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## "A Band on Every Corner": Using Historical GIS to Describe Changes in the Sydney and Melbourne Live Music Scenes

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## Abstract

This paper demonstrates the use of historical Geographic Information Systems (historical GIS) to investigate live music in Sydney and Melbourne. It describes the creation of a tailored historical geodatabase built from samples of gig listings (comprising dates, locations, and performer names), and how this historical geodatabase offers insight into the changing dynamics of performers and venue locations. The major findings from the analyses using the developed historical geodatabase are that neither city showed a decline in live music performance or performer numbers, but Melbourne increased at a greater rate than Sydney. Further, the spatial concentration within Melbourne has been far greater than that for Sydney. While Melbourne has expanded numerically but shrunk spatially, Sydney has experienced a geographic dispersion of performances throughout the study period.

## Keywords

gis, describe, changes, sydney, melbourne, live, music, scenes, "a, every, band, corner";, historical

## Disciplines

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# **“A band on every corner”: Using historical GIS to describe changes in the Sydney and Melbourne live music scenes**

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## **Key words:**

Historical GIS; historical geodatabase; live music; Melbourne; Sydney

## **Abstract**

This paper demonstrates the use of historical Geographic Information Systems (historical GIS) to investigate live music in Sydney and Melbourne. It describes the creation of a tailored historical geodatabase built from samples of gig listings (comprising dates, locations, and performer names), and how this historical geodatabase offers insight into the changing dynamics of performers and venue locations. The major findings from the analyses using the developed historical geodatabase are that neither city showed a decline in live music performance or performer numbers, but Melbourne increased at a greater rate than Sydney. Further, the spatial concentration within Melbourne has been far greater than that for Sydney. While Melbourne has expanded numerically but shrunk spatially, Sydney has experienced a geographic dispersion of performances throughout the study period.

## **Introduction**

This paper demonstrates the use of historical Geographic Information Systems (historical GIS) to investigate live music in Sydney and Melbourne. It describes the creation of a tailored historical geodatabase built from samples of gig (concert) listings comprising dates, locations, and performer names. It then presents descriptive statistics and thematic maps derived from this historical geodatabase, demonstrating how this offers insight into the changing dynamics of live music performers and venue locations.

Live music and GIS are not a common combination of subject and methodology, but this is neither for lack of data nor a lack of academic interest in the relationships between music and place. The persistent, but never one-to-one, relationship between music and place has been the subject of several dedicated studies (Bennett & Peterson 2004; Connell & Gibson 2003; Krims 2007; Whiteley, Bennett & Hawkins 2004). The case of live music presents a particularly literal manifestation of music and place, given that live music performances are defined by particular performers, locations and times.

Examples of research that make maps of music are still something of a novelty, but this is changing with the gradual opening up of GIS into non-traditional subjects and data types (see: Chrisman 2005; Cope & Elwood 2009; Gibson, Brennan-Horley & Warren 2010). Parallels can be found in recent examples which investigate creative industries such as cinema, art, and fashion specifically as spatial data (Brennan-Horley & Gibson 2009; Cooper & Gregory 2011; Currid & Williams 2010; Shaw 2013; Verhoeven, Bowles & Arrowsmith 2009). For GIS within research on music specifically, there is a noticeable variation in scale and data type: Lashua (2011) and Cohen (2012) use hand drawn qualitative maps by Liverpool musicians, while Florida et al (2010) use quantitative US Census and business data. These different data approaches reflect differences in focus and overarching framework (in these cases, ethnography or economics respectively), but share a common recognition of the usefulness of maps in understanding changes in music activity.

By focusing on changes to live music, this paper, and the wider research project from which it draws, is motivated by similar aims and strategies to those found within examples of historical GIS. Historical GIS refers simply to the use of GIS and related techniques within historical research. This has grown from near obscurity in the 1990s and now comprises not so much a distinct linear field of enquiry but a large and diverse collection of

applied examples These include cinema (Klenotic 2011; Verhoeven, Bowles & Arrowsmith 2009), crime (Johnson, SD 2010), meat production (Robichaud & Steiner 2010) and gay and lesbian history (Brown & Knopp 2008). Amongst this are several champions who bring together compilations and call attention to the merits of GIS within historical research (DeBats & Gregory 2011; Gregory & Healey 2007; Knowles 2000, 2005).

