

Feature Film Diversity on Australian Cinema Screens: Implications for Cultural Diversity Studies Using Big Data

*Bronwyn Coate, Deb Verhoeven,
Colin Arrowsmith and Vejune Zemaityte*

INTRODUCTION

Screenings in Australian cinemas are dominated by feature films from the USA. This is neither a new observation nor a new phenomenon. The high volume of distinct first-release feature titles from the USA has been a constant characteristic of Australian film consumption since the 1910s, and over the years, several state and federal government inquiries have sought to investigate both the reasons for this dominance and its consequences for local producers, distributors and exhibitors.

B. Coate (✉)
School of Economics, Finance and Marketing, RMIT University,
Melbourne, VIC, Australia

D. Verhoeven
Faculty of Arts and Social Sciences, University of Technology Sydney,
Ultimo, NSW, Australia

© The Author(s) 2017
M.D. Ryan and B. Goldsmith (eds.), *Australian Screen in the 2000s*,
DOI 10.1007/978-3-319-48299-6_16

341

The Kinomatics Global Showtime Dataset, which captures world-wide data from 2013 to 2014, reveals the on-screen dominance of US films in the majority of countries around the world. To some extent, the prominence of US cinema has been exacerbated by the significant changes heralded by the digitisation of film production, distribution and exhibition. Yet, the impact of digitisation on diversity at the level of film offerings has not been given a great deal of attention. Certainly, digitisation has ‘lowered the bar’ for some types of film production and made it easier for these films to be screened in cinemas. As data from Screen Australia reveals, from 2000 to 2015, the number of film titles released in Australia more than doubled, increasing from 250 in 2000 to 539 in 2015.¹ Since 2010 alone, the number of distinct films released in Australia has risen by 65%.²

To assume from this marked growth in the circulation of distinct films that greater diversity is assured is to confuse ‘diversity’ with ‘variety’. Glasser is careful to distinguish these terms in a media context, defining variety as simply the raw number of outlets or content choices available, whereas diversity focuses on both the number of choices *and* the differences between them.³ This chapter explores how film exhibition has responded to the increase in distributed film content and considers the implications of these changes for Australian cinemagoers in terms of the diversity of films available to them. Our focus on measuring diversity in relation to overall availability distinguishes our work from previous considerations of diversity in film and media studies. Most of this previous research on screen diversity (at the level of films’ source of origin) has focused on the volume of films making it onto the big screen, with little attention paid to how films receiving a cinema release

C. Arrowsmith

School of Mathematical and Geospatial Sciences, RMIT University,
Melbourne, VIC, Australia

V. Zemaityte

School of Communication and Creative Arts, Deakin University,
Melbourne Burwood Campus, VIC, Burwood, Australia

then compete with each other for space on these screens. Because our research derives from detailed ‘showtime’ data, we are able to take into account the relative access provided by cinema infrastructure to screenings of different films.

Recently, for example, Park analysed the changing patterns of foreign film distribution in Australia using a one-way flow model, finding that a noticeable growth in the proportion of Asian movie imports is directed by a corresponding growth in Australia’s Asian-born population.⁴ While Park’s results make a valuable contribution towards understanding the underlying drivers for change in cultural tastes, her analysis is restricted to non-US films, and therefore omits major Hollywood blockbusters and independent American features. Extending Park’s analysis to include all films screened in Australian cinemas enables an unbiased equal weighting to be attributed to each individual film title. This ensures a more rigorous analysis of what Philip Napoli has described as ‘exposure diversity’, as discussed further in the following text.⁵

The Kinomatics Global Showtime Dataset provides us with an extensive and detailed listing of all films that screened commercially in Australia during 2013–2014. The diversity of first-release films was determined using ‘screen-shares’, i.e. the proportion of screenings for individual films as measured against all films screening at the same time. Films sharing the same country of origin were then grouped together to consider and compare their respective representations within the sample, in order to understand diversity at the level of where films come from. We found that as more titles have been released, competition among non-US films has intensified, often resulting in limited numbers of screenings at a restricted range of venues and/or short release periods. As a result, we argue that a more nuanced view of film release and distribution strategies is needed to assess the performance of both US and non-US films in Australian cinemas. As the theatrical box office diminishes in importance as a proportion of film revenue, and as producers explore alternative distribution models with less certain revenue streams, definitions of film success or failure must take into account the uneven playing field provided by current exhibition infrastructure.⁶ As a further consideration, evidence based on analysis of the Kinomatics Global Showtime Dataset reveals that cinema size is a significant influence on the diversity of films screened.⁷ In particular, smaller-sized cinemas, especially those with between three and six screens, are found to screen non-US titles more frequently than larger cinemas.

