



THE SKILLSET OF PROFESSIONAL STUDIO MUSICIANS IN THE GERMAN POPULAR MUSIC RECORDING INDUSTRY

“The studio musician has to be better than good, he has to be great” (Pierce 1998: x). This statement by record producer Buddy Killen describes common conceptions of studio musicians. For many people, studio musicians are masters of their instruments; immaculate playing on released records suggests this. Who has played on a record, who has developed the rhythms, melodies and subtle fills, or how have the performances been edited, these are secrets that remain hidden behind closed studio doors. This is why generally little information exists about the profession of a studio musician. However, a glimpse of the lives of studio and session musicians have been given to the public by recent films as for instance *Hired Gun: Out Of The Shadows, Into The Spotlight* (Strine 2016), *20 Feet from Stardom* (Neville 2013), *Muscle Shoals – The Incredible True Story of a Small Town with a Big Sound* (Camalier 2013), *Standing in the Shadows of Motown* (Justman 2002) and the Finish tv documentary *Tuhansien raitojen miehet* (Virtanen 2017) as well as books like *The Wrecking Crew – The Untold Story of Rock & Roll Heroes* (Hartman 2013), the latter declaring that those musicians are still one of the “best kept secrets” in the music industries. Even in popular music which is specifically centred on celebrity figures and recognisable characters, much of the music “is in fact made by unknown, unidentified musicians, hired collaborators

who work out of the public eye in the recording studio or in the shadows of the concert stage” (Williams 2010: 59).

The lack of general visibility assumingly has been a reason for widely overlooking the professional role of session and studio musicians in music research. There are only a handful of studies dedicating their focus entirely to this profession. Sociologist Robert R. Faulkner (1971), for example, portrayed Hollywood studio musicians as interchangeable labourers. Likewise, Bruce A. MacLeod (1993) described emotionally detached “hired guns” and “musical mercenaries” in his study on live session musicians in New York. In contrast, ethnomusicologist Alan Williams’ (2010) work on studio musicians in the USA demonstrated that their unique musical skills, social qualities and creative ideas have been crucial for the popular music business since decades. Based on twelve case studies, Jennifer E. Pierce (1998) revealed insights into the practices of renowned country session musicians in Nashville, showing that for those musicians, skills learned from band practice counted much more than a formal education. Also focusing on Nashville, Morris S. Levy (2000) interviewed musicians who experienced the introduction of multitrack technology and the changing practice from live to overdub recording in the 1960s. Musicologist and singer Isabel Campelo (2015), drawing on her own experience as a music professional in Portugal, highlighted the dominance of male white instrumentalists in the business and chauvinist behaviour in the studio. Unevenly shared royalties amongst different groups of professions were subject to guitarist Jon Fitzgerald’s (1996) investigation when he observed the collaborative process of an Australian popular music recording session and the emergence of collective ideas. This issue was also described by drummer Bill Bruford (2018), who compared the work realities, roles and skills of world-leading drummers such as Steve Gadd and Chad Wackerman.

The work of studio musicians has occasionally been captured in historical work on popular music. Historian Suzanne E. Smith (1999) highlighted the crucial importance of the studio band the Funk Brothers for the Motown label, backed up by Fitzgerald’s (2007) investigation into black pop songwriting in the 1960s, confirming the pivotal role of these hired musicians. Similarly, ethnomusicologist Michael Veal’s (2006) analysis of Jamaican reggae demonstrated the relevance of studio musicians such as Sly and Robbie for dub music. Juha Korvenpää (2005)

reconstructed the changing of the sound of Finnish popular music and the role of music technology based on interviews with arrangers, audio engineers and studio musicians.

Some ethnomusicological research has also documented career developments and working practices of session musicians. In her study on the production of South African Zulu music, Louise Meintjes (2003) explored aspects of status hierarchy in the recording studio amongst the professions of producers, engineers and musicians. Frederick Moehn (2012) illustrated the career of Brazilian percussionist Marcos Suzano from a session musician to an acclaimed artist by embracing the creative potential of modern production equipment in his home studio, and Eliot Bates (2016) captured career developments, required skills and creative contributions of Turkish session musicians in Istanbul.

As recent research (Auvinen 2016; Herbst & Holthaus 2017) has highlighted, most work on professional roles in the academic field of the art of record production has concentrated on outstanding record producers (Blake 2009; Chanan 1995; Cunningham 1996; Moorefield 2010; Warner 2003; Zak 2001), neglecting those of lesser reputation and other professional roles in this industry like the mixing engineer (Anthony 2017; Kealy 1982). Yet, focusing on the practices of musical actors below international fame could shift the gain of knowledge from historical documentation towards present work realities, as musicologist Tuomas Auvinen (2016: 3–4) has argued discussing the role of music producers:

Studying the work of non-canonized producers who are not widely known [...] brings up new perspectives on music production, on music producers, on agencies and on the producer's values before media content and a public image add a new layer of meaning to their work. Furthermore, studying the work of such producers offers a perspective on how careers are built in the music industry [...] Additionally, studying producers 'in the making' instead of established names sheds light on aspects of the present and future of the music industry instead of the past.

The same applies to studio musicians. Whilst public media (Camalier 2013; Hartmann 2013; Justman 2002; Neville 2013) and most research (Fitzgerald 2007;

Levy 2000; Pierce 1998; Smith 1999; Veal 2006) hardly consider this fast-changing industry but rather recollect memories of past stars or musical developments from over twenty years ago (Faulkner 1971; Korvenpää 2005; MacLeod 1993; Meintjes 2003), little is known about more recent biographies, individual skills and working practices of average studio musicians from different parts of the world. Against this backdrop, the present study explores the skillset of studio musicians in Germany's popular music industry, thus filling a gap in popular music studies and ethnomusicology where the German recording industry is underrepresented. Since this research considers the role and work realities of studio musicians, its empirical findings complement a recent study on music producers and studio operators in Germany (Herbst & Holthaus 2017). As Europe's second largest music industry (Statista 2018) with a yearly turnover of € 11 billion (€ 3,104 million in the recording sector) and 18,000 registered freelancing musicians plus a further 32,000 employed music professionals (Bundesverband Musikindustrie 2015), Germany is a considerable scene within the international music industry.

Four questions guided the research project: What kinds of formal or non-formal musical education prove relevant to studio musicians? What pathways can lead into this profession? What skills are required of modern studio musicians? How do they regard technological development in the studio with respect to its potential effects on their professional services? The answers to these questions will complement the existing body of research about skills required of popular musicians working in the recording industry as hired collaborators. Since key skills and qualities of modern professional musicians will be explored, the findings may further be valuable to aspiring music professionals and institutions offering music programmes.