Knowles, introducing one such compilation, sees a commonality of interest in “*the use of geographical evidence to understand the shaping influence of geography on history...[and] use of GIS to re-examine historical interpretations or to illuminate historical events*” (Knowles 2005, p. 8). Gregory, Ian and Ell (2007) also point to the practical benefits GIS can bring to historical research as a database technology, by making it possible to handle data which is both spatial and temporal. Similarly, the use of GIS presented in this paper is motivated by a desire to understand a particular historical subject (live music), and since live music is inherently spatial but also changeable the practical advantages of handling both temporal and spatial data are evident. Hence, while many of the techniques described here are found in GIS more generally, examples of historical GIS are the primary methodological precedents.

The focus of this paper is the changing extent and nature of live music scenes in Sydney and Melbourne. Since the early 2000s, music scene participants in Australian cities have shown increased literacy in the web of policy issues relating to *saving* live music – the idea of live music thriving, or growing, is set in the past (Barrett 2012; Emery 2012; Lobato 2006; Schaefer 2014; Walker 2012). Concern about decline is often described in spatial narratives: closures of music venues, noise complaints, competition for space, or changing neighbourhood composition (see: Burke & Schmidt 2009; Gibson & Homan 2004). Amidst these accounts, there are differentiations within and between cities, as well as over time. These differing outcomes in growth or decline are difficult to account for in an entirely temporal narrative, but can also provide clues to the broader nature of change.

The Melbourne live music scene is currently described as both thriving and under threat. In government, media and industry output it is reported upon positively as a “music city” in terms of aggregate live music activity (Arts Victoria 2011; Boulton 2013; Music Victoria 2012). But it is also home to activism based on concern about decline in music venues. The 2010 Save Live Australian Music (SLAM) rally drew thousands of protestors to the Melbourne CBD (Levin 2010), and prompted the formation of Music Victoria (Music Victoria 2010). The organizational impetus for the SLAM rally came initially from the (temporary) closure of the Tote Hotel, which had hosted live music since 1980 (Homan 2011). Similarly, in 2004, concerns for the Esplanade Hotel in St Kilda had sparked planning policy intervention (Shaw 2005a, 2005b).

By contrast, Sydney is often described as a more extreme example of a depleted music scene, and an example of what not to do (Burke & Schmidt 2009; Purcell 2009). Shane Homan has extensively documented the policy frameworks which hastened the transition away from Sydney’s pub rock peak in the early 1980s (Homan 2000, 2003). A sense of decline in Sydney live music opportunities was noted in both the 2003 *Vanishing Acts* report (Johnson, B & Homan 2003) and the 1993 *Stayin’ Alive NSW* report (Ausmusic 1993). In addition, a variety of qualitative accounts point to Sydney in the 1990s as an increasingly inhospitable music scene (Casimir 1990; Cochrane 1993; Purcell 2009).

The title of this paper refers to a 1997 song (“there’s a band on every corner, but I play in my room”) by The Whitlams, a music group strongly identified with inner city Sydney (Carroll & Connell 2000; Giuffre 2009). Lead singer Tim Freedman was by the late 1990s singing bleakly about changes to his home city. Speaking on radio in 1997, Freedman commented that Melbourne had “a bigger sense of community, in pubs and being part of a crowd”, while inner city Sydney had been “scattered to the wind” (*Australian Music Show*, Triple J, September 3<sup>rd</sup> 1997, quoted in Carroll and Connor (2000)). Interviews with Sydney musicians for the wider research project from which this paper is drawn are consistent with this tone. By contrast, musicians who were active in Melbourne during the 1990s report relative ease finding performance opportunities and a visible music scene, if not great personal success. Several musicians reported leaving Sydney in this timeframe and migrating to Melbourne.

“Things changed a lot between when I first moved to Sydney and when I realised I wanted to get out... Every venue shut down, essentially, or discarded music ... To actually play was a horrible experience. It was like you were getting yelled at by the venue for putting your gear in the wrong place... So when we first got to Melbourne the first thing I noticed was you got a rider [complimentary drink]. Which was huge, I was just like, “I can’t believe this!””

- Musician active in Sydney in the 1990s (interview March 2014)

These differing accounts invite several questions. What happened to make Sydney a hostile place for musicians in the 1990s? Why is Melbourne live music described simultaneously as thriving and under threat? Does the experience of decline relate simply to continuous venue closures, or fewer live music performances?

