

1 Introduction

For several decades, if not centuries, and in many parts of the world, the guitar has been an integral part of popular music and mainstream culture (Dawe, 2010). It became an idolised instrument with its electrification (Waksman, 1999), followed by the rock'n'roll boom in the 1950s and the subsequent diversification of rock music into hard rock, psychedelic rock, and heavy metal. Mass fabrication from the 1960s and 1970s onwards made guitars and amplifiers more accessible (Kraft, 2004) and paved the way for aspiring guitarists, resulting in a wealth of hard rock and heavy metal bands from the 1980s onwards. In the 1990s, the guitar was fundamental in the mainstream genres of grunge, indie rock, and nu metal. Since the turn of the millennium, new ways of using the instrument have been explored in the subgenres of rock and metal, as well as other forms of popular music.

Speculation that the heyday of the guitar is fading came from Eric Clapton, who mused in 2017 that 'maybe the guitar is over' (Bliss, 2017), and from an article in *The Washington Post* predicting the 'slow, secret death of the six-string electric' (Edgers, 2017). Such rumours have circulated since at least the 1990s (Rotundi, 1997). Some genres of popular music are created entirely on the computer, without use of physical instruments, and it is fair to say that this trend has caused the guitar to lose much of its presence on mainstream radio. Nevertheless, numerous scenes and communities of the electric guitar defy this development. Journalist Rob Copsey (2019) points out that guitar sales have more than doubled in the last decade, reaching their highest number in history. Guitar.com concurs: 'the guitar is not dead, the guitar is thriving' (*Guitar.com*, 2019).

Some researchers and practitioners share the mainstream media's pessimistic view of the electric guitar. James Slaven and Jodi Krout conclude from their musicological analysis that, while guitar solos became ever faster between the 1950s and the 2000s, the 'general techniques of guitar soloing have changed very little since the beginnings of the rock era in the 1950s, even though the style of playing has seen dramatic changes' (Slaven & Krout, 2016: 246). They further argue that most of the early rock techniques had already been used by guitarists since the late nineteenth century and were common even earlier on other string instruments, such as the violin. In a similar vein, solo artist and guitar educator Joe Stump claims that whilst 'metal/shred guitar has evolved and changed in all kinds of ways over the years, many of these techniques have remained constant' (Stump, 2014: 94). There is some truth to these statements, but what these authors fail to address is that electric guitar techniques have developed over time, sometimes enabling novel forms of expression such as

percussive thumping and polyphonic multi-role eight-finger tapping. Furthermore, neither the academic nor the educational literature offers any explanation as to how speed has increased over the decades.

This Element was motivated by speculation about stagnation in electric guitar playing and a lack of academic recognition of advances since Eddie Van Halen reconfigured the instrument on Van Halen's debut album in 1978 (Walser, 1992: 276). Even in contemporary guitar manuals for aspiring virtuosos, 1980s guitarists are still treated as 'state of the art'. While it is acknowledged that rock guitarists from the 1980s have superseded virtuosos of the 1970s such as Ritchie Blackmore and Uli Jon Roth in terms of playing speed and precision, little consideration has been given to developments and innovative players in the twenty-first century. Our analysis of why particular guitarists became widely recognised and joined the established canons, as evidenced by educational material and greatest lists, and how they advanced the instrument will make the case that electric guitar playing has continued to evolve.

We will examine how rock guitarists searching for new forms of expression, ever higher speeds, and virtuosity dealt with the ergonomics of the instrument. Exploring playing techniques requires cultural, social, medial, and economic contexts. After all, cultural change, advances in guitar and amplification technology, recording practices, and showmanship led to the emergence of the rock guitar heroes of the 1960s (Millard, 2004a; Weinstein, 2013). Any analysis of the development of electric guitar playing must therefore consider issues of culture, technology, production, the recording industry, income streams, and the musical zeitgeist to understand how playing reflects and drives cultural change. This includes how culture is passed on, how music is released, and how guitarists form specialist communities.