MORE OF THE SAME OR SOMETHING DIFFERENT: DEFINING DIVERSITY

Diversity can be a somewhat elusive concept in that individual perception of difference and sameness can vary markedly. Scholarly definitions of diversity are also inconsistent and vary between and within disciplines. Napoli describes diversity as one of the foundational principles of communications policy.⁸ Moreau and Peltier and Benhamou and Peltier assert that cultural diversity is a multidimensional concept, and that attempts to measure it should rely on criteria from the biological sciences to account for variety, balance and disparity.⁹ So even while considering diversity in the restricted context of the cinema, there remain wider conceptual challenges around definitions of the term.

Napoli identifies three types of diversity: source diversity, content diversity and exposure diversity.¹⁰ Source diversity is defined as ‘the extent to which the media system is populated by a diverse array of content providers’.¹¹ Source diversity can be considered in terms of the attributes of the owners or creators of a media product, such as their ethnicity and gender or, in the case of films themselves, their geographic or national origin. Conversely, content diversity can be expressed in terms of genre distinctions or the inclusion of ‘on-screen’ demographic attributes, such as the ethnic or gender diversity of the cast.¹² Arguably, content diversity flows out of, or is causally related to, source diversity, although empirical evidence on this is mixed.¹³ The third type of diversity identified by Napoli is exposure diversity, which is defined as ‘the extent to which audiences consume a diverse array of content’.¹⁴

Moreau and Peltier also identify three types of diversity in their study of cultural diversity in the film industry.¹⁵ ‘Variety’ simply refers to the number of categories into which quantity of similar film titles can be placed. ‘Balance’ refers to the distribution pattern of the quantity—for example, different genres of films. Finally, ‘disparity’ refers to the degree to which categories such as genre are distinct and different from each other. As Moreau and Peltier acknowledge, difficulties in obtaining practical data to quantify disparity result in their diversity measure being skewed towards variety and balance.¹⁶ In many respects, Moreau and Peltier’s ‘balance’ is similar to Napoli’s source and content categories in that it can be used to refer to the spread of films by national origin or by genre.

Moreau and Peltier make a further distinction between diversity supplied and diversity consumed.¹⁷ This mirrors Napoli’s distinction

between source and exposure diversity and builds on earlier work by Van der Wurff and Van Cuilenburg, who analysed how competition in the Dutch television broadcasting market from the late 1980s to late 1990s influenced the diversity of television programmes supplied. In the oligopolistic broadcasting environment of Holland, Van der Wurff and Van Cuilenburg found a distinction between moderate competition, which was found to improve diversity, and ruinous competition, which resulted in what they describe as ‘excessive sameness’.¹⁸ They argue that the types of strategies adopted by broadcasters ultimately influence the diversity outcomes experienced by audiences. In exploring diversity in this way, Van der Wurff and Van Cuilenburg further distinguish between open and reflective diversity as a way to account for the relationship between production and consumption so as to understand, for example, the responsiveness of supply to changes in demand. Reflective diversity assesses whether the media expresses different ideas or topics in the same proportion as media users prefer, while open diversity assesses whether media expresses all reasonable ideas or topics in equal proportions, regardless of public support.¹⁹

In this chapter, we explore the diversity of films screened in Australian cinemas over 2013–2014 using a hybrid approach that is guided by Napoli’s typology as well as by Moreau and Peltier’s distinction between supplied and consumed diversity. The consumption of both imported and locally produced films, quantified by screen-shares of films from different countries, is considered alongside top-level data concerning films supplied to the cinema exhibition market itself. While screen-share is not a perfect proxy for consumption, it does give an indication of consumption levels if we assume that exhibitors are motivated to screen titles that will generate the highest profit (and that typically, although not always, are associated with a larger audience).

DATA AND METHOD

The data used in this chapter are a subset of the Kinomatics Global Showtime Dataset. This big cultural database represents a unique data set of global cinema showtimes spanning a two and a half year period from December 2012 to May 2015. The database is organised around attributes of each of the specific film titles that were screened over the collection period, including data on the country or countries of origin that were merged from the Internet Movie Database (IMDb).²⁰

The database enables us to track exhibition patterns and thus to gain a clear understanding of the spatial aspects of film distribution and exhibition. Finally, the Kinomatics Global Showtime Dataset tracks individual screenings of every film down to the date and time of every showtime at every venue covered in the sample. This extensive data set covers 48 countries, approximately 33,000 venues, 97,000 films and 330 million screenings. The subset of films and screenings in Australia in 2013 and 2014 are described in broad terms in Table 16.1.