The use of historical GIS recognizes the spatial narratives already threading through these questions, and can bring a “forest through the trees” calibration to the on-the-ground accounts from music scene participants. The bulk of this paper describes the data sourcing and database practicalities of implementing this approach. This is followed by the presentation and discussion of descriptive statistics and thematic maps, which provide new insights on the nature of decline in live music in Sydney and Melbourne. While the wider research project aims to synthesize various qualitative and quantitative analysis techniques on a larger scale, the results presented here form an abridged example of the novel possibilities of using historical GIS to investigate live music.

## Method

### *Developing the Historical Geodatabase*

A tailored historical geodatabase was created to enable investigation of live music performances in Sydney and Melbourne across time. The target timeframe was chosen to encapsulate the transition from the “heyday” to more recent years (early 1980s to mid-2000s).

Like other historical geodatabases, the development process comprised a significant part of the research time. However, the basic concept was resilient: dates and locations are found in abundance in the primary data, so that transforming this to an historical geodatabase was a matter of leveraging, rather than adding, data. The challenge was in keeping to a manageable scale. This meant selecting data sources recognized and meaningful to music scene participants, but also able to be structured in comparable samples to focus on spatial change over time.

### *Gig Listings*

*Gig listings* were chosen as the primary source for the historical geodatabase. “Gig listings” is an Australian music scene vernacular term for the printed notifications of forthcoming concerts found in the weekly entertainment section of newspapers or the “street press” (free weekly music magazines distributed in particular cities, see: Brennan 2007). A page of gig listings is comparable in appearance to a TV or cinema guide (see example Figure 1). Their common elements are date, venue and performer name/s.

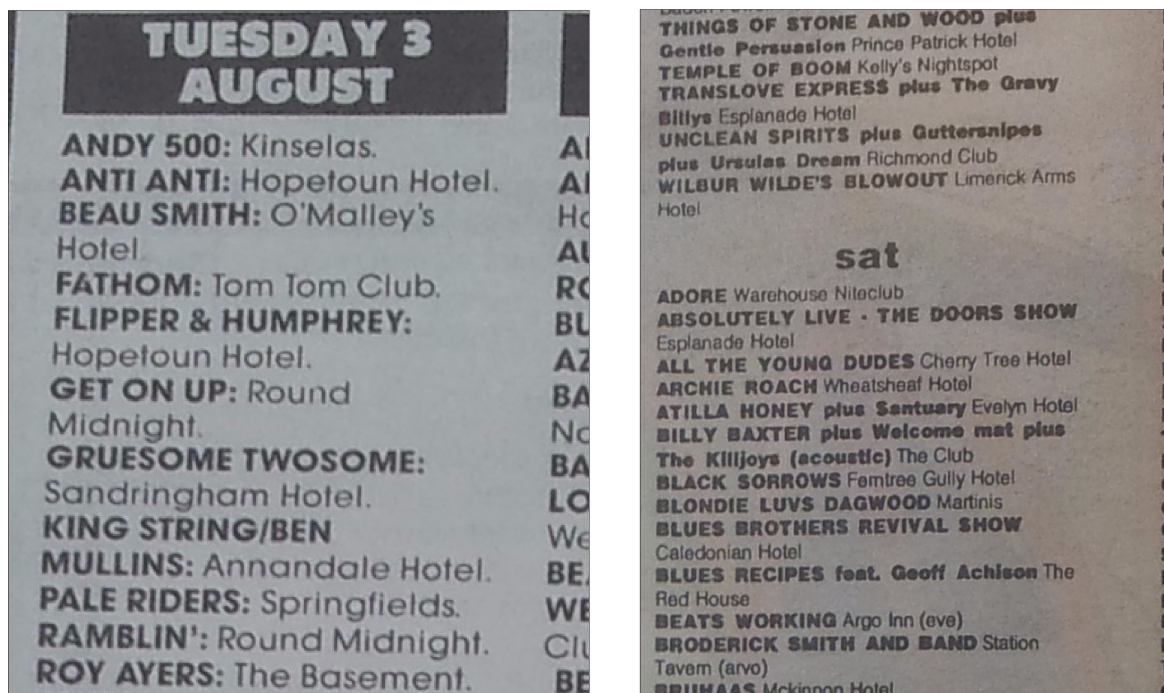


Figure 1: Examples of gig listings

Similar gig listings sources have been used in Melbourne to chart changing independent music, visual art and theatre venues (Shaw 2013). They are also the basis of the TUGG<sup>1</sup> database. Extending on these examples to focus on spatial change over time, and facilitate comparison between Sydney and Melbourne, required additional investigation of the gig listings sources.