First, however, virtuosity must be discussed to place the virtuosic rock guitar scenes in a broader tradition. The virtuosity debate in music reached a climax during the Classical and Romantic periods in the eighteenth and nineteenth centuries. Virtuosity culminated in the technically demanding playing and extravagant performances of nineteenth-century icons such as Niccolò Paganini and Franz Liszt, who set the scene for the guitar virtuosos to come. The term 'virtuoso' was originally associated with theorists and composers but was gradually applied to performers with exceptional technical abilities, artistry, and showmanship (Ginsborg, 2018: 455). Although novelty and progress have generally been regarded as beneficial to creative practice in Western societies (Niu & Sternberg, 2006), virtuosity was frequently reduced to the pursuit of higher speeds, sacrificing music's expressive and emotional qualities (Stachó, 2018; Wood, 2010). Virtuosity has been divisive. Opponents have accused virtuosos of selfishness and indulgence, showing off their playing skills

or persona, and putting the self before collective ensemble performance (Frith, 2007: 325). The one-sided focus on technique as an end in itself with little musical value has been a constant point of criticism in classical and popular music (Frith, 2007; Wood, 2010). Since Liszt, and especially in recent history with the metal guitar hero (Fellezs, 2018: 118; Walser, 1992: 300), musicians have provoked condemnation with their extravagant displays of technical prowess. But virtuosity is not only aesthetically controversial; it also poses practical problems with ethical implications. Excellence is required of professional musicians, and perfection has merely become the ‘starting-point before other kinds of virtuosity come into play’ (Leech-Wilkinson, 2018: 558–9).

Advocates of virtuosity have long argued that technical skill and expressiveness are mutually dependent, as technique is merely the ability to realise artistic visions and feelings as authentically as possible (Stachó, 2018: 540). Moreover, musical development needs the sounding out and shifting of boundaries, and it requires an element of virtuosity, one that is motivated by a ‘musical urge’ (Hennion, 2012: 126). While virtuosity can benefit musical development in general, it is necessary to advance both the instrument and the music played with it. Virtuosos may therefore contribute to musical development, especially in more progressive forms of music.

The shift from composition to interpretation has added to the controversy of virtuosity. In classical aesthetics, the genius in music is in the written composition. The nineteenth-century virtuoso embellished the score and rose above the composer, reversing the traditional hierarchy (Wood, 2010) and showing that performance can be as fascinating and aesthetically valuable as the composition itself. For music sociologist Antoine Hennion (2012: 129), such fascination takes two forms. Audiences may be fascinated by what they hear or cannot believe they are hearing, like the fascination a magician evokes. Novelty is enjoyable because it breaks with convention and offers new experiences. To maintain this sensation, the presentation must progress. Publications such as *The Guinness Book of Records* suggest that people find it exciting to see how fields of practice strive for new heights. The second kind of fascination is the spectacle of humans becoming automatons – that is, humans performing music with machine-like perfection. Musicologist Michael Custodis (2017: 49) explains the longstanding popularity of the progressive metal band Dream Theater with precisely this kind of fascination. The band manages to capture music on the record that is so fast, technical, and awkward to play that one might imagine it is written with little consideration of how humans might perform it. As anthropologist Anya Royce (2004: 18–19) points out, virtuosity and speed are only a problem when used for their own sake. That may not be the case with Dream Theater, whose virtuosity is fundamental to their artistic concept and main appeal (Custodis, 2017).

The evaluation of virtuosity has become more complex over time. As Hennion (2012: 126) notes, a duality of technique and expression has increasingly become over-simplistic in times of musical cross-pollination. In her study of what virtuosity means to classical musicians, musicologist Jane Ginsborg (2018: 471) finds that most players see it as a tool for music-making and adopt a more relativist stance by avoiding value judgements. They instead embrace stylistic versatility for musical reasons, which requires virtuosity. Many of the guitar-centred rock bands and artists that have emerged in the last decade use virtuosity similarly for stylistic, expressive, and creative purposes.