In order to ensure consistency, only first-release feature films with more than 50 individual screenings were used in the analysis. By adopting a threshold of 50 screenings, niche screenings such as those associated with festivals are excluded from our sample and subsequent analysis, as we argue that these represent a distinct form of film consumption, different from that associated with a general exhibition in commercial cinema. A film was considered to be a first release if it was produced in or after 2010 and was being screened in Australia for the first time. This enabled us to accommodate the lag associated with the distribution of some films across different territories. We use the Academy of Motion Pictures Arts and Sciences definition of ‘feature film’—that is, any film that runs for 40 min or longer.²¹ As Table 16.1 shows, restricting the sample to first-release feature films with in excess of 50 screenings reduces the overall sample size in terms of screenings by only a very small amount so that in 2013, under 45,000 screenings from over

Table 16.1 Description of aggregate data set of films screened at Australian cinemas

	2013	2014
Number of screenings	2,993,168	2,975,492
Number of films ^a	2939	3053
Number of venues	420	409
Number of screens	1929	1907
% of total films selected for the sample (new release, with 50 ≥ screenings)	14.7	15.9
% of total screenings selected for the sample (new release, with 50 ≥ screenings)	98.5	99.0

^aAll films screened, including shorts, live performances, feature presentations, new and old releases. Note that alternative format versions of the same film, including 2D and 3D versions, are treated as the same film

Source Kinomatics Global Showtime Dataset

2.9 million in total are excluded, while in 2014 this is even lower, with under 30,000 screenings excluded as a result of the restriction criteria. As would be expected of the long tail effect that characterises cinema exhibition and box office returns where relatively few films generate high values on these variables, the same principle applies to the data presented in Table 16.1—although the number of first-release film titles covered by the restricted sample drops considerably, there is negligible impact on the number of screenings. This indicates the need to caution that an increase in the number of films does not mean more diversity overall *per se*, given in the practical sense, a large number of films are ignored or not accessible to the typical cinemagoer, as the screening-level data reveals.

Table 16.2 enumerates source diversity of first-release films with 50 or more screenings, while Table 16.3 presents an insight into the source diversity associated with the screenings generated by films included within the sample of first-release films screened in Australia during 2013–2014. The tables reveal that international collaborations, which for the purposes of this analysis include both official and unofficial co-productions, are an important element of the global production landscape. This is to be expected, given the momentum of globalisation in driving greater cooperation and partnerships between nations.

As Napoli has previously observed, most of the research on film diversity has focused on the supply side (source and content diversity) rather than on demand or consumption (exposure diversity).²² In his research on diversity in the media, Napoli emphasises the centrality of

Table 16.2 Description of first-release films with 50 or more screenings in Australian cinemas

	2013		2014		% change
	N	(%)	N	(%)	
Australian films (no international collaboration)	25	5.77	27	5.58	-0.19
Australian films (with international collaboration)	6	1.39	21	4.34	+2.95
US films (no international collaboration)	137	31.64	137	28.31	-3.33
US films (with international collaboration) ^a	72	16.63	62	12.81	-3.82
Non-Australian, non-US, foreign films	193	44.57	237	48.97	+4.40
Total films	433	100	484	100	+11.78

^aWhere films include Australian and USA collaboration, each film is counted once as an Australian film with international collaboration

Source *Kinomatics Global Showtime Dataset*

Table 16.3 Description of first-release feature screenings for films with 50 or more screenings in Australia

	2013		2014		% change
	N	%	N	%	
Screenings of Australian films (no international collaboration)	42,631	1.44	64,134	2.18	+0.74
Screenings of Australian films (with international collaboration)	64,457	2.19	132,662	4.50	+2.31
Screenings of US films (no international collaboration)	1,883,421	63.88	1,588,651	53.91	-9.97
Screenings of US films (with international collaboration) ^a	720,050	24.42	902,710	30.63	+6.21
Screenings of non-Australian, non-US, foreign films	237,884	8.07	258,843	8.78	+0.71
Total screenings	2,948,443	100	2,947,000	100	-0.05

^aWhere films include Australian and USA collaboration, the associated screenings are counted once as an Australian film with international collaboration

Source *Kinomatics Global Showtime Dataset*

the audience underpinning the democratic ideal of diversity. This extends beyond a ‘marketplace of ideas’ model, whereby the implicit assumption is that if audiences are simply provided with more diverse content, they will, therefore, consume more diverse content.²³ Napoli views this as a simplification and argues that diversity of consumption does not necessarily follow from diversity supplied. Following this, we compare diversity in terms of first-release films as a source of supply, and also in terms of the screen-shares associated with these films as a way to proxy demand (in terms of film consumption that occurs at a cinema). This also echoes McQuail, who describes the difference between diversity that is ‘sent’ and diversity that is ‘received’, whereby the latter may be quite different from the former based on what audiences actually select.²⁴

To do this, we focused our analysis on comparing film diversity and screening diversity as proxies for diversity supplied and diversity consumed or demanded. As a further consideration for understanding diversity, we looked at source dimensions identified by the country or countries of origin of all the films included in our sample. Details on the origin of films were based on data from IMDb, which was merged into the Kinomatics Global Showtime Dataset. On this basis, in comparing Tables 16.2 and 16.3, it is interesting to note that while non-US

films represent close to half the total number of first-release features, they only account for fewer than 10 percent of all screenings. The figures in Tables 16.2 and 16.3 provide insight into the differences between films originating from different regions in terms of their popularity on Australian cinema screens. For instance, based on 2014 figures, a US film averaged 12,500 screenings, which was well above the average screenings for other international films at 1092, while Australian films averaged 4100 screenings. The variance associated with the data at the film title level, however, cautions our ability to generalise these findings.