### ***Scoping sources***

A number of publications containing gig listings were active in either Sydney or Melbourne during the study timeframe. No publication was active for the entire timeframe. The choices of particular sources to use were based on feedback from interviews with music scene participants, and from investigating and trialling data. More data was added to the historical geodatabase than was ultimately used in analysis.

Specifically, gig listing sources were sought which were:

- Recognized by music scene participants in the relevant timeframe and city
- Comparable between Sydney and Melbourne
- Comparable over multiple years
- Publicly available

For viewing change over time and between Sydney and Melbourne from the 1980s to 2000s, the following combination of publications presented the most favourable balance:

- *Sydney Morning Herald* (Fairfax newspaper, Sydney) and the *Age* (Fairfax newspaper, Melbourne) for the 1980s and early 1990s
- *Drum Media* (street press, Sydney) and *Beat* (street press, Melbourne) for the 1990s and 2000s

As identified in interviews, by the late 1990s, street press had gradually overtaken mainstream newspapers as the predominant source of live music scene information. Hence the early 1990s includes data from both street press and newspapers.

The initial focus of data collection was August in Census years (1981, 1986, 1991, 1996, 2001, 2006). This was motivated by the ability to overlay Census data. A complementary set of year-by-year samples was collected from the *Age* and *Sydney Morning Herald*, starting from 1983 (the first year both sources were available). These allowed consideration of whether long-range trends were consistent with trends within single sources.

### ***Structure of Historical Geodatabase***

The historical geodatabase structure (see Figure 2) reflects the process of retrieving primary data. Individual tables correspond directly to editions of gig listing publications, e.g. “*Sydney Morning Herald* August 2 1985”. Within these tables, rows correspond to individual gig listings in the primary source.

The format for instances of multiple performers at a single event differs between sources (see Figure 1). While the tables replicate these differences and maintain a direct relationship to the primary source, queries named “performance listings” are the basis of map exports and spatial analysis. These queries contain one row per performer, date, source, and venue, and hence allow more standardised comparisons between sources.

All tables link to a centrally updated and geocoded venue table. New venues were geocoded as required, at street address precision and a match rate of 90% or higher.

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<sup>1</sup>TUGG: *The Ultimate Gig Guide*, is a project led by Deb Verhoeven at Deakin University and Alexander Gionfriddo at RMIT University. The wider research project from which this paper is drawn works in partnership with TUGG. TUGG is available for other researchers. 7,500+ records of gigs in Melbourne since the 1970s are available for immediate querying online (as at September 2014). See the website for details: <http://tugg.me/>