Method

Inspired by recent work on the role of record producers and music studio operators (Auvinen 2016; Herbst & Holthaus 2017; Martin 2014), the present study continued the young tradition of the Interpretative Phenomenological Analysis (IPA) in this field of research. IPA aims to "explore the participant's view of the world and to adopt, as far as is possible, an 'insider's perspective'

of the phenomenon under study” (Smith 1996: 263–264). By remaining closely connected to its primary sources, this method gives the respondents the opportunity to describe their experiences in their own words (Smith & Osborn 2015: 49, 51). It combines emphatic hermeneutics with questioning hermeneutics, a procedure that “is likely to lead to a richer analysis and to do greater justice to the totality of the person” (Smith & Osborn 2015: 26). Considering the small body of research on studio musicians, IPA seemed a reasonable method. For musicologist Adam Martin (2014: 66), the unique

value of IPA research lies in its commitment to idiography [sic!] and the inductive nature of the findings. IPA seeks data and analysis that can describe, explore and explain a specific phenomenon rather than data that may lead to an overarching theoretical position as in the case of grounded theory. This form of theoretical outcome is suggestive of a form of abstraction away from the participants’ original accounts that is not aligned with the method and values of IPA. [...] Whilst there is a potential argument that this form of analysis is not saying anything radically new about the data, it is in fact this grouping, presentation and the lack of specifically ‘new’ comments that make IPA valuable. The accounts of participants remain, appropriately, at the centre of attention with the researcher being responsible for grouping, explaining and describing these accounts but not imparting significant, abstracted ideas upon their original words. (Martin 2014: 66)

In research on record producers (Auvinen 2016; Herbst & Holthaus 2017; Martin 2014) as well as in performance studies (Sansom 2007) and music therapy (Pothoulaki et al. 2012), IPA has been successfully applied.

IPA requires deliberate sampling, striving not for representativeness but for depth to gain new insights into the phenomenon in question (Smith et al. 2009: 49). Typical sample sizes are between one and six participants, prioritising depth over breadth (Smith et al. 2009: 51–52). For this study, six participants were recruited: three guitarists, one bass player, one drummer and one keyboardist. Following Williams’ (2010: 59) study of US-American session musicians, all participants, even if not widely known by the public, were leading session musicians in Germany.

The data of this study were gathered through semi-structured interviews with a schedule (Smith & Osborn 2015: 31–35) addressing topics such as the musicians’ professional role and biography, practice habits, required skills, typical recording sessions and their economic situation. The six interviews took place between 13 and 16 May 2017; two were conducted via Skype, two per telephone and two face to face. The interviews lasted 27 to 66 minutes, and with an average length of approximately 40 minutes they conformed to IPA standards (Smith & Osborn 2015: 35). Table 1 provides an overview of the participants who have been anonymised for ethical reasons.

Participant	1	2	3	4	5	6
Instrument	Guitar	Guitar	Guitar	Keyboard	Drums	Bass
Label	G1	G2	G3	K1	D1	B1
Age	48	55	61	52	27	66
Federal state	North Rhine- Westphalia	Baden- Wuerttemberg	Schleswig- Holstein	Baden- Wuerttemberg	Berlin	Bavaria

Table 1: Sociodemographic data of the studio musicians

The sample covered various regions in Germany. No female musician meeting the criteria for this study could be identified and recruited, which concurs with the gender imbalance amongst studio musicians in the Portuguese (Campelo 2015) and Turkish (Bates 2016: 226) recording scenes. The sample is also similar to that of Bruford’s (2018) study on professional drummers; the nine respondents were between 34 and 60 years old, only one woman among them.

The audio-recorded interviews were transcribed according to IPA requirements (Smith & Osborn 2015: 37–38), concentrating on the content rather than on prosodic aspects. Expressive gestures such as laughing, emphasis or pauses were not considered. Each transcript was analysed individually, highlighting significant quotes and assigning them to topics. All interviews were categorised. The quotes were translated from German into English. Since the focus was on the musicians’ experiences, language errors and language-specific idioms were corrected in the translation for a better understanding.

The structure of the article is divided into two parts. At first, in the results section, the studio musicians’ experiences are described, clustered around key

topics. Subsequently, these topics will be discussed in the light of previous literature to analyse broader trends or differences between studio musicians working in various times and places. This structure will allow greater transparency and objectivity by separating participants' views from interpretations and further sources (Denscombe 2007: 326).

Results

Half of the interviewees have a *formal music* education, although to different degrees. As son of a leading Russian composer, guitarist G₁ emphasised the importance of the thorough musical education he received at music schools in Russia. 6 years old, he started learning classical piano and cello, practicing theory and performance every day. At eleven, he began playing the guitar. Later he enrolled at a jazz and rock institute whilst continuing his classical training. Band practice was important to him as well. 14 years old, he joined his first band and started touring two years later. G₁ thinks this thorough training was crucial for acquiring the skills needed in this profession.

Pianist K₁ also had classical piano lessons at an early age, and later on, he studied classical piano performance at a university of music. This training, however, did not cover essential elements of his later profession: popular music, improvisation and composition. He taught himself engineering and producing skills since no workshops or learning materials were available unlike they are today. Placements in studios helped him learn these skills.

The youngest participant, D₁, attended a two-month course in popular music at a university of music where he was educated by some of Germany's leading session musicians. This helped him with his business skills. Regarding his studio skills, he benefitted from private tuition from a jazz drummer who taught him to play the cymbals quietly.

Guitarist G₂ had classical guitar teachers in his childhood and his early twenties, but he felt the most important teacher and source of inspiration was the record player. His development as a musician was marked by contrasts. Apart from occasionally imitating other guitar players excessively, he widely ignored

other guitarists for years. Isolating himself from external influences helped him develop his individual style, as he was told by other people.

B₁, the oldest participant, received piano training in his childhood too. Later at the age of 13, he learned the guitar and bass on his own. Award winning studio musician G₃ did not receive formal education on any instrument whatsoever. He was inspired by the blues records he heard as a boy at his friends' homes, trying to copy what he could remember back home. A few years later, he joined a cover band, which was essential for his development as a musician.

The participants found different *pathways into their profession*. G₂ was the only one who took a deliberate decision to become a studio musician.

It has always been my dream. Because when I started playing the guitar seriously, as a teenager, my favourite guitar players were well-sought studio guitarists. Larry Carlton and Lee Ritenour. In the '70s they were the studio guitarists who allegedly played five sessions a day, and as a teenager I dreamed of doing this too, although the studio scene in Germany would not allow it anyway [...]. And then people started to notice that I could deliver, be able to fit into the music, and to cover both the technical and creative aspects of the job.