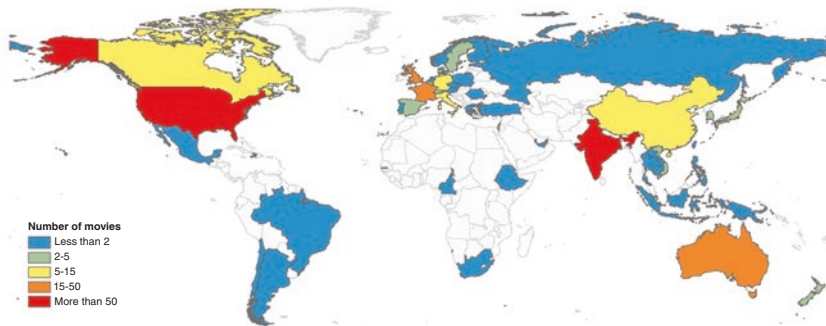
Of further relevance to understanding the diversity of films screened is cinema size. Table 16.4 presents some summary statistics related to source diversity for screenings across different-sized cinemas based on 2014 data. Comparing cinemas of different sizes, we see clear evidence that smaller-sized cinemas allocate a much greater share of their screenings to Australian and non-US titles. Especially of interest is that as cinema size increases, the percentage share of screenings for Australian films falls. Conversely, Table 16.4 shows that larger cinemas screen a less diverse range of offerings (at the country of origin level) and are far more reliant on a staple diet of US films (presumably Hollywood blockbusters) compared with smaller cinemas. This data also infers that outside the mainstream ecology of US-dominated film exhibition and distribution, the increased number of films being produced and screened has had a ‘cannibalising’ effect, in which increased competition has had a greater negative impact on the success of non-US film titles.

Maps 16.1 and 16.2 show the source diversity of film titles and the total number of screenings (exposure diversity), respectively. While data for US and Australian films simply reflect the figures provided in Tables 16.2 and 16.3, disaggregating international films to their specific country of origin enables a richer understanding of where the films that make it onto cinema screens in Australia come from, and where they are screened. In the case of collaborations that include both official and unofficial co-productions, each of the countries responsible for producing the film is assigned equivalent shares. In some cases, the contributions may not be equivalent, but in the absence of knowing precisely how the collaborative arrangements have played out in each of the specific cases, we accept equivalent shares between countries as indicative of collaborations, including official and unofficial co-production arrangements as they generally exist.

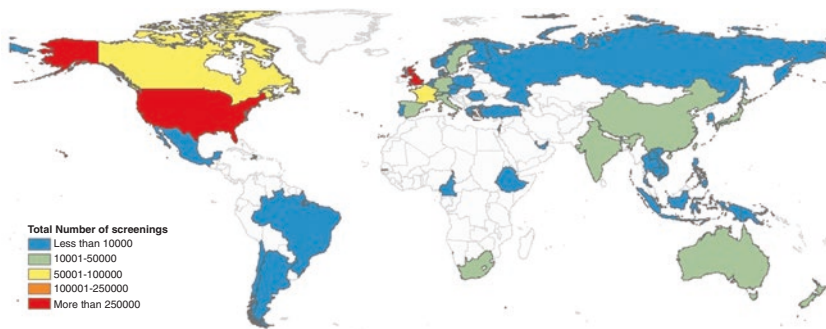
Table 16.4 Description of first-release feature screenings for films with 50 or more screenings in Australia by cinema size for 2014

	<i>Small size</i> (1–2 screens)		<i>Midsize</i> (3–6 screens)		<i>Multiplexes</i> (7–9 screens)		<i>Megaplexes</i> (10+ screens)	
	N	% of total	N	% of total	N	% of total	N	% of total
Screenings of Australian films (no international collaboration)	6194	2.7	27,233	2.7	16,831	1.9	14,816	1.8
Screenings of Australian films (with international collaboration)	14,682	6.4	55,474	5.5	43,407	4.9	39,510	4.8
Screenings of US films (no international collaboration)	107,819	47.0	505,315	50.1	492,542	55.6	443,661	53.9
Screenings of US films (with international collaboration) ^a	67,674	29.5	281,403	27.9	250,700	28.3	232,942	28.3
Screenings of non-Australian, non-US, foreign films	33,034	14.4	139,188	13.8	82,386	9.3	92,189	11.2
Total screenings by cinema size	229,403	7.8	1,008,613	34.2	885,866	30.1	823,118	27.9