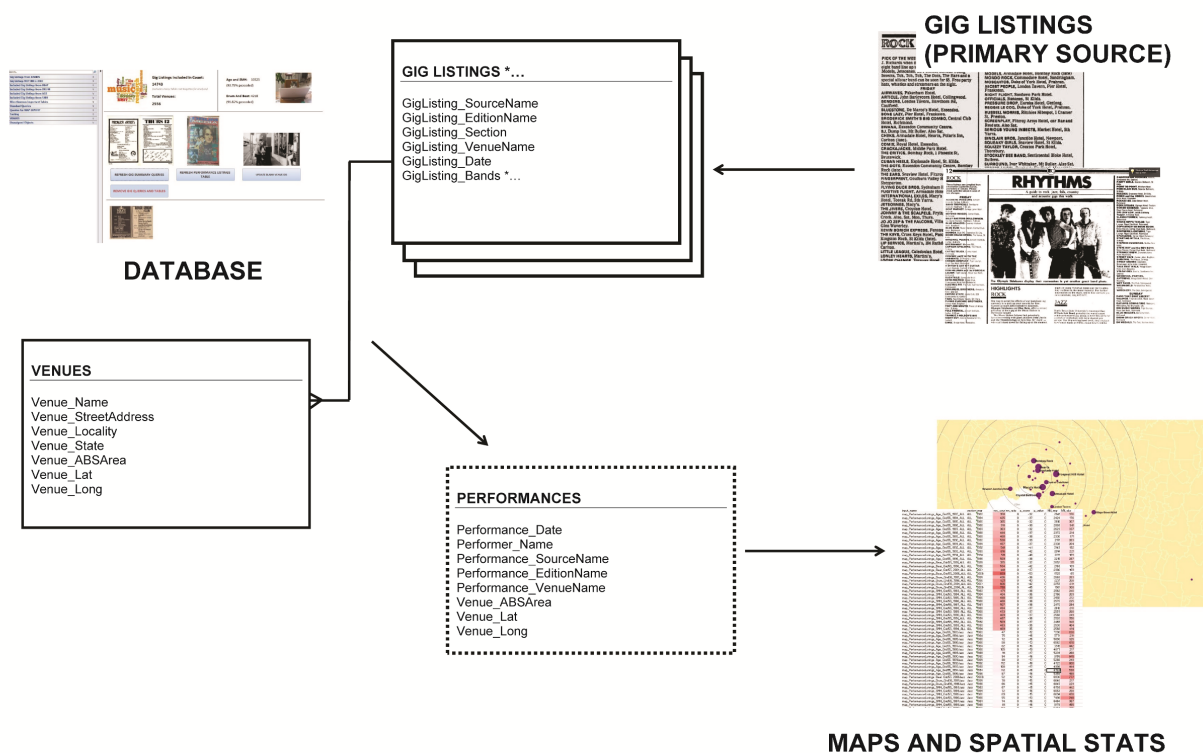


Figure 2: Simplified database structure

### *Descriptive statistics and thematic maps*

For the data presented in this paper, a subset query of performance listings was produced from the historical geodatabase, comprising single editions from the same time of year. This query was exported to ArcGIS and converted to point features.

From this data, the following descriptive statistics were generated:

- Count of individual performance listings per edition
- Average Nearest Neighbour results for performance listings in each edition (Greater Melbourne or Greater Sydney)
- Count of individual performers per edition

Average Nearest Neighbour (Average NN) provides a relatively simple descriptive spatial statistic as a discussion point. Average Nearest Neighbour measures the average distance between points in a given area (see: Haworth, Bruce & Iveson 2013; Ord & Getis 1995). It is a measure of clustering, and can be compared to the expected value for a random distribution of points within the same area, or, in this case, to the results for the same area in different years. A decreasing Average NN value over time is indicative of clustering.

To complement these descriptive statistics, thematic maps were produced to represent the number of performance listings per venue in each edition, with larger symbol sizes corresponding to venues with more performances. For this paper, three maps are presented for each city, taken from data in the start, middle and end point of the target timeframe.

Together, these outputs provide an introductory description of the changing dynamics – frequency and location - of live music performances, venues, and performers, in equivalent samples over time in Sydney and Melbourne.



## Results

Table 1 and Table 2 present descriptive statistics of live music performances in Melbourne, drawn from samples of gig listings from the *Age* and *Beat* respectively. These were compiled in the historical geodatabase described above. Note that shading is applied for readability, with darker shades corresponding to higher values within each respective table and column.

In both Table 1 and Table 2 the count of performance listings and performers increases across time (1983 to 2006) while the Average Nearest Neighbour result for performance listings decreases.

Figure 3 presents three thematic maps of performance listings in Melbourne, grouped by venue. Increased clustering over time (1983 to 2006) can be seen in the CBD, the inner north (Fitzroy), and St Kilda.