Several guitarists covered in this Element have advanced musical genres, playing styles, and instrument design. Early rock guitar heroes of the 1960s and 1970s explored the potential of distortion and effects in rock music and how the lead guitar could employ a distorted sound to create a style outside the idioms of the blues. The 1980s and 1990s were decades dedicated to the pursuit of speed and progress in playing techniques. Much criticism and appeal to virtuosity concerned the shred guitar style of this era. The 1990s and 2000s were characterised by experimentation with sound effects, seven-string guitars, and more modern amplifiers. After the shred boom, advances in guitar playing were grounded in bridging styles and genres. Inspired by other instruments, guitarists explored new affordances of techniques and technologies not only for their instrument but also for songwriting, recording, and production. Changes in music technology include extended-range guitars with seven or more strings, a break with the decades-long dominance of valve-based analogue amplifiers, widespread availability of digital recording and production resources, and Web 2.0 providing a medium for connecting guitarists around the world. The relevance of digital communities can hardly be overstated since they allow players to share their ideas with fellow musicians and bypass gatekeepers such as record labels. This development has allowed contemporary players to inspire others and make a living as virtuosos from their homes.

The guitar in rock and popular music has been important in mainstream musical culture, but guitarists have also always formed specialist communities to discuss subject-specific topics related to playing, gear, and trends. We can understand such specialist groups as ‘communities of practice’ (Wenger, 1998) with guitar playing and culture at their core. Members do not know the entire community, but they need to understand the unwritten rules and common knowledge within the group, which in the case of guitarists includes influential players past and present, epochal moments, and shared values.

We believe there can be no definitive historiography of virtuosic rock guitar playing because too many subjective variables and value judgements would be involved. Following the concept of ‘communities of practice’ (Wenger, 1998),

we draw on our experiences as members of guitar communities and analyse their discourse as reflected in the written and unwritten canons found in guitar compendia, greatest lists, teaching materials such as guitar handbooks, and other sources on the Internet (see Section 2). Methodologically, we are guided by qualitative media analysis (Altheide & Schneider, 2013; Bowen, 2009), also known as ethnographic content analysis (Altheide & Schneider, 2013: 5). This method is suitable for understanding culture, social discourse, and social change through documents created and received in the scene, such as magazines, websites, and audio-visual materials (Bowen, 2009). Naturally, media like guitar magazines such as *Guitar World* are selective and favour some artists while neglecting others, but they are opinion-forming and must therefore be taken seriously. By choosing an ethnographic method of studying popular media, our analysis of the development of virtuosic rock guitar playing and culture must consequently be understood as a capture of popular discourse, which cannot claim complete historical accuracy and coverage of artists and developments. However, given the relative lack of research on contemporary guitar playing (see Dawe, 2010), our approach of combining analysis of popular discourse with our own observations as insiders is a first step in filling in the gaps in a guitar scholarship that has neglected advances in playing style and technique since the 1990s.

The starting point of our investigation is establishing canons of electric guitar virtuosos through a meta-analysis of handbooks, greatest lists, and guitar compendia (Section 2). In so doing, we determine performative and aesthetic criteria for the inclusion in the canons over more than fifty years of electric guitar playing. Section 3 introduces the electric guitar's main playing techniques. The three subsequent sections study the evolution of electric guitar playing with many noteworthy artists. We begin with the first generation of rock guitar heroes, who laid the foundation for virtuosity in rock music and the instrumental solo artist (Section 4). The discussion includes the introduction of neoclassical shred, innovation in instrument design, and playing techniques such as tapping, sound effects, and recording techniques. Subsequently, the canonical rock guitar virtuosos and shredders of the 1980s to the 2000s are explored (Section 5). This section identifies reasons why players joined the canons, covering characteristics such as influence, feel and expressiveness, versatility, knowledge of harmony and theory, performative and production aspects, and educational products. Next, stylistic, musical, and technological developments in the twenty-first century are investigated (Section 6). Our analysis suggests that playing has incorporated new techniques and that virtuosos use their technical skills for rhythm guitar and songwriting. This is apparent from their exploration of rhythmic techniques such as bass guitar-inspired