^aWhere films include Australian and USA collaboration, the associated screenings are counted once as an Australian film with international collaboration
Source Kinomatics Global Showtime Dataset



Map 16.1 Geographic source of origin associated with first-release film titles screened in Australia in 2014. *Source Kinomatics Global Showtime Dataset*



Map 16.2 Geographic source of origin associated with first-release film screenings in Australia in 2014. *Source Kinomatics Global Showtime Dataset*

Map 16.1 reveals that films originating from a large range of countries screened in Australia in 2014. A somewhat different picture emerges in Map 16.2, however, as we look at screening data to consider the countries that produce the films shown on Australian cinema screens. As we move from comparing films in Map 16.1 to screenings generated by these films in Map 16.2, the dominance of films from the USA and, to a lesser extent, other English-speaking nations becomes apparent. A simple comparison of the two Maps demonstrates the disparate character of film origin and screenings. The USA dominates Australian cinemas in terms of the *number of screenings* compared with all other countries,

but if analysis focuses on the *number of films* screened, the USA is comparatively less dominant. This demonstrates the way a small number of Hollywood blockbusters dominate cinema screens the world over. It also points to the critical importance of availability for understanding diversity in the film industry. Without a holistic analysis that includes consideration of distribution and exhibition conditions, our understanding of diversity will be severely limited.

QUANTIFYING SCREENED FILM DIVERSITY

Economists have explored the question of diversity and its counter of concentration in many different fields and under different circumstances or sets of assumptions. This generally involves applying a Herfindahl Hirschman index (HHI), which is most commonly used to measure industry concentration levels.²⁵ The HHI enables us to assess the degree to which cinema in Australia is decentralised and diverse as opposed to centralised and concentrated. The HHI is applied to the Australian cinema market according to a number of different segmentations defined in terms of films' geographic origin to quantify the diversity of origin. The index also enables the screenings of these films to be defined by geography to generate a quantity of diversity received or consumed by audiences in Australia. By comparing these results, we were able to assess how diversity supplied and consumed differs. This not only enables a deeper insight into the features associated with a diverse cinema market but is also useful for informing cultural policy.

The HHI is calculated based on the following equation:

$$\text{HHI} = \sum_{i=1}^N s_i^2$$

where s_i is the market share in terms of the total screenings of film i in the market, and N is the number of films. In focusing upon films defined by their geographic origin, film i becomes a composite value reflecting the total films belonging to a given geographic origin, from the set of geographic regions (1, ..., N). For assessment of diversity supplied, the HHI is calculated based on film-only metrics, while for assessment of diversity consumed, the HHI is calculated based on screen-shares as previously defined. The HHI approaches zero when a market is occupied by a large number of films (or screen-shares) and reaches its maximum

Table 16.5 Herfindahl Hirschman index from a geographical origin perspective—film titles as a proxy for supply

<i>Variables</i>	2013	2014
Overall number of first-release features	433	484
Number of countries films imported from	56	58
Domestic films share of total films (%)	7.16	9.92
<i>HHI</i> based on country of origin	1943.21	1876.34

Table 16.6 Herfindahl Hirschman index from a geographical origin perspective—film screenings as a proxy for demand

<i>Variables</i>	2013	2014
Overall number of first-release features screened	2,948,433	2,947,000
Domestic films screening share of total (%)	3.64	6.68
HHI ignoring country of origin	97.07	95.61
HHI based on country of origin	5984.78	5680.57

of 10,000 points when a market is controlled by a single film. The HHI increases both as the number of films in the market decreases and as the disparity in screen-share size increases. Generally, if the HHI is between 1500 and 2500 points, a market is considered to be moderately concentrated, while any market with the HHI in excess of 2500 points is highly concentrated. Lower values are associated with higher diversity, and score ranges have specific interpretations, so that an HHI below 1500 indicates a low level of concentration and therefore a greater level of diversity. Drawing from Napoli's typology, it is interesting to compare diversity results across the market, particularly in terms of diversity supplied and consumed, where diversity is considered in terms of where films originate from in order to aid understanding of the role geography plays in shaping diversity. Table 16.5 presents the results of the HHI from a supply perspective, and also includes other descriptive elements that present insight into the supply of new-release films in Australian cinemas defined by their country of origin.