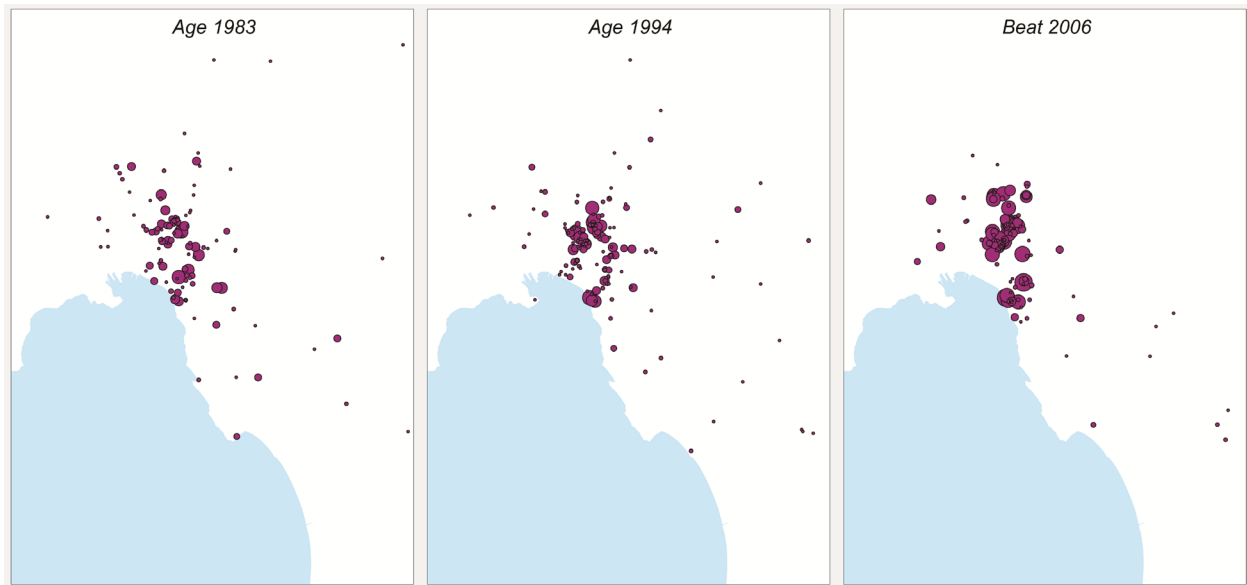
**Table 1: Performances from gig listings in the *Age* (newspaper, Melbourne), first week of August, 1983-1994**

Publication	Year	Performance Listings -		
		Performance Listings - Count	Average Nearest Neighbour (m)	Performers - Count
<i>Age</i>	1983	358	336	266
<i>Age</i>	1984	425	176	281
<i>Age</i>	1985	365	307	268
<i>Age</i>	1986	318	341	252
<i>Age</i>	1987	363	337	261
<i>Age</i>	1988	444	214	328
<i>Age</i>	1989	460	171	337
<i>Age</i>	1990	530	263	391
<i>Age</i>	1991	457	204	386
<i>Age</i>	1992	541	192	415
<i>Age</i>	1993	616	221	469
<i>Age</i>	1994	511	189	411

**Table 2: Performances from gig listings in *Beat* (street press, Melbourne), first week of August, Census years 1991-2006**

Publication	Year	Performance Listings -		
		Performance Listings - Count	Average Nearest Neighbour (m)	Performers - Count
<i>Beat</i>	1991	355	311	427
<i>Beat</i>	1996	534	109	433
<i>Beat</i>	2001	441	169	385
<i>Beat</i>	2006	839	85	738





**Figure 3: Melbourne maps of performance listings by venue, 1983, 1994, 2006**

Table 3 and Table 4 present descriptive statistics of live music performances in Sydney, drawn from samples of gig listings from the *Sydney Morning Herald* and *Drum Media* respectively. These can be compared to the equivalent publications for Melbourne presented in Tables 1 and 2.

In Table 3 the number of performance listings and performers remains steady while the Average Nearest Neighbour result for performance listings increases. In Table 4 the count of performance listings and performers increases and the Average Nearest Neighbour result increases slightly.