Other musicians were motivated by their first studio experience to strive for such a career. B₁ recalled:

When I was 19, my brother, 12 years older, took me to a studio, a famous one in Munich where all kinds of world stars had recorded. This was around 1967. There I sniffed studio air, could watch and listen. [...] And there I tasted blood. I felt this was exactly what I wanted to do. I also wanted to read my name on the album covers and I wanted the challenge to produce work that would still be heard in 20 years.

B₁ did not start a career as a session musician right away. It only happened when he got a record deal with CBS in 1975 to produce a demo with his original band. On that session, the sound engineer, formerly associated with The Beatles, became so impressed by B₁'s bass playing that he passed his telephone number on to a producer. After his first professional studio job it became regionally

known that this newcomer could play modern styles even though he was not able to read sheet music well. As B1 explained, this is how it still worked today.

G3, one of Germany's most successful and experienced studio musicians, initially did not believe in such a career as he thought he was not professional enough, mainly because he could not read sheet music well and did not own quality music gear. But since he was a good musician, he became member of a successful top forty band whose more experienced players took him to studio sessions. After four years of experience and a developing reputation, he sensed that he could make a living from studio work.

D1's studio career began similarly, playing extensively with many bands. He stressed the effort necessary to always be thoroughly prepared because several professionals assumed he could perform well without much practice. It did not take long for other musicians to notice D1's meticulous sense of detail in musical phrasing and sound, which earned him his first studio jobs and made him realise his interest in such work. He was intrigued by both the many options the studio offered in shaping sounds and the new challenges he was constantly confronted with. Over time, several live jobs for renowned German actors helped building his reputation. Recording with them extended his professional network and got him further studio jobs.

K1 started as a live musician too. When he realised his interest in studio work, he began producing himself. This had been a valuable experience to him because he learned more about both instruments and their studio arrangement. His ability to think holistically about the final product made him more attractive and distinguished him from other musicians who only were players.

G1 saw his start as a studio musician connected to the original bands he played in. Due to his highly developed technical skills, he was able to track his guitar parts in few takes. Deeply impressed by his outstanding playing skills, the sound engineers and producers hired him again for other projects and recommended him to colleagues. The prospect of saving time and money made him special. Soon record labels began contacting G1 and interested musicians approached him at live shows. His work gradually extended to band coaching, arrangement and recording other bands.

The interviewees acquired their *musical skills* differently; yet irrespective of a formal education in music, practice on the instrument and band experience

are generally necessary to reach a professional level. Once their careers had been established, practising turned into a luxury for most respondents, only occurring occasionally between jobs. G2 tries to play at least once a day, but as a freelancer he needed time for administration, acquisition of jobs and social media so that finding quality time for practicing was difficult. However, he enjoys being involved in challenging projects because the required preparation would help him improve musically. D1's practice routine is very similar; between live sessions, time for practicing is rare. Yet he stresses to like practicing. Rather than focusing on technical skills he would, however, try to recreate drum sounds on commercial albums in his studio, thus combining playing, phrasing and engineering in his practice routine. Similarly, G3 perceives practicing as "research" since he works on ideas and experiments with sounds. Whenever he notices his playing technique is deteriorating, he feels motivated to practice again. The same can be said for G1 who had been working on his playing technique with great discipline in the past. Nowadays, he only does technical exercises when he feels he cannot perform ideas he has in mind. B1, in contrast to all other participants, admits never having practiced seriously all his life. He reflects that although his playing would have become better had he done exercises, his work never demanded it. What got him hired, he explained, were his ability to invent new bass lines and his general musicianship.

All participants prepare for their hired studio jobs just rudimentarily. One of the reasons is that musicians rarely receive material in advance. Written sheet music is the exception nowadays; more common are basic lead sheets or demos, if anything at all. Some participants revealed to hardly prepare even when material was available because they could not find time, or the job was musically so easy that no preparation was required. Others are at least trying to become acquainted with the artists. K1, for instance, does so by listening to demo tracks. Another reason for minimal preparation is that the musicians' parts are often not fully composed when they enter the studio, and it would be their task to develop these in situ. Irrespective of the availability of demos, the participants rarely work on ideas before recording sessions start because from experience they know that what had worked at home would often not do so in the studio. Anyhow, most feel it would be a waste of time to compose without knowing what the producer was looking for. Information usually required in advance was about the style of music and the equipment expected to take to the studio.

For the participants it is rather uncommon to play additional instruments professionally. In the past, G3 explains, every extra instrument brought 50 % on top of their original commission for the main instrument, and often the producers wanted the musicians to play as many instruments as possible to involve as few people as just necessary. Some of the participants occasionally record simple lines on instruments they played in their childhood, or they play percussion, but they do not have the skills on these additional instruments that would force their employer to raise the fee. Most of the participants reject to sing, yet reluctantly record backing vocals in groups. Generally, playing an additional instrument neither significantly increases income nor helps getting jobs, but does foster good working relationships with employers.

Despite the relevance of playing skills for employment, none of the participants considers virtuosity crucial for their work. This used to be different in the past according to G1. When he started his professional career in Germany 25 years ago, recordings were still done on analogue equipment. Because editing options were limited, producers had been looking for studio musicians with excellent playing technique to improve the quality of the production and to save costly studio time. With modern digital audio technology, G1 explained, playing shortcomings could easily be corrected. That was why technical skills no longer played a pivotal role and, as a consequence, studio jobs for virtuosos were continuously decreasing. Now other skills were important, “eventually, you don’t need quality anymore, but what will always be needed are ideas”. Since the songs were seldom completely composed at the recording stage, creativity, flexibility and spontaneity were described as vital skills for inventing melodies and grooves, or even form parts for the songs. The participants highlighted that it was in their responsibility to find out what the song needed and to offer ideas to the producer. G3, for example, mentioned trying to figure out what could be done to improve the song, which might not only require providing ideas on his own instrument but to make changes to the wider arrangement. K2 elucidated it was his “task to find out what the producer and artist need for a song or an album. Then, I must reflect on my musical background, decide on what seems reasonable for the project, and contribute the ideal ingredients as a keyboardist”. G3 added to this that every studio musician needed to have sufficient technical skills to be able to realise the producer’s ideas with good timing, phrasing and sound. In so doing, the musicians had to be highly flexible since the expected

performance could oppose the “correct” playing technique. Furthermore, realising the producer’s artistic visions did not always mean one had to sound as proficient as possible, sometimes it could also be the contrary.

If someone asks me to play the piano in a way I wouldn’t do normally, I have to be like an actor. [...] And when the pianist should sound like Lisa Mueller who can barely play a few chords, then apparently this is just right for the song and I shouldn’t be too arrogant to play it like that. (K1)

The other participants had similar experiences. G2, for example, described that in some projects, controlled playing to a click with high-quality instruments was not adequate for the music:

Sometimes producers say it is too clean. ‘Take this trashy guitar over there and play as if you could not play a guitar’. That creates a very different aesthetic. You cannot be judgemental. It is about the sound, and sometimes you need the sound of someone who struggles on the instrument, who plays dirty. And sometimes it has to sound effortlessly and fluid. And the producer must decide what the song needs. And then you try to play it like this.