Table 16.5 shows that the supply of films by country of origin is moderately concentrated. While there is a large number of supplier countries, the results suggest that shares are not even. Indeed, the dominance of films from key sources, particularly the USA and India, underscores this

result. On the consumption side, evidenced by screen-share allocations, Table 16.6 reinforces the contention that geography matters to film diversity. With screen-share allocations mirroring film consumption patterns, we are able to use these as a means to proxy demand indicated by what films audiences have access to when they attend the cinema. First, ignoring the country of origin, the HHI yields a very low value (below 100) that reflects a high volume of films with similar screen-shares. Yet once the country of origin is factored in, our HHI goes from diverse to highly concentrated (in excess of 5000). This result is driven largely by unequal screen-shares across the different countries reflected in the sample. The dominance of Hollywood features from the USA is the key factor producing this situation.

By distinguishing between source and exposure diversity, it is possible to explore whether diversity of supply has an impact on consumption. Ideally, a longer time series would enable this relationship to be rigorously tested. Typically, for most goods, it would be assumed that supply should reflect diversity demanded. Yet as Caves notes, cultural goods present an exceptional case.²⁶ Faced with uncertainty about the likely success or failure of films, it is rational for them to be overproduced. This situation is further exacerbated by a significant lift in content production in recent years, which is partly due to the easier accessibility of digital production technologies.

A further analysis presented in Table 16.7 considers the degree of concentration associated with the screenings of a small number of films. The concentration ratio for the top ten new-release films reveals the skewed character of film exhibition, which can be expected in a heterogeneous market such as film. But regardless of this being what we would expect, the question remains of what this entails for diversity more generally in cinema. From Table 16.6, we see that the top ten films generate close to 20 percent of all screenings and that all these films originate from the USA, either exclusively or as co-productions involving the USA.

This domination of US films in the top 20 percent of showtimes also suggests that diversity may apply differently across different exhibition outlets. Specifically, when comparing the diversity of films screened in cinemas grouped by screen size, it is possible to see that cinema infrastructure is also a significant determinant for the diversity of films screened. For example, while small cinemas (1–2 screens) and midsize cinemas (3–6 screens) accounted for around a third of the total screens

Table 16.7 Concentration ratio of top ten (CR_{10}) new-release feature films screened in Australia annually—demand side

2013		2014					
Rank	Film title	Geographic origin	% share of screenings	Rank	Film title	Geographic origin	% share of screenings
1	<i>Iron Man 3</i>	USA and China	2.28	1	<i>Guardians of the Galaxy</i>	USA and UK	2.10
2	<i>The Hunger Games: Catching Fire</i>	USA	2.13	2	<i>Gone Girl</i>	USA	2.03
3	<i>Thor: The Dark World</i>	USA	2.00	3	<i>The Hunger Games: Mockingjay Part I</i>	USA	2.00
4	<i>The Great Gatsby</i>	USA and Australia	1.97	4	<i>The Lego Movie</i>	Australia, USA and Denmark	1.80
5	<i>Grinny</i>	USA and UK	1.89	5	<i>How to Train your Dragon 2</i>	USA	1.64
6	<i>Despicable Me 2</i>	USA	1.81	6	<i>The Other Woman</i>	USA	1.62
7	<i>Oz: The Great and Powerful</i>	USA	1.80	7	<i>Transformers: Age of Extinction</i>	USA and China	1.60
8	<i>The Hangover Part III</i>	USA	1.73	8	<i>Interstellar</i>	USA and UK	1.57
9	<i>Star Trek Into Darkness</i>	USA	1.73	9	<i>Neighbors</i>	USA	1.55
10	<i>The Croods</i>	USA	1.60	10	<i>Teenage Mutant Ninja Turtles</i>	USA	1.54
CR_{10}			18.94				17.43

in Australia in 2014, the chance of seeing an Australian film on these screens was more than double that of seeing an Australian film in larger cinemas with more than seven screens.

CONCLUSION

Moreau and Peltier note that ‘although it has become a widely adopted credo, the concept of cultural diversity is particularly polysemous’.²⁷ As this chapter has discussed, the concept of diversity itself has been defined and applied to cultural industries such as the film sector in diverse ways. In supporting arguments for cultural diversity, including the principles underpinning the United Nations Educational, Scientific and Cultural Organization Convention on the Protection and Promotion of the Diversity of Cultural Expressions in 2005,²⁸ it is important to be able to measure and assess diversity so that goals and targets around it can be clearly identified, and central issues such as weighing up the costs and benefits associated with achieving or maintaining diversity can inform policy and practice.

While each of the different dimensions of diversity discussed in this chapter is important, for the purpose of considering the effects of globalisation in terms of cinema audiences’ exposure to cultural products from around the world, we have focused our attention on the geographical origins of the film. It is worth noting that ideally, it would also be useful to reflect on the extent to which different national origins can be distinguished from each other, although we acknowledge that any attempt to either qualitatively or quantitatively assess disparity between films from different countries would be highly contestable.