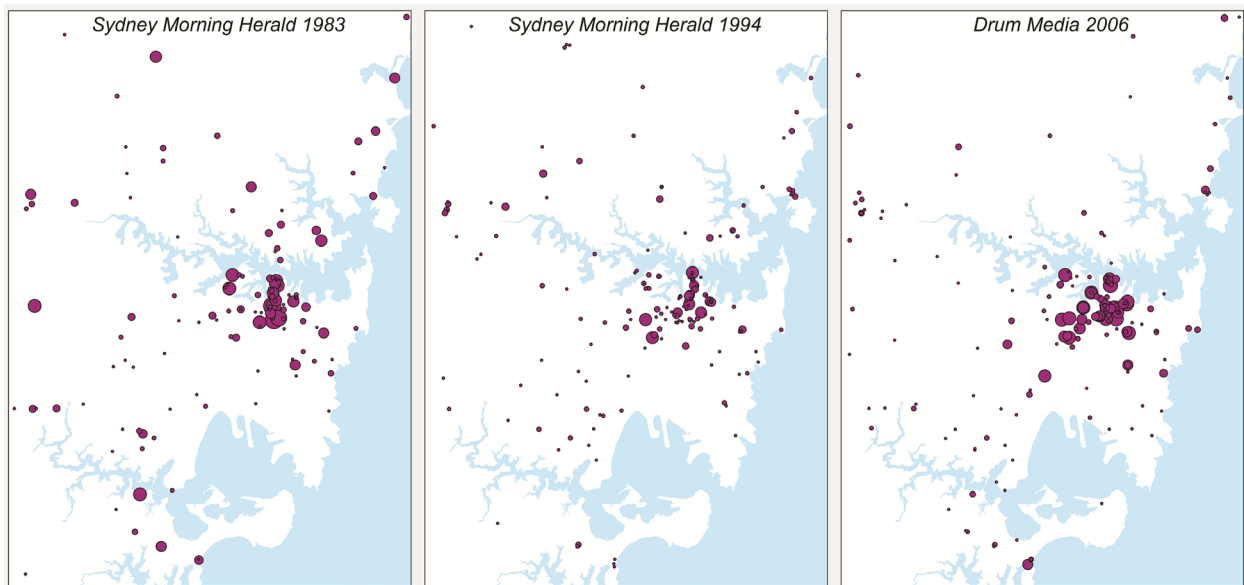
Figure 4 presents three thematic maps of performance listings in Sydney, grouped by venue. The suburban ring of venues, and venues in the inner city, can be seen decreasing in size between the first and second map (1983 and 1994). By 2006, clustering returns to the inner city and inner west but not to the outer suburbs.

**Table 3: Performances from gig listings in the *Sydney Morning Herald* (newspaper, Sydney) first week of August, 1983-1994**

Publication	Year	Performance Listings -		
		Performance Listings - Count	Average Nearest Neighbour (m)	Performers - Count
<i>Sydney Morning Herald</i>	1983	471	240	324
<i>Sydney Morning Herald</i>	1984	404	209	306
<i>Sydney Morning Herald</i>	1985	498	212	337
<i>Sydney Morning Herald</i>	1986	468	225	308
<i>Sydney Morning Herald</i>	1987	507	284	371
<i>Sydney Morning Herald</i>	1988	454	210	336
<i>Sydney Morning Herald</i>	1989	473	268	353
<i>Sydney Morning Herald</i>	1990	469	249	353
<i>Sydney Morning Herald</i>	1991	487	356	378
<i>Sydney Morning Herald</i>	1992	509	348	408
<i>Sydney Morning Herald</i>	1993	483	404	376
<i>Sydney Morning Herald</i>	1994	469	414	353

**Table 4: Performances from gig listings in *Drum Media* (street press, Sydney), first week of August, Census years 1991-2006**

Publication	Year	Performance Listings -		
		Performance Listings - Count	Average Nearest Neighbour (m)	Performers - Count
<i>Drum Media</i>	1991	436	283	306
<i>Drum Media</i>	1996	621	208	685
<i>Drum Media</i>	2001	606	231	548
<i>Drum Media</i>	2006	788	308	639



**Figure 4: Sydney maps of performance listings by venue, 1983, 1994, 2006**

## Discussion

The narrative of decline is a prevalent theme in contemporary calls to “save” live music in Australian cities. As mentioned, the idea of thriving, or expanding, is set in the past. It is therefore surprising that, over time, including the 1990s, the sources do not show any *numerical* decrease in live music, in either Sydney or Melbourne. But the structure of the historical geodatabase allows insight into other attributes, which help to untangle what is meant by a thriving or declining live music scene. This adds to, rather than contradicts, existing accounts. It also helps to understand why Sydney live music scene participants report differently to those in Melbourne.

In Melbourne, the count of live music performances increases in both sources: *Age* 1983-1994 by 42%, *Beat* 1991-2006 by 136%. The count of individual performers also increases: 54% and 72% respectively. But these new performances and performers added each year are *not* in new locations. They are increasingly clustered around the same inner city locations (St Kilda, CBD, Fitzroy), and in particular venues (visible as larger map symbols in Figure 3). Accordingly, the Average Nearest Neighbour figure decreases in both sources: *Age* 1983-1994 by 43%, *Beat* 1991-2006 by 72%.

