	4
HHI	5,776		3,784		5,264		4,728		4,728		5,336		5,592	

Source: *Livres Hebdo* and *Création et diversité des industries culturelles* (Département des études, de la prospective et des statistiques, Ministère de la culture, 2006)

Despite its low level, the diversity consumed by language of origin for literature was higher than the diversity supplied. During the period 1998–2003, the average share of French titles in the works of literature published was 89.9%, compared with less than two-thirds for those consumed. Over the same period, translated literature comprised about 35% of sales, but only 10% of the supply. Foreign authors were therefore over-represented among bestsellers.

4 Discussion

How might such an analysis enable us to draw conclusions about the nature of the French publishing industry? Does the publishing policy of French firms favour cultural diversity? If we judge solely by variety, the first dimension of diversity, the answer is yes. This measure emphasizes, in particular, the rise in the number of titles published. But a more thorough investigation of the concept of diversity leads us to qualify this observation considerably, with respect to all three of the classification schemes: titles, genres and the language of origin of translated books.

The rise in the number of books published went hand in hand with a decrease in the average print run, which fell by 10% from 10,483 in 1990 to 9,411 in 2003 for all genres except youth books. The declines for “literature, news”, “school, university”, “minority” genres and “practical” books were -9.7% , -13.8% , -21.2% and -25.5% , respectively. Such falls result in weaker exposure for many titles, which encounter growing difficulties in meeting their potential public. In addition, the publishing industry is far from achieving any balance between titles. Not that balance should necessarily be an end in itself, but the growing predation of market share by a small number of titles is hardly favourable to the visibility of the works published or to the sovereign exercise of choice by consumers. This conclusion is consistent with the importance of the self-promoting mechanism of reputation in the book sector (Benhamou 2002; Ginsburgh 2003; Verdaasdonk 2003). It should also be linked to the characteristics of the goods (prototype goods, experience goods), which predispose consumers to choose goods for which they possess relatively reliable information. This explains the highly standardized nature of the books in the Top 20. The three authors most present—Mary Higgins Clark, Patricia Cornwell and Christian Jacq—offer standardised products, with predictable norms for the subjects covered, the lengths of the texts and the chapters, the presentation and jacket, etc., which help to create or accentuate a feeling of familiarity in buyers.

Although balance by genre has increased, this conceals considerable change in terms of disparity. With all due reservations, which can only be satisfied by a more detailed analysis of book content, we observe, both for supply and demand, an increase in the share of utilitarian reference books and “easy-access” reading books (youth and comics), to the detriment of literary works and of more or less formally prescribed school and university books.

Analysis of the linguistic origin of the books has led to two other observations: there was a fall in the share of books of foreign origin in French publishing, but this

was accompanied by rebalancing between the different origins, with periods of decline in books of English origin to the benefit of a wide range of other languages.

Finally, it is striking to note that with respect to categorization by title, the variety supplied is much greater than the variety consumed. This concurs with other research that points out that the high level of uncertainty surrounding the conditions for the success of a book leads to the adoption of a “lottery” strategy by publishers: by publishing a large number of titles, they increase their chance of success (see especially Caves 2000). Analysis by genre and by language of origin, on the other hand, reveals that the diversity supplied is systematically lower than the diversity consumed. The downward trend in the number of works translated is combined with a relatively high proportion of translated books among bestsellers: the level of openness is not nearly as low for the “general public” sector as it is for all titles taken together.

In terms of genre, the discrepancy between diversity supplied and diversity consumed has two main causes. In the market for school and university books, the share in the supply is greatly in excess of the share in the demand for these works. The situation is the exact opposite in the “youth” segment and, to a lesser extent, for literary works. In the case of market segments for prescribed books—school and university—the competition between editors has taken on a winner-take-all character (Frank and Cook 1995). At the secondary level, the choice of a title by an educational establishment entails the capture of a significant share of the market, as these institutions have a policy of group purchasing. Furthermore, for school and university books, establishing a collection’s reputation is essential since an author’s reputation is usually weak. To increase their chance of winning a market, publishers in this sector therefore have every interest in supplying the widest possible selection of works. The “winner-take-all” effect also operates in the youth and literature segments, but in a different manner. For “youth” books, the explanation probably resides in the sensitivity of demand to the intensity of promotional effort and to the cumulative effect of various series (Harry Potter, Blake and Mortimer, etc.), with the result that sales can easily reach several hundred thousand copies. The same logic reigns in the literature domain, with the presence of recurrent authors who benefit from very large promotion expenses.

5 Concluding remarks

In conclusion, a few topics require further comment.

