

their absence: this volume boasts a lot of diligent and highly informative scholarship, and the student of any one of the areas under discussion would do well to consult the piece in question, but very few of the authors attempt to connect their particular subject to broader themes or to make comparisons across national contexts – in short, no one in this book is speaking to anyone else. Some authors argue convincingly against the restrictions of generic categories; others structure their chapters entirely by discrete generic categories. One topic is covered both by a very senior scholar, who produces an accomplished and thought-provoking piece, and by a postgraduate student working well beyond their usual area of expertise and seemingly unsupported, resulting in some unfortunate and highly regrettable pages containing a number of basic errors. The overall result is an anthology, but not a conversation.

That said, what we learn is often fascinating. Flávia Camargo Toni's discussion of the relationship between Sigismund Neukomm and the illiterate, mixed-race composer Joaquim Manoel Gago da Câmera is richly detailed, and would benefit further from a wider contextualisation within the vogue for publishing 'national melodies' in the non-Lusophone world. David Robb's introduction to the political and rebel songs of revolutionary Germany is a masterpiece of concise description, and a worthy trailer for the book on that subject he recently co-authored with Eckhard John (2020). Jan Dewilde's analysis of song's role in the development of Flemish linguistic nationalism is never less than absorbing.

Scott makes particular reference to the pandemic at the end of his introduction (p. xxv). Perhaps the original intention was to come together, share expertise and generate discussion that would enrich and open out these chapters. It is an unhappy reflection on recent history that the 19th-century musicians and works documented in these pages managed to circulate much more freely and fruitfully than the book's contributors. Taken as a starting point rather than a conclusion, this volume begins to look more promising: this is a topic rich in scholars and sources, and I look forward to the conversation continuing in years to come.

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Reference

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Music by Numbers: The Use and Abuse of Statistics in the Music Industries. Edited by Richard Osborne and Dave Laing. Bristol: Intellect, 2021. 270 pp. ISBN 978-1-78938-253-2

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The chapters collected in *Music by Numbers* mark the final contribution of Dave Laing to the study of popular music. The book begins with a touching tribute to Dave written by his co-editor, Richard Osborne, who also contributes four of the 14 essays published in this work. Part I consists of three essays written by Osborne

which focus on the role of numbers in distinguishing between music industry winners and its many losers. The first chapter, 'Art of the Sign of the Swingin' Symbol: The Manipulation of the UK Singles Chart', delves into the dubious origin of the numbers behind popular music charts. More than merely representing the popularity of a particular song, album or artist, the music charts, Osborne argues, in fact play a more active role in driving this popularity. This chapter reveals how record companies have historically manipulated the singles chart by falsifying sales and 'bending the rules' (p. 34). In the age of platform mediation however, the singles chart has lost its significance as a promotional tool for record companies. Today, the singles chart 'is now doing the job that it originally purported to do', reflecting the popularity of music, no longer driving it *per se*.

In the second chapter, Osborne presents a similar investigation to that of the previous chapter, but this time in seeking to demythologise the Gold Disc. On the one hand, the Gold Disc reflects the self-congratulatory nature of an industry which sets its own bar for success. Yet viewed in another way, from the perspective of audiences, the Gold Disc can also be considered positively as it more accurately reflects music that has taken on 'a dynamic public life' than easily manipulable charts do (p. 52). By this, Osborne is talking about the hugely successful commercial music that has become so engrained within cultural life that the song becomes common property. In contrast to the singles chart, music can only become golden if it genuinely connects with the public. Chapter 3, which completes the opening trio of essays written by Osborne, discusses success ratios in the recording industry. This chapter questions the accuracy of the fabled one-in-10 music industry success rate, presenting a lucid account of the challenges posed to traditional music label hegemony by new digitalised alternatives.

Part II consists of a pair of essays written by David Arditi and Shain Shapiro. Arditi's essay unveils the manipulation of numbers presented in the Global Music Report. This fudging of industry figures amounts to the reproduction of ideology, in this account, allowing record companies to construct narratives of decline, selling these stories to politicians and lawmakers who introduce policy favourable to the dominant cadre of music labels (Lucas Logan's contribution in Chapter 9 treads a similar path and uses the intriguing case of OiNK to reach comparable conclusions). Shapiro's essay, in contrast, demonstrates a more positive role that numbers can play in nurturing music industries. Drawing upon examples from his native Canada, Shapiro shows how national cultural policies, such as reserving certain amounts of airplay for Canadian artists, can have positive impacts for local music scenes. Nevertheless, these policies appear to be working primarily in the favour of established Canadians such as Shania Twain and Céline Dion over supporting emerging and grassroots artists.

Part III of *Music by Numbers* concentrates on live music industries and contains three enlightening contributions. The first, Chapter 6, is a reflection on experiences of conducting a UK Live Music Census. The chapter contains several important insights for those who may wish to undertake comparable studies in their own locales. Laing's contribution to this collection, Chapter 7, is similar in scope to the previous chapter but looks in detail at the mechanics of calculating the value of live music. Chapter 8, which completes Part III, is another essay by Richard Osborne that proves to be a useful comparative study. It traces the growth of live industries which interpretably 'saved' music following its devaluation in the wake of digital music piracy crises. Part IV also tackles the issue of music piracy across three chapters. Lola Costa Gálvez's contribution, for example, traces Spanish attempts at combatting the practice – Spain is in the top 10 music industries most at risk from piracy. Spanish public institutions and associations have found success deploying numbers (in the form of statistics and surveys) to support anti-piracy (lobbying) efforts.

The final section of *Music by Numbers* contains three further essays which centre around the role of numbers in emerging digital solutions. Michael Jones looks at the transformation of music publishers in the digital age, while Marcus O'Dair develops analysis of blockchain technologies and the musical potential of NFTs (non-fungible tokens). Craig Hamilton provides the final contribution to this collection. Chapter 14 takes a deep dive into the methodological complexities surrounding the study of the computational processes which lie behind digital music distribution (i.e. algorithmic intermediation). Hamilton's chapter examines the Harkive Project, an annually occurring online event that encourages participants to share and reflect upon their musical experiences. The ambitious quantitative methodology pursued by Hamilton attempts, as much as is possible, to replicate the logic of algorithmic decision-making which underlies Spotify's automated service curation. This enlightening contribution develops a much-needed practice-based approach for critically engaging with the data technologies that are increasingly shaping the lived experiences of everyday life.

This collection would benefit, however, from more accounts from outside the Anglosphere, as well as from musicians' perspectives. Artists today are increasingly empowered by social media and streaming media statistics. Accessing real-time audience information affords musicians unprecedented degrees of data-driven autonomy and informed strategising potentiality. Furthermore, the importance of accumulating digital symbolic capital (i.e. numbers of likes, streams, shares, follows, etc.) for the successful pursuit of a career in music plays an active role in shaping the development of musical practice. Nevertheless, in a world increasingly reflected and cognised through numerical computation, this well curated collection proves a useful reference resource. Expansive, detailed and well-researched, *Music by Numbers* is a commendable contribution to the understanding of our digital age.

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