Both examples show that technical skill levels are subject to aesthetic intention and that musicians must be able to imitate players with different expertise convincingly.

Next to playing skills required for improvising ideas on the spot, all participants but drummer D1 highlighted music theory and experience as songwriters and arrangers to be important for their work. B1 explained that profound skills in voice leading were crucial when having to come up with bass lines. Talking to the composer or arranger was necessary because rules not followed could destroy any song. He further elucidated: “You cannot just play what is written or improvise. You always have to know the melody when playing the bass because otherwise you can affect the song without the arranger or producer even realising it”. Guitarist G2 also emphasised the significance of music theory:

Especially as a guitarist, the ability to navigate on the fretboard and to play chords not just in one way but with various inversions on the fretboard, this has been most beneficial to me. If I had not learned this, the circle of fifths, all chords, all inversions of major and minor chords, I wouldn't be a guitarist much sought after. It really opened many doors for me. And you can always learn more theory.

Profound theoretical knowledge might lead to a multitude of jobs as it did for G₁. His reputation as an arranger and composer led to collaborations with many original metal bands and projects that also allowed him to do arrangements and orchestral recordings around the world. Listening skills, in G₁'s experience, were the most important skills for a studio musician. He explained that one must notice instruments being out of tune or time when recording any genre, instrument or style, from orchestras to metal guitars, because such an error could hardly be corrected later on.

All musicians are capable of playing a notated composition, but today this ability is hardly required anymore. In the past, however, sight-reading was a relevant skill. B₁ recalled that sometimes there was no chance to practice as the musicians did not receive sheet music before the session, leaving them just enough time for a quick look at the most challenging phrases. Then the ensemble had three to four takes to decide on a common phrasing and to capture a good collective take on tape. Today, most sessions involve recording improvised overdubs onto a backing track; an approach not only allowing for more attempts but also making it possible to take more risks, which potentially leads to interesting takes by chance.

All participants perceive differences between live and studio work. Playing in the studio required specialised practice since musicians had to be able to play more quietly, irrespective of the instrument. Apart from engineering reasons, playing quietly allowed creating more energy and colour according to K₁ and D₁. Furthermore, overdub recordings, different forms of miking and various editing and mixing options in modern digital audio production enabled producing subtle timbral nuances and sound worlds. This is what they regard as very different to a live performance where the show was often more important than the sound. Two further differences expressed were that playing needed to be immaculate in

the studio, and recordings in most modern productions were required to follow a click track, a technique some musicians were reserved about. G1 missed groove and dynamics, B1 felt challenged to phrase musically while keeping in time, and G2 was worried about the loss of character when the playing was getting too clean and mechanic.

All interviewees highlighted the necessity of being up-to-date which includes mastery of various kinds of genres. B1 clarified:

For some years, certain styles are trendy. You develop a routine and specialise, you become the expert for this period. This can be music you don't favour. But you have to play it. That is the essence of a studio musician. I cannot say I don't play it, otherwise it will be the last job for that employer.

Stylistic flexibility presents challenges to the musician's playing skills. G2 admitted not to accept job offers for metal or flamenco projects because "if you aren't a wunderkind, then you have to dedicate fully because they are on such a high level technically. You would have to practice like hell, and this would be too single-sided for me". As a studio musician, according to K1, one must be familiar with many genres and be skilled on several instruments. Keyboardists simulating an orchestra on a synth would have to play differently to the piano or a Hammond organ, and the phrasing and articulation were depending on genre conventions, which not only had to be understood but did require respective performing skills as well. Nonetheless, keeping on top of the musical development was an effort commonly regarded positively. D1 stated that every musician needed to develop a unique style, and getting acquainted with different genres and styles was not be bad after all. Consequently, G1 highlighted the benefits of playing different kinds of music because it supported personal development, valuable for both one's own original music and one's professional growth.

The interviews further revealed that studio musicians must possess several *soft skills* which are closely related to the *role* and self-concept of the profession.

You must be able to work in a team. Always being in exchange with the producer and develop something. To let go of your preferences and influences

and not say, 'But I have a much better idea'. You should not insist on your ideas. You must interact with the producer and for doing so you need a certain social competence. It's important not to see yourself in the centre of the project. (G3)

Being able to let go of one's ego is a decisive quality described by all participants. G1 put it this way: "You must manage to stay in the background. It is a job, and as a guest on a project you want to make the people who invited or hired you happy with the result. It is the song that matters". G2 further emphasised the relevance of patience and tolerance, which were helpful qualities if tensions came up with the employer or fellow musicians. In his experience, it was exceptionally important to keep a positive mindset when the project was on a tight schedule and budget.

Another crucial skill of a studio musician mentioned was the ability to withstand pressure in different recording situations. D1 described having been intimidated by more experienced musicians in live recordings, stressing the need to gain a routine as quickly as possible. B1 elucidated his experiences:

I can cope with pressure: 'Here is the sheet music, play it!' But I know there are many musicians who cannot do it. But this is my bread and butter job. It's important to get to the point at which you can resist this pressure. If you play with an orchestra and you blow it, fifty people turn around and shake their heads. Resisting the pressure and still playing well, not many can do that. Staying calm when recording is a fundamental quality required of a studio musician.

Producers are commonly under pressure too. They are the ones responsible for creating a commissioned product, within the agreed timeframe and on resources which have been provided to them. If the producer was insecure and the musicians reinforced it, the project would most probably fail. Therefore, B1 claimed that studio musicians needed to be "psychologists"; every minute counted in a production which was a crucial reason why musicians must be able to reassure the producer that everything is well cared for. A relaxed atmosphere would efficiently support the work and the mutual goal of creating a high-quality product. Furthermore, all participants agreed that a good atmosphere

in the studio had a positive impact on the results. Committing to the music and adopting required musical personae while being creative at the same time were only possible in a positive and supportive working environment.