The choice to work with the three properties of diversity (variety, balance, disparity) turns out to be revealing, since diversity may increase in one dimension while decreasing in another. This result weakens the legitimacy of public support for the arts that relies on an argument for diversity that focuses on a single dimension. As we have shown, privileging one dimension leads to debatable results with respect to the state and the evolution of cultural diversity. This could be one of the sources of conflict in national or international discussions about diversity.

Our analysis of balance by genre would be worth refining. As for the question of the degree of proximity between titles, so far this has been only partially tackled by

Basuroy and Ravid (2004) for films and by Hamlem (1994) and Alexander (1996) for music.¹⁹ As far as we know, nothing else has been published on books.

Our approach to disparity has been to examine the bestseller lists together with the variety of their linguistic origins. No doubt more work needs to be done in the analysis of disparity to measure the extent to which newly published works are the source of proliferation of standardised or diversified titles.

It would be interesting to augment our results with a cross-national analysis of cultural diversity in the publishing sector. But the statistics are not yet sufficiently harmonized, so the results would be deeply questionable.

This paper has suggested a methodology to measure cultural diversity in its multidimensional nature. This is a first but necessary step before going further in at least two directions. First, the analysis should be expanded to identify and evaluate determinants of cultural diversity such as demography, level of education and also linguistic market size, market structure, and degree of vertical integration.²⁰ Second, a measuring tool is a prerequisite to establishing a decision-making tool allowing a fine tuning of public policies devoted to promoting cultural diversity. Weitzman (1993) has assessed how to conduct a public policy that would ensure diversity of natural species. He recommends protecting those species that are most different from the others. In the same manner, our methodology is a tool to select appropriate public measures in order to increase cultural diversity. The paper shows that it is difficult, and maybe impossible, to enrich all of the dimensions of diversity simultaneously; it is certainly not possible on the basis of a unique measure. For example, in terms of the linguistic origin of books, it seems that public support for the translation of books from rare linguistic origins is coherent with the idea of promoting disparity offered, but it is not sure that this would increase diversity consumed. Another kind of policy would be necessary, through education in particular. In other words, for policy prescription a *set* of measures should be preferred if we aim to promote both diversity supplied *and* diversity consumed.

Acknowledgements We thank two anonymous referees as well as Mark Schuster and Michael Rushton for their relevant comments and suggestions.

¹⁹ The entropy index proposed by Alexander (1996) intends to measure the quantity of disorder in a musical system, where disorder is assimilated to diversity. It is based on a certain number of product characteristics, such as tempo, harmonic structure, melody, etc. However, Peterson and Berger (1996) demonstrate the unsuitability of the characteristics chosen for the assessment of diversity in popular music.

²⁰ For example, in this article, we simply propose a hypothesis about the relationship between market structure and diversity. We demonstrate that, apart from youth books the increase in variety supplied is accompanied by a fall in the average print run. Two complementary processes are probably at work. Firstly, publishers adopt a strategy of product differentiation as a response to the specific demands expressed by consumers. Secondly, publishers may be engaging in a strategy of variety proliferation. In France, vertical integration in the book industry allows the adoption of a strategy of variety proliferation with the aim of maximising the occupation of retail display space, thereby evicting rival products (Benhamou 2003).

Appendix 1: Data

The measures of variety by title and of balance by genre, both supplied and consumed, over the period 1990–2003 are based on the annual survey of the sector's professional body, the *Syndicat National de l'Édition (SNE)*. The data are reliable; they are collected from all publishing firms and represent more than 95% of total turnover.

Analysis of balance supplied by language of origin is made possible thanks to the survey of the foreign rights committee of the SNE. These data have been collected since 1988, but they have only been subject to systematic and reliable processing since 1997. We have therefore chosen only to work with the period 1997–2003 to ensure greater homogeneity and continuity in the data. To evaluate the share of foreign titles purchased as a proportion of the total production of new books and new editions, we make the realistic assumption that all the titles purchased are published, thus ignoring the strategy of buying dormant rights, a strategy that may be practiced by certain publishers. This simplifying assumption does not weaken our analysis, as it tends to overestimate the importance of foreign works in French publishing.

For the assessment of balance by titles, we use the lists of the fifty bestselling “novels” and “essays” drawn up by the magazine *Livres Hebdo* over the period 1998–2004. Although *Livres Hebdo* has been publishing bestseller lists every year since 1992, the information has only been based on a unified and certified methodology since 1998.

For the analysis of diversity consumed by language of origin and of disparity by title, we also study the lists of bestselling novels because of the lack of more complete statistics. Thus, we obtain a picture of the attraction of the general public for literature of diverse linguistic origins. This result cannot encapsulate the preference for diversity, but it does illustrate one of its facets.

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