thumping or two-handed multi-finger tapping used for piano-like accompaniment rather than lead guitar. Finally, shifting the focus away from playing, we examine the current guitar scene, with its income streams that allow virtuosos to make a living (Section 7). Some of today's best-known players in the scene have hardly released music through traditional channels, relying instead on video platforms and social media.

2 Establishing a Canon

This section creates a framework for analysing the development of rock guitar playing and the respective guitar scenes, as depicted in popular discourse. After discussing the significance and cultural power of canons, we determine a canon of relevant guitarists between the 1960s and the present day, based on the discourse observable in guitar handbooks and journalistic lists of the greatest guitarists.

2.1 The Canon and Its Value

Canon research is well established in education and in disciplines such as literary and religious studies. In music, canons also provide a valuable tool for analysing dominant values, socio-demographic structures, and conflicts of power (Appen & Doehring, 2006; Citron, 1993; Jones, 2017; Regev, 2006). A canon is usually a collection of musical content. Albums have become canonical because they are 'supposedly the undisputed "masterpieces" ... and typically presented as peaks of the aesthetic power of the art form in question, as ultimate manifestations of aesthetic perfection, complexity of form and depth of expression' (Regev, 2006: 1). Such works and the artists associated with them are recognised as significant in their field; they are formally embedded in culture and exercise cultural power. The works and what they represent are passed on in educational curricula (Guillory, 2010; Wendell, 1991). In less formal settings, canonical artists are included in compendia, rankings, and greatest lists.

As part of cultural history, canons reduce a field to its essence (Jones, 2017: 7). However, the selection of notable works and artists is sometimes not based on purely aesthetic merit but motivated by interests in conveying idealistic values (Corse & Griffin, 1997: 174–5). Canon formation can therefore also be understood as a 'scene of competition for the power to grant cultural consecration' (Bourdieu, 1985: 25) and as an instrument of social control and exclusion (Anderson & Zannetti, 2000: 345). A canon represents a site of conflict between past genius and present aspirations. Canons are consistently being challenged and, over time, show the evolution of artists and works deemed important (Jones, 2017: 8). As much as canons dictate and possibly distort the

historical narrative, they represent development and have the potential to inspire creativity in the future (Regev, 2006: 2).

There is no single form of canon. Literary scholar Alastair Fowler (1979: 98–9) distinguishes between the selective and the critical canon; the first consists of lists in anthologies, the second of works repeatedly treated in articles and books. The two overlap insofar as the critical canon is composed of selective canons. Harris Wendell (1991: 113) differentiates between a relatively stable diachronic canon and the rapidly changing canon, from which only some works enter the diachronic canon. That is why several canons exist at the same time, interacting with each other. While some remain relatively constant, others reflect the current state of the art. Canons have adapted to the diverse subcultures and plurality of today's lifestyles. In most fields of practice, there is still a canon for the greatest works of all time, but smaller canons for more specialised art forms provide structure in a complex world (Jones, 2017: 1).

Canons are rarely directly accessible but implicit in books and curricula. By contrast, a list is explicit. It is the overt but simplified form of the canon (Kenner, 1984: 373). Compilation lists as shorthand manifestations of canons provide clues to a 'microcosm of values' (Jones, 2017: 26) and information about the greatest artists and works. These have been central to music journalism for decades when discussing the best records of all time, the last year, or a recent month. The number of compilation lists has multiplied with the proliferation of the Internet. Who selects the work is unchanged; in both print and online, it can be editors, other experts in the field, the readership, or a mixture of these. The constitution of the voting members, their interests and motives, and their age structure have an impact on the list, with younger readers often favouring more recent music over established works (Jones, 2017: 94, 122).