All interviewees have a home studio they use for different kinds of jobs. Remote sessions, where the hired professionals record their instrument onto a basic track sent by the producer, are very common since less time, organisation and money is necessary compared to work at a large commercial studio. Other recordings made at home are for films, audio plays and instruments libraries. Despite all these jobs, the participants were divided over the level of *engineering proficiency* a studio musician must have today. For K1, B1 and G1, one did not need to be an audio engineer, but being one would still be advantageous. K1 expressed that studio musicians should have a basic understanding of the recording process, but since a professional production required such a high standard of engineering, hiring a trained engineer would sometimes make sense. G3 added that there were many versatile and well-playing guitarists who undermined their good quality by recording themselves with engineering skills that were beneath their level of playing. Those players would be better off collaborating with a professional engineer. B1 only considered engineering skills on his own instrument relevant as these allowed him to discuss his sound with the engineer. G1 and G2 stressed that understanding options and processes of digital recording was helpful when it came to deciding on what to do with takes; should they be edited or repeated, should effects be added, and if so, whether these should be created with hardware devices or in the computer. Moreover, G1 and G2 agreed with B1 that having basics in engineering facilitated communication with recording and mixing engineers. G1 further mentioned the importance of a sound-check since the choice of microphones and the miking drastically affected the recorded sound.

G3, holding two part-time professorships, one of guitar performance and one of music recording and production, emphasised the benefit of engineering skills for modern studio musicians. While it was fundamental that these skills matched the playing when recording one's own, he added that with modern digital technology it was much easier than it used to be in the past. Therefore, he advises his students to master engineering and recording themselves for not having to pass on potential sources of income. D1, a former student of G3, was

convinced that engineering skills and a personal studio are inextricably linked to each other and as relevant to him as his playing is.

You must be able to do the technical side. This means, you have to know [Apple] Logic [Pro] but also your instrument. You must be able to tune your drums because with close-miking in the studio, every overtone is recorded. You have to be flexible with the sounds, have different instruments. You must know your microphones and their sounds. You must select the right ones and place them at the right spot to capture the sounds you want. Then, you have to select the preamps [preamplifiers; authors' note]; I also have different ones and must choose the one that sounds right. Sometimes you have to overdrive the microphones, distort them, to create a sound. And then the signal goes into the computer. I don't mix the drums for the projects, but I record them the way I would like them to sound in the end.

This strong focus on the sound can also affect the performances. As D1 explained, he would often record just the basic tracks of kick and snare drum, and then overdub the overheads and other percussion instruments, to have more engineering and mixing options available. Afterwards, he would replace an ordinary shaker with other cymbals and combine regular drum sounds with more electronic or experimental sounds. This approach would produce results that were different to programmed drums and would motivate producers on small budgets to invest into a studio drummer.

The participants showed some ambiguity towards *technological advancements*. While digital technology makes recording more affordable and does support remote sessions, the capabilities of digital instruments were perceived as both impressive and threatening. B1's interview revealed this fundamental ambiguity. Although not believing musicians would be replaced by computers because they could not create a human sound, he predicted that the profession of studio musicians would vanish within the next ten years if computer technology were continuously developed further and at the centre of popular genres. G1 in this context claimed "overproduced" records to be detrimental to session musicians as this aesthetics would, amongst other things, shift the work from the performance and recording to the mixing and mastering. Others were less

pessimistic as for instance G3. He welcomed the advancements in modelling, simulation and profiling guitar amplifiers, but did not see the guitar being replaced by a computer as long as rock music was still being played. G2 agreed, stating that virtual guitarist software was no real threat since producers were often looking for character than for a perfect performance. For the keyboard, K1 explained, many of the traditional tasks of sound designing and orchestration were already carried out by producers who used instrument libraries excessively. Unworried about the high quality of virtual instruments, K1 does not fear to be replaced soon, since the sounds, after all, were only one part of the production, the skilled performance another one. This is why it was so important for modern studio keyboardist to be versatile and convincing, showing the producers what can be done beyond their programming skills. Musical personality was the key success when it came to outperforming computer instruments.

Technological advancements have changed the skillset and the practices of modern studio musicians. These players, however, are not likely to be replaced by computers any time soon. All the same, none of the participants can make a living from studio work as it used to be possible in the 1970s and '80s. They all need several sources of income. K1 additionally works as a live keyboardist, producer and professor of music production. B1 plays in two live bands and produces material for library companies in his professional home studio. Next to the many jobs that require recording popular music in his studio, D1 records percussion and other sounds for films. He further does live gigs, but explained that while waiting for jobs, he could as well use the time making money at home recording for other projects. On top of this, he writes articles for musicians' magazines and plays in an original band. The three guitarists are in a similar situation; they have several jobs that pay for their living. G2 has a few bands of his own, is permanent member of a renowned German pop band and teaches at several higher education institutions. Holding professorships that ensure his living, G3 has the freedom to choose and negotiate session work. G1 plays in original bands, holds part-time lectureships and manages a music school. Furthermore, he composes music for documentations and audio plays and arranges for classical orchestras. All these activities demonstrate the multitude of skills required of today's studio musicians to make a living.

Musical education, acquisition of skills and pathways into the career

Given the rise of institutionalised popular music education in Germany and elsewhere in the world, one aim of this study was to explore the skills required of studio musicians and the pathways into this profession. According to Pierce (1998: xvi):

There are no schools, there are no written rules, there are no lists of protocol; experience and 'hanging out' are the only teachers. No one gets 'in' because of rank, status, money, power, or favors, talent is the only key that will fit the door.

Musical ability as the key to this occupation has been observed in this study as well. The interviews showed that the participants acquired their professional skills in various ways and that a formal music education was not superior to self-directed learning. In her study on Nashville country musicians, Pierce (1998: xvi) came to similar results. She described top session players mostly being autodidacts who believed that "formal training might inhibit or restrain their natural feelings for music". Those musicians had learned their instrument by copying records by ear; a style of learning also found amongst the participants of this study, which concurs with theories in popular music education (Green 2002). Such an individualised form of learning can foster originality, a trait employers often looked for in a studio musician. D1 emphasised that his unconventional approach to music was interesting to producers and had helped him get hired for projects that would easily have worked with programmed drums. Although the present findings do not indicate a significant benefit of music degrees for studio musicians, it must be noted that most of the participants were already experienced and had learned their craft long before dedicated popular music programmes existed in Germany. Considering that many of these programmes combine performance and technology, and offer modules on music business and law, respective education might be advantageous in this highly competitive business. But then again, most professional popular music producers do not have a music degree either (Bates 2012).

If receiving musical education at all, the participants were trained mostly classically. Notwithstanding that these players regarded their training as valuable, it cannot be said what difference an education in popular music would have made. To start their careers, however, such education was secondary. All interviewees convinced fellow musicians with their playing and likeable personality, an important trait also found amongst Bruford's (2018: 44, 56–60) interviewed professional drummers, which brought them recommendations and eventually an increasing professional network. Substitution jobs were vital, and performing well improved the prospects of being hired again, concurring with career advisor Shelly Field's (2004: 194) guide on music industries and Pierce's (1998: xvi) criteria for a professional career as a session musician. G3, one of the older musicians, revealed to have profited from being introduced to the professional scene by more experienced musicians; a practice of "sponsorship" that according to Faulkner (1971: 97–107) was crucial for musicians in Hollywood in the 1970s. Moehn (2012: 38) also documented such sponsorship in his study on the Brazilian scene in the 1990s. However, this convention was not evident in Bates' (2016:113–114) recent investigation of Istanbul's recording industry. Thus, the question whether the relevance of sponsorship decreased in general or rather depends on factors such as geography or musical genre cannot be answered for certain based on current research.