Our study of film diversity in Australia has been made possible by the availability of new forms of data-driven evidence. Access to big cultural data, with its intricate level of detail at scale, will facilitate further growth in the number of studies capable of addressing exposure diversity. Indeed, Napoli has already noted the slowly growing momentum for exposure-focused studies in policy and research.²⁹ With big cultural data sets such as the Kinomatics Global Showtime Dataset, we are able to go some way towards addressing the void identified by Napoli and provide some evidence about what audiences are actually exposed to.³⁰ We anticipate extended analysis at a range of scales, including down to the localised level of a neighbourhood cinema, as a way to continue adding nuance to this study. An exposure diversity approach such as this would

enable us to examine what McQuail describes as the ‘different universe’ of what is actually received by audiences in a practical sense at the cinema, as well as producing a more nuanced picture of cinema distribution and release strategies.³¹

To approach this from a different angle, if we truly value diversity on Australian cinema screens, then it is crucial for a rich ecology of cinema infrastructure to also exist. Given that the existing onus for diversity lies with smaller cinemas, patrons with access to these cinemas will have improved access to more Australian and non-US films. Understanding diversity in relation to this critical role played by cinema venues themselves represents an area where further research efforts might be directed.

Finally, it is important to remember that cinema comprises institutional, social and commercial networks that are interdependent; an observation that in turn has influenced and shaped our approach to cinema research—including, in this case, how we conceptualise and operationalise the notion of diversity. To understand and work with large data sets and across all the dimensions of film industry performance has required us to be as interdependent as our object of study. For example, our emphasis on exposure diversity brings together approaches from media and communication studies, geospatial science and cultural economics. And although we have described diversity through the different languages of our respective academic disciplines, our conceptualisations are largely similar. Through detailed consideration of the definition of diversity across and within our different disciplines, we have mobilised a meaning and definition from which diversity in film exhibition and distribution in Australia can be measured and assessed. By taking an interdisciplinary approach, we were able to understand that ‘diversity’ itself is a contingent rather than an absolute term. This chapter demonstrates the benefits of an interdisciplinary and multifaceted approach to diversity for revealing the conditional contexts of film consumption in Australia.

NOTES

1. Screen Australia, “Number of Australian and Overseas Films Released in Australian Cinemas, 1984–2015,” Screen Australia, Last modified March 2016. <http://www.screenaustralia.gov.au/fact-finders/cinema/industry-trends/films-screened>.
2. *Ibid.*

3. Theodore L. Glasser, "Competition and Diversity among Radio Formats: Legal and Structural Issues," *Journal of Broadcasting & Electronic Media* 28.2 (1984): 8.
4. Sora Park, "Changing Patterns of Foreign Movie Imports, Tastes, and Consumption in Australia," *Journal of Cultural Economics* 39.1 (2015): 89.
5. Philip M. Napoli, "Exposure Diversity Reconsidered," *Journal of Information Policy* 1 (2011): 252.
6. Deb Verhoeven, Alwyn Davidson and Bronwyn Coate, "Australian Films at Large: Expanding the Evidence about Australian Cinema Performance," *Studies in Australasian Cinema* 9.1 (2015): 13–14.
7. Cinema size is defined in terms of the number of screens within a cinema venue, and classification includes four cinema sizes: small (1–2 screens), midsize (3–6 screens), multiplexes (7–9 screens) and megaplexes (10 + screens).
8. Napoli, "Exposure Diversity Reconsidered," 250.
9. François Moreau and Stéphanie Peltier, "Cultural Diversity in the Movie Industry: A Cross-National Study," *Journal of Media Economics* 17.2 (2004): 25; Françoise Benhamou and Stéphanie Peltier, "How Should Cultural Diversity Be Measured? An Application Using the French Publishing Industry," *Journal of Cultural Economics* 31.2 (2007): 90.
10. Philip M. Napoli, "Deconstructing the Diversity Principle," *Journal of Communication* 49.4 (1999): 16.
11. Napoli, "Exposure Diversity Reconsidered," 247.
12. *Ibid.*, 247–248.
13. For further discussion of this problem, see Marc Howard and Philip Roessler, "Liberalizing Electoral Outcomes in Competitive Authoritarian Regimes," *American Journal of Political Science* 50.2 (2006): 365.
14. *Ibid.*
15. Moreau and Peltier, "Cultural Diversity in the Movie Industry," 23.
16. *Ibid.*, 24.
17. *Ibid.*
18. *Ibid.*
19. Richard Van der Wurff and Jan Van Cuilenburg, "Impact of Moderate and Ruinous Competition on Diversity: The Dutch Television Market," *The Journal of Media Economics* 14.4 (2001): 215.
20. IMDb, <http://www.imdb.com/>.
21. Academy of Motion Pictures Arts and Sciences, "Rule 2: Eligibility Feature Films," <https://web.archive.org/web/20080906191347/>, <http://www.oscars.org/79academyawards/rules/rule02.html>.
22. Philip M. Napoli, "Rethinking Program Diversity Assessment: An Audience-Centred Approach," *Journal of Media Economics* 10.4 (1997): 59.