The selection criteria reveal values in the field of practice. The overarching criterion in music is *originality* (Jones, 2017: 17; Talbot, 2000: 3–5). Canonical works stand out from preceding and other contemporary works. Originality includes features such as strangeness, weirdness, or the extraordinary portrayal of the familiar that makes works unique and potentially influential (Jones, 2017: 17). Another criterion related to originality is *timelessness* (Jones, 2017: 9; Kermode, 1985: 62–90). Works that pass the test of time are called masterpieces and likely appeal to a younger audience, too (Appen & Doebring, 2006: 22). A third criterion is *complexity* because multidimensional works offer the potential for discussion and ongoing engagement (Jones, 2017: 17). *Virtuosity* is a controversial criterion in musical canons. Aesthetic value is generally regarded as superior to practical, sentimental, or hedonistic value. Hence, complexity and greatness in composition and arrangement are preferred to a mere display of virtuosic technique (Jones, 2017: 15). However, good

virtuosity is defined by technical skills used for the sake of originality (Heister, 2004: 17). Since virtuosity can be grounded in imagination, thereby leading to creativity and innovation (Leech-Wilkinson, 2018: 560), it potentially fulfils the two criteria of originality and complexity so that virtuosity may be positively judged if it suits the music.

2.2 The Canons of Electric Guitar Heroes and Virtuosos

A canon is seldom clearly visible. To extract various relevant canons of guitar virtuosos, we analysed two forms of data: thirty guitar handbooks and thirty greatest lists (see Appendix). All sources were systematically examined to extrapolate which players are mentioned and for what they are known. This information guides the analysis of the development of rock guitar playing in later sections.

As one of the more formal manifestations of the canon, handbooks are representative of the educational curriculum and can be considered their own canon. Despite having reduced relevance due to the rise of online learning resources, handbooks retain their influence in educational settings and are more accessible for the study of discourse than scattered video tutorials and online lessons. Greatest lists are a simplified and condensed form of the canon and provide useful information about core values and the contribution of specific players to the guitar community (Jones, 2017: 26; Kenner, 1984: 373). Such lists offer aesthetic guidance by indicating ‘who deserves to be in the pantheon and what is worthy to emulate’ (Weinstein, 2013: 149). In the context of guitarists, it must be noted that the various canons differ from most other art canons in that it is not so much a specific release being recognised but a player’s style.

Guitar Handbooks

The canon of guitar manuals was determined by analysing thirty handbooks on electric guitar technique and shred guitar playing with an average publication date of 2013. Table 1 shows the percentage of books wherein specific guitarists are mentioned. The absolute numbers are not considered because one book (Brooks, 2017) is dedicated solely to Yngwie Malmsteen, which would skew the distribution. The relative percentage of references made to a guitarist in handbooks is thus a way to evaluate recognition of a player’s technique and its creative use.

The list given in Table 1 suggests that most of the featured guitarists are rock and metal players. This can partly be explained by the books analysed, several of which are for metal lead guitar. However, even in those books not focused on a specific genre, rock and metal artists dominate, with some notable exceptions

Table 1 Reference to players in guitar handbooks

Rank	Player	Percentage
1	Yngwie Malmsteen	85%
2	Paul Gilbert	69%
3	Joe Satriani / Steve Vai / Eddie Van Halen	58%
6	John Petrucci	54%
7	Randy Rhoads	46%
8	Jason Becker / Frank Gambale / Vinnie More	42%
11	Ritchie Blackmore / Al Di Meola / Greg Howe	38%
14	Marty Friedman / Uli Jon Roth	35%
16	Michael Angelo Batio / ‘Dimebag’ Darrell / Steve Morse	31%
19	Jimi Hendrix / Allan Holdsworth / Shawn Lane / George Lynch / Michael Romeo / Zakk Wylde	27%
25	Guthrie Govan / Kirk Hammett / Jeff Loomis / John McLaughlin	23%
29	Nuno Bettencourt / Brett Garsed / Eric Johnson / Tony MacAlpine / Gary Moore	19%
34	Reb Beach / Buckethead / Mattias Eklundh / Stanley Jordan / Richie Kotzen / Michael Schenker	15%
40	Tosin Abasi / Jennifer Batten / Rusty Cooley	12%
43	Warren Di Martini / Alexi Laiho / Josh Martin / Tom Morello / Dave Mustaine / Andy Timmons	8%