Musical skills and compositional contribution

Existing research (Bates 2016: 1; Pierce 1998: x; Williams 2010: 63) and professional guides (Field 2004: 194–195; Hannan 2003: 61) stress the importance of technical playing skills. Musicologist Michael Hannan (2003: 61) explains that studio "musicians have to have the highest possible levels of instrumental (or vocal) skill [...]. There is absolutely no room for any kind of imperfection in professional recording", concurring with Field's (2004: 194–195) assertion: "There is usually not a lot of time for rehearsals, and because of the high studio cost of studio personnel and time, mistakes are not tolerated". The studio musicians' technical

¹ This practice is often referred to in the recording industry as calling in "Dr Midnight".

proficiency can be one of their biggest assets (Faulkner 1971: 7, 117–119, 137). As Meintjes (2003: 83–84) observed for commercial productions in South Africa, session “musicians were called in midsession a couple of times to overcome hitches in the band’s performance”, demonstrating that professional musicians were hired to save expensive studio time and to assure better quality. Bates (2016: 2, 93) came to similar conclusions when he discovered that most recordings of original artists in Istanbul were in fact made in collaboration with hired studio musicians for reasons of quality and efficiency. Thus, Bruford (2018: 41–42) sees efficiency as one of the main selling points of this profession: “The art of the studio musician lies in problem-solving against a time constraint”. Such professionalism requires profound playing skills by nature.

The interviewees pointed to a situation more complex. In the times of analogue recordings, technical perfection was crucial to keep the production costs low and minimise the danger of audible edits, concurring with Faulkner’s (1971) account on Hollywood studio musicians in the 1960s. Yet, technical virtuosity according to the German musicians is less important nowadays as long as technical dexterity ensures the intended expression at a professional level, coinciding with current practice in Istanbul (Bates 2016: 114) and statements by world-leading drummers (Bruford 2018: 213). Stylistic versatility, improvising and arranging skills appear vital instead and are thus often favoured over technical exercises due to time constraints. The musicians rather work on compositional ideas or sounds to extend their repertoire; a vital asset in recording sessions where music needs to be improvised, arranged and composed on the spot. Services in musical genres requiring specialised skills as for instance very technical playing in metal music the professionals do not offer. They commonly play substyles of popular music, such as acoustic pop, singer songwriter or soul, in which feel and knowledge of idioms rank before technique. This finding contrasts with Becker’s (1963: 112–113) claim that musicians who go commercial adopt a craftsmanship orientation, valuing virtuosity and technical skills over artistry; an attitude that has likely changed in the more than fifty years since his study. One of the main reasons setting the musicians apart from programmed instruments is their ability to make the track sound more “musical”. Creating feel and groove along with phrasing and accompaniment, based on theoretical knowledge and extensive experience, makes their services more valuable than computer instruments. Overall, the

findings confirm Williams' (2010: 64) criteria of successful studio work: broad stylistic range, ability to translate ideas across genres, consistent quality and contribution of original ideas. This matches Bruford's (2018: 41) account of studio musicians needing to be "chameleon-like [... professionals], who can perform efficiently within disparate styles without attracting, or otherwise diverting, attention from the 'true owner'".

In his guide to the music industry, journalist Kent Hartman (2003: 61) claims that the session musician must be an "excellent sight-reader", concurring with R. Serge Denisoff and John Bridges' (1982: 136) assertion that for "studio musicians [...] the ability to sightread proficiently is most often a prerequisite to steady employment". All participants of this study can read sheet music. Some learned it on their own because these skills were essential for their personal or professional playing, others profited from their classical training, even if it only involved piano lessons in their childhood. In practice, however, most recording sessions go without pre-composed music. If material is available in advance, the musicians rather learn the songs by ear, sometimes guided by lead sheets. Bassist B₁, who frequently plays traditional German music like Bavarian *Volksmusik*, was the only one who seemed to record notated music regularly. The ability to read music is more commonly used for arranging and composing in combination with profound knowledge in music theory. The importance of a theoretical understanding was particularly stressed for situations that require creating strong bass lines, playing chord inversions on the guitar fretboard and arranging music for larger orchestras or ensembles.

The overlapping of different roles including player, arranger and composer is described in literature on recording practices around the globe, indicating that hired musicians are, and always have been, vital contributors to the songwriting of popular music. Bates (2016: 123–124) observed that in Turkey musical parts are rarely written out but discussed in the session between musicians, the arranger and producer. Meintjes (2003: 147–157) documented a similar approach in South African studios, where musicians jam to develop instrumental parts and produce the arrangement together. Likewise, Jamaican musicians who recorded the reggae 'riddims' in the 1970s "create[d] original music on the spot" (Veal 2006: 47). Moreover, Nashville musicians in the 1960s used to listen to recorded demos in the studio together before they "would [...] sketch out

an arrangement between themselves, sometimes with input from the artist or producer" (Levy 2000: 23). Similarly, Motown songwriter Lamont Dozier (quoted in Fitzgerald 2007: 128) has acknowledged that "a lot of the ideas wouldn't have been possible without the Funk Brothers" as the "[r]iffs and feel drew on the extensive musical knowledge and experience of the session players" (Fitzgerald 2007: 128). Fitzgerald (1996) also documented a session in Australia where the collaboration between producers, arrangers and studio musicians led to a record that highly depended on developing rudimentary structural ideas into a coherent composition together. All this is strong evidence that studio musicians are expected to offer more than just playing composed music; they contribute compositional ideas to the song (Williams 2010: 64). In compliance, Bruford (2018: 44–45) described the studio drummer, whose instrument arguably is least likely to be associated with composition, as an "invisible composer". These reports from different parts of the world highlight the studio musicians' role not only for leaving their mark on the performances of landmark recordings, but also for taking a decisive part in the development of popular music genres. Whilst this is specifically documented for hired Jamaican reggae musicians practically inventing the proto drum and bass style (Veal 2006: 58) and for the Funk Brothers shaping Motown's soul music (Fitzgerald 2007; Smith 1999), the studio musicians' impact on current popular music genres is acknowledged relatively little.