Thus, the data shows Melbourne live music scene expanding numerically from 1983 to 2006, but shrinking spatially at an equally impressive rate. This accounts for the seeming paradox of Melbourne live music being described as both thriving and under threat. With many performers in a small area, it is not surprising that Melbourne music scene participants, or migrants from Sydney, were able to find a welcoming live music culture and visible scene. But it would also be understandable that Melbourne music scene participants would feel

vulnerable, both as individual performers and as a community of interest. The closure of a single large, long running venue would be notable to many performers: e.g. the Tote Hotel, Esplanade Hotel, or the Punters Club (see: Schaefer 2014).

This spatially tempered expansion also helps to understand both positive and negative accounts of contemporary Melbourne live music. In spite of increasing live music activity, the dynamics in the 1980s suggest that performers played more often and in more varied locations. This is consistent with interviews, in which 1980s relate playing multiple shows per week, sometimes on the same night, and on opposite sides of town. Through the late 1980s and the 1990s, Melbourne suburban live music circuits shrank, and even inner city areas such as South Melbourne, Richmond and South Yarra declined in activity (this is consistent with maps presented in Shaw 2013). Hence, the thriving live music scene reported upon for contemporary Melbourne (Arts Victoria 2011; Music Victoria 2012) comprises more musicians, in a smaller area, playing less often, than in the past. The desirability of this is outside the scope of this paper, but the outputs of the historical geodatabase do present novel insights into how the Melbourne live music scene has adapted and survived.

Sydney presents more mixed results. It does not lose live music in the 1990s as much as its accounts might suggest. But it does not grow numerically in performances or performers at the same rate as Melbourne. Nor does it present the spatial concentration that appears to be both the strength and weakness of Melbourne live music. The *Sydney Morning Herald* 1983-1994 shows very little variation in numbers of performances and performers across the entire sample period, but the Average Nearest Neighbour figure increases steadily, to a total increase of 73%. Given the increasing population and economic activity in Sydney in the 1990s (see: O'Neill & McGuirk 2002), as well as the increase in live music exhibited in Melbourne in the *Age* in the same timeframe, this can be viewed as a stagnation, consistent with (although less dramatic than) other accounts of Sydney in the 1990s.

*Drum Media* shows greater spatial concentration than the *Sydney Morning Herald*. But this also does not exhibit the spatial contraction of Melbourne over multiple years. It increases in performers and performances from 1991 to 2006 (80% and 108% respectively), with Average Nearest Neighbour figure remaining steady.

Further, thematic maps of Sydney live performances grouped by venue (Figure 4) visualize live music continuing in the city through the 1990s, but scattering spatially. The prominent ring of suburban venues in the 1983 map is absent by the 1994 map. These correspond to the popular “beer barns”, which were the mainstay of the Sydney Oz Rock scene and (often drink driving) punters in the early 1980s, and which by 1993 were reported as having “all but disappeared” (Ausmusic 1993). Further, the live music activity visible in inner city Sydney in the 1983 map does not disappear by 1994, but does visibly shrink in concentration. The Sydney inner city live music scene by the 1990s is constituted less of single venues hosting live music often (e.g. the Sydney Trade Union Club in the 1980s), than by many venues hosting live music only occasionally. This is consistent with accounts of musicians competing for space with alternate uses of pub space, and the experience of “putting your gear in the wrong place.”

In spite of not “all venues closing” in Sydney in the 1990s, the patterns in Sydney are consistent with the general tone of dispersal and fragmentation found in existing accounts of Sydney live music in this timeframe (“scattered to the wind”). With the large suburban circuits of the 1980s closing, and no equal and opposite recovery of the inner city venues to take their place (as in Melbourne), it is not surprising that Sydney musicians found Melbourne a more visible live music scene in the 1990s. But, of course, rumours of the death of Sydney music have been exaggerated, and by 2006, the Sydney inner city scene does appear to be recovering and consolidating, albeit with the loss of outer suburban venues.

The reasons behind these changes to Sydney and Melbourne live music are the subject of wider research, including the wider research project from which this paper is drawn. What is evident from these results, however, is that the accounts of decline do not relate solely to reduced numbers of live music venues or performances, but also to measures of contraction or dispersal. The historical geodatabase described in this paper is able to leverage the historical and spatial data already present in gig listings, and is able to sit alongside existing qualitative accounts of live music in Sydney and Melbourne. This adds a new, and explicitly spatial, dimension to understanding what is meant by growth and decline in live music.

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