for fusion players such as Allan Holdsworth, John McLaughlin, and Frank Gambale.

Several players are less widely known, indicating a guitar-specific canon outside the popular music mainstream. Some of them appear in other canons for their roles in successful bands, such as Paul Gilbert and Richie Kotzen in Mr. Big, Marty Friedman in Megadeth, George Lynch in Dokken, Nuno Bettencourt in Extreme, and Reb Beach in Winger. These examples have in common that they are hard rock and metal bands primarily popular in the 1980s and 1990s. The same is true for many of the listed players. Most gained popularity as members of popular bands or solo artists in the 1980s, some with continued success in the 1990s and later. Only two players active from the 2000s are on the list of featured players: Animals as Leaders’ Tosin Abasi and Little Tybee’s Josh Martin. The data suggests that guitar handbooks focus on long-established guitarists and their approaches to techniques but tend to overlook contemporary guitarists.

The guitar handbooks discuss players mostly in terms of their technical ability and less for their popularity and creativity. In contrast, some lists of the greatest guitarists disclose a broader set of selection criteria, indicating values appreciated in the electric guitar communities. Concurring with the previous deliberations (see Section 2.1), influence, originality, and technical skill are the main criteria, with influence holding the greatest weight (Kitts & Tolinski, 2002: 1–2). Influence is specified through reference to innovation, pushing boundaries (McIver, 2008: 8–9), exciting imagination, changing the way we approach the instrument (Turner & Rubin, 2020), overall impact on the guitar scene, and level of success (Bienstock, 2019c). Several sources acknowledge the development of playing in the last two decades, speak of a ‘golden age in the guitar world’, and emphasise that young players with developed skills emerging from the underground are ahead of their ‘elders and betters’ (McIver, 2008: 9). While virtuosity has sometimes been connoted negatively (Frith, 2007; Wood, 2010), it seems to be a positive trademark in certain electric guitar communities and is seen as conducive to musical progress. Guitar scholar André Millard even regards virtuosity as a prerequisite for the rock guitar hero, necessary to lead the instrument into ‘new dimensions’ and define it in new ways for which the hero is appreciated and emulated (Millard, 2004a: 143–4).

We divided the total sample of the thirty greatest lists from 2002 to 2020 with an average publication date of 2017 into smaller meta-lists because they cannot be compared directly and represent different rock guitar sub-cansons. Due to the different numbering formats of the individual lists, we distinguished only between inclusion and non-inclusion and did not weigh the rankings. Guided by the handbooks and due to the scope of this Element, we only considered players classified as virtuosos in the selection.

The meta-list of the greatest and most influential players (Table 2) contains many of the same names as the previous list derived from handbooks. The main difference lies in the ranking, with Jimi Hendrix, Eddie Van Halen, Ritchie Blackmore, and Randy Rhoads at the top of the list of greatest players. Even fifty years after his passing, Hendrix tops most lists, demonstrating his significant contribution to the instrument. Van Halen is included for his original and virtuosic approach to soloing that has inspired generations of guitarists, as well as his contribution to the instrument’s design and amplification. Blackmore is acknowledged as the ‘father of neoclassical metal and shred guitar’ (Sulem, 2020). Yngwie Malmsteen is also best known for his technique. Amongst the players mentioned in the handbooks but not included in any of the greatest lists are Frank Gambale, Vinnie Moore, Greg Howe, and Michael Angelo Batio.