Despite the musicians' compositional contribution, most research reveal them not to receive fair payment. Especially access to lucrative writer's royalties proves difficult. Session fees are the usual form of remuneration in South Africa (Meintjes 2003: 6), Jamaica (Veal 2006: 49), Turkey (Bates 2016: 83), Australia (Fitzgerald 1996: 74) and Brazil (Moehn 2012: 39), resulting in precarious economic situations in many cases. Most of the interviewees working in the German recording industry confirmed this problem. Statistically, 13 % of the income of freelance musicians in Germany is from royalties plus 9 % from record sales (Bundesverband Musikindustrie 2015: 23). Considering the musicians' national average annual income of € 12.500, their share of the record sales and media play is likely to be very low. All interviewees declared to usually pass on their authors' rights linked to revenues from royalties by the GEMA (German Society for Musical Performing and Mechanical Reproduction Rights). Instead, they get a one-off fee and receive small royalties by the GVL, the official Collecting Society for Neighbouring Rights

in Germany. Compared to the annual distribution of € 756 million (net) of the GEMA, the GVL only pays out € 113 million (net) which are shared evenly amongst artists and record labels (Bundesverband Musikindustrie 2015: 66–67). This exploitation of studio musicians is even more drastic when considering national laws. Unlike the copyright approach in the USA, UK and the Commonwealth that protects the economic interests of entrepreneurs, the German *Urheberrecht* secures the intellectual, artistic and economic rights of creators (Urheberrecht 2018). As the threshold for the eligibility of works for protection is very low (the so-called “small coin”), every contribution beyond playing pre-composed parts should theoretically be a protectable merit and grant the studio musicians their share on the writers’ royalties. Yet, since there is no universal regulation and each case must be decided in court (Rösing 2012: 259–262), most musicians do not insist on getting their fair share of the royalties. As Germany has no musicians’ union – only the GVL which apparently does not prevent exploitation in practice –, the musicians commonly pass on their rights to keep a good working relationship with employers and to secure future employment, a practice documented by Bruford (2018: 42) too: “employer satisfaction is critical to job retention”.

The professional role and its change through technological developments

All interviewed studio musicians agreed that their profession is a service job. This was highlighted by the expressed relevance of soft skills like the ability and willingness to work in teams and to subordinate to the producer and the requirements of a project, which is in line with the findings of Bruford (2018: 44, 56–60), Faulkner (1971), Field (2004: 195), Fitzgerald (1996) and Williams (2010). However, such a supportive and non-self-centred attitude contrasts with the studies by Meintjes (2003), Smith (1999), Veal (2006) and Williams (1996), each one demonstrating musicians having issues with the unequal hierarchy and thus preferring the labels “collaborator”, “accompanist” or “supporter”. As Williams (2010: 63) points out, it is “the musician’s unique ability to assess and adapt his or her ‘way’ that makes one a desirable hire”, which concurs with Bruford’s (2018: 41–42) notion that “the musician able to supply whatever is needed to

make the music ‘work’ [... receives] further employment”. The interviewed musicians would adopt all personae necessary on a session, even if it meant playing like a beginner. Since this could hamper with their musical identity, they emphasised the importance of playing music they personally liked in between sessions. Another observed challenge was the pressure in a recording situation, which even for very experienced musicians seems to be demanding; a finding that concurs with statements by some of the world’s top drummers that Bruford (2018: 42, 73) interviewed. For coping with stress in the studio, the musician should be a “psychologist”, conveying a positive atmosphere which was described as essential for a creative project. What is more, showing confidence to the producer would not only be important to secure future employment but also to give the impression that everything is going as planned. As drummer Steve Gadd in Bruford’s (2018: 59) study confirmed, “what’s important, to make them feel comfortable”. These findings shed light on the power relations between the roles. Studio musicians commonly accept the producer’s leadership although doing far more than playing their instruments; they spring into action managing the psychological state of the project. A calm and balanced personality as well as social skills is needed to handle this. The role of a studio musician therefore is similar to that of a mixing engineer (Kealy 1982: 102); both support but not lead the creation of the product; yet, their impact on the progress and the result must not be underestimated. They are likely to contribute more to the music than the plethora of research on record producers (Blake 2009; Chanan 1995; Cunningham 1996; Moorefield 2010; Warner 2003; Zak 2001) might suggest.

The effect technological advancements have on the work realities of studio musicians is crucial when discussing their working practices and conditions. One of the main changes developments in music technology have entailed is the move from collective live to individual overdub recording practices, often mourned about in literature (Bates 2016; Bruford 2018; Levy 2000; Moehn 2012) as well as by the German musicians who quoted better feel and sound as well as reduced pressure on the individual player as reasons. Another reason captured in literature is “the commitment that is required by everyone in the room; the attention level is just a little bit sharper” (Bruford 2018: 144), because the options to correct collective performances are limited. This argument contrasts with experiences of the German musicians about reduced pressure, but it supports

their notion of a better “musicality” when the recordings are live, concurring with statements by Nashville musicians in the 1960s (Levy 2000: 26–27). Although recording practice has moved from live to overdub recordings more and more in the last fifty years, many studio musicians still value the aesthetics of collective ensemble recordings. Nonetheless, the German musicians saw many benefits in the overdub approach as for instance sound replacement or enhancement, control over the individual sound, more leeway for experimentation and easier scheduling of time.

Another phenomenon related to the development of production technology regards the changing of professional roles. Albin Zak (2009: 70) described an “increased blurring of lines between engineering and producing in pop music over the last twenty-five years [which] is the by-product of a process that began in the late 1940s”. Roles that initially were distinct and required collaboration have been merging over the years, most drastically that of engineers and producers (Auvinen 2016: 5; Herbst & Holthaus 2017; Howlett 2012; Martin 2014: 185–188; Mellor 1998: 3–9; Zak 2001: 164). In this study, most musicians declared to be taking on duties of a sound engineer. The musicians’ roles being all in one – engineer, composer, arranger and the person performing the ideas – is what shows a different form of overlapping roles to what Auvinen (2016: 23) recently described as a

tracker [...] whose responsibility it is to create the tracks and come up with the arrangement excluding the melody. The tracker might also be the producer and a producer might be a tracker. A producer might also be an engineer, but this does not have to be the case. [...] the tracker is the one who programs the different instrument tracks. The tracker might play and record the tracks and the producer has more of a general picture of the song as a whole. The producer has the last word in what sounds will be used and might influence the song after the tracker has worked on it.