23. Robert M. Entman and Steven S. Wildman, "Reconciling Economic and Non-Economic Perspectives on Media Policy: Transcending the 'Marketplace of Ideas'," *Journal of Communication* 42.1 (1992): 5.
24. Denis McQuail, *Media Performance: Mass Communication and the Public Interest* (Thousand Oaks: Sage, 1992), 157.
25. United States Department of Justice, Antitrust Division, "Herfindahl Hirschman Index," United States Department of Justice, Last modified 29 July 2015. <https://www.justice.gov/atr/herfindahl-hirschman-index>.
26. Richard E. Caves, *Creative Industries: Contracts between Art and Commerce* (Cambridge: Harvard University Press, 2000), 75.
27. Moreau and Peltier, "Cultural Diversity in the Movie Industry," 23.
28. United Nations Educational, Scientific and Cultural Organization (UNESCO), "Convention on the Protection and Promotion of the Diversity of Cultural Expressions," UNESCO, Last modified 20 October 2005. http://portal.unesco.org/en/ev.php-URL_ID=31038&URL_DO=DO_TOPIC&URL_SECTION=201.html.
29. Napoli, "Exposure Diversity Reconsidered," 253.
30. For further information on the Kinomatics Global Showtime Dataset, see <http://kinomatics.com/about/data-and-technology/>.
31. McQuail, *Media Performance*, 157.

BIBLIOGRAPHY

- Academy of Motion Pictures Arts and Sciences. "Rule 2: Eligibility Feature Films." <https://web.archive.org/web/20080906191347/>, <http://www.oscars.org/79academyawards/rules/rule02.html>.
- Benhamou, Françoise, and Stéphanie Peltier. "How Should Cultural Diversity Be Measured? An Application Using the French Publishing Industry." *Journal of Cultural Economics* 31.2 (2007): 85–107.
- Caves, Richard E. *Creative Industries: Contracts between Art and Commerce*. Cambridge: Harvard University Press, 2000.
- Entman, Robert M., and Steven S. Wildman. "Reconciling Economic and Non-Economic Perspectives on Media Policy: Transcending the 'Marketplace of Ideas.'" *Journal of Communication* 42.1 (1992): 5–19.
- Glasser, Theodore L. "Competition and Diversity among Radio Formats: Legal and Structural Issues." *Journal of Broadcasting & Electronic Media* 28.2 (1984): 127–142.
- Howard, Marc, and Philip Roessler. "Liberalizing Electoral Outcomes in Competitive Authoritarian Regimes." *American Journal of Political Science* 50.2 (2006): 365–381.
- McQuail, Denis. *Media Performance: Mass Communication and the Public Interest*. Thousand Oaks: Sage, 1992.

- Moreau, François., and Stéphanie Peltier. "Cultural Diversity in the Movie Industry: A Cross-National Study." *Journal of Media Economics* 17.2 (2004): 123–143.
- Napoli, Philip M. "Deconstructing the Diversity Principle." *Journal of Communication* 49.4 (1999): 7–34.
- Napoli, Philip M. "Exposure Diversity Reconsidered." *Journal of Information Policy* 1 (2011): 246–259.
- Napoli, Philip M. "Rethinking Program Diversity Assessment: An Audience-Centred Approach." *Journal of Media Economics* 10.4 (1997): 59–74.
- Park, Sora. "Changing Patterns of Foreign Movie Imports, Tastes, and Consumption in Australia." *Journal of Cultural Economics* 39.1 (2015): 85–98.
- Screen Australia. "Number of Australian and Overseas Films Released in Australian Cinemas, 1984–2015." Screen Australia, last modified March 2016. <http://www.screenaustralia.gov.au/fact-finders/cinema/industry-trends/films-screened>.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). "Convention on the Protection and Promotion of the Diversity of Cultural Expressions." UNESCO, Last modified October 20, 2005. http://portal.unesco.org/en/ev.php-URL_ID=31038&URL_DO=DO_TOPIC&URL_SECTION=201.html.
- United States Department of Justice. Antitrust Division. "Herfindahl Hirschman Index." United States Department of Justice, Last modified July 29, 2015. <https://www.justice.gov/atr/herfindahl-hirschman-index>.
- Van der Wurff, Richard., and Jan Van Cuilenburg. "Impact of Moderate and Ruinous Competition on Diversity: The Dutch Television Market." *The Journal of Media Economics* 14.4 (2001): 213–229.
- Verhoeven, Deb., Alwyn Davidson., and Bronwyn Coate. "Australian Films at Large: Expanding the Evidence about Australian Cinema Performance." *Studies in Australasian Cinema* 9.1 (2015): 7–20.