Since Auvinen studied a singer-songwriter project, which at a grass roots level usually does not require recording musicians in large studios, he and his interviewees did not take the role of studio musicians into account. However, there might be a similar overlap between the “tracker” and modern studio

musicians. As the findings show, studio musicians are working on instrument parts and the wider arrangement, record the performances and send the files to an external producer. Auvinen (2016: 13) sees the reason for this emerging role in the shrinking budgets, which “requires creative individuals to possess new skills, which again contributes to the construction of agency. Smaller album budgets mean smaller fees for producers, who consequently need to find new sources of income”. This resembles the financial problems many studio musicians are confronted with. Thus, the merging of roles might well be motivated by creative intentions but likely with an economic motivation behind it, considering the dwindling budgets in the recording industry in general (Burgess 2008; Leyshon 2009) and in Germany (Bundesverband Musikindustrie 2015: 40–41; Herbst & Holthaus 2017). The findings demonstrate that all participants have a home studio for economic reasons (Théberge 2004, 2012). Some of the more established musicians can still manage to record in professional studios more often than doing remote sessions, yet they all use their personal studio for additional income. Not every one of the interviewees considers engineering skills crucial, but they all agree that these are sources of extra income and allow them to shift their spectrum of jobs from teaching and live sessions to recording. However, engineering skills are not only regarded as valuable for economic reasons. All professionals concur that understanding the processes and options of modern production facilitates creativity and helps achieving intended sounds. That is why they put a lot of effort into producing the perfect sound and go to considerable length, taking huge instrument collections to external sessions, spending valuable time on sound-checks in their project studios and investing in music production equipment. This finding contrasts with recent research claiming that record producers are little interested in production technologies as they do not want to compete over equipment (Martin 2014) and rather focus on post-production by using more standardised digital technology (Auvinen 2016). Possibly, this marks a shift in their responsibilities; musicians take care of the sounds at source with their selection of instruments, amplifiers, effects and the recorded performance, whereas producers and mixing engineers concentrate on the post-production. Some of the musicians gave hints about “over-production” in their criticism, supporting the notion of such a divide between musicians on the one side and producers and engineers on the other.

Even though the interest in production equipment has recently been disputed (Auvinen 2016; Martin 2014), research indicates that music equipment and technological skills are of economic and social value in music scenes all over the world. One of the recurrent themes in Meintjes' (2003) documentation of music production in South Africa are the relations between the professions in the studio as a mirror of the wider socio-cultural context. As she describes, musicians acquire equipment and improve their technological skills hoping to gain the respect of the producers and engineers. Understanding recording technology is an important aspect in defining the authority and status of the people involved in a recording process (Meintjes 2003: 102–107). Likewise, knowledge of music production technology and recording practices from the analogue days, according to the older German musicians, would be valuable when working with younger producers and engineers who grew up with digital technology. Thus, the status, if determined by role on the one side and by experience, skills and reputation on the other side, might be diverging. The interviewees experienced different situations, suggesting a less one-dimensional hierarchy between producers and studio musicians to what is described in literature (Bates 2016: 128–133; Faulkner 1971: 30–50; Meintjes 2003: 102–107; Veal 2006: 46–49), but one that underlies manifold aspects such as professional knowledge, specialist skills, experience, reputation from previous successes, access to resources and financial control.

Moehn (2012) depicted a different phenomenon, one that resembles the practice of the German musicians. He documented the advance of Brazilian percussionist Marcos Suzano from a session player to an acclaimed solo artist by innovating percussion sounds with analogue and digital production tools in his home studio. The characteristic “cyborgian grooves” (Moehn 2012: 48), decisive for his artistic success, match the individuality of sounds stressed by all the German musicians and especially by drummer D1, to whom his daily exercise is not a work routine to improve his technical playing skills but rather “research into timbres”, a phrase used by several of the German musicians and Brazilian percussionist Suzano (Moehn 2012: 51). Having an up-to-date sound, one that is both individual and chameleon-like, seems to have become increasingly valuable. Profound engineering and producing skills tie in with these individual and flexible sounds, and as such have become part of the required skillsets of professional musicians, not only to keep ahead of others, but also as a strategy to retain the profession in the recording industry.

Conclusion

As record producer Buddy Killen once claimed: "The studio musician has to be better than good, he has to be great" (Pierce 1998: x). What does this mean in the 21st century? For a long time, the successful studio musician in the popular music industries had incredible playing skills, stylistic flexibility and was an excellent sight-reader. These requirements seem to have shifted for the six interviewed professionals. Being experts just on their instruments seems no longer sufficient for a career; studio musicians must have a broader skillset today. Highly valuable are a repertoire of ideas and sounds to be offered spontaneously in a recording session, along with empathy, social skills and a likeable and humble personality. The musicians must be both unique and flexible to serve a project and keep up with the many fellow musicians and programmers of computer instruments. Music education programmes may support musicians in developing the required skills and qualities, but what counts in the end is practical experience, a professional network and satisfied employers. There are no defined pathways and no way that guarantees a successful career.

The economic situation of studio players is difficult in Germany, and even leading professionals like the interviewed musicians must acquire extra sources of income: playing live and studio gigs, coaching bands, teaching in music schools and higher education institutions, arranging, composing, recording and producing for other bands, film companies and library firms. These activities require a multitude of skills that are acquired through practice, which, again, become useful in the studio. All interviewees are devoted to their profession notwithstanding the high demands on musicality and personal dedication, the fierce competition and the economic insecurities. Grateful for being able to make a living from music, they enjoy working with different artists and inspiring people, hoping to be part of records that will still be played in many years to come.

Future research should dedicate to some of the issues that are raised from the present findings but could not be explored in this study. Even though remote sessions in home studios seem to be the standard in many productions nowadays, neither the effects of studio resources and acoustics nor the lack of professional sound engineers have been explored yet. Likewise, the claimed positive effect of working together in the studio is becoming rarer with remote sessions, so

what are the consequences for musicians and productions? A further aspect to be explored may be the skillset studio musicians require for their services in different genres. What is more, the present study did not distinguish between instruments due to the small sample size. Instrument-specific skills have thus not been captured. In addition, the effects of formal music education could be studied empirically, addressing the common claim of autodidacts that their unconventional approach was beneficial for this kind of profession. Finally, comparing legal regulations on copyright and the economic situation of studio musicians in different music scenes might reveal conditions varying between countries. Finding answers to these questions could shed light on the popular music recording industries and improve the visibility of studio musicians in music research.

Interviews

G1 (2017) Detmold 13.5.2017. 1 h, 3 min, 37 sec. Interviewer Tim Albrecht. Mp3-file in the possession of the authors.

G2 (2017) Bielefeld 15.5.2017. 26 min, 48 sec. Interviewer Tim Albrecht. Mp3-file in the possession of the authors.

G3 (2017) Detmold 15.5.2017. 45 min, 33 sec. Interviewer Tim Albrecht. Mp3-file in the possession of the authors.

K1 (2017) Bielefeld 15.5.2017. 31 min, 42 sec. Interviewer Tim Albrecht. Mp3-file in the possession of the authors.

D1 (2017) Detmold 16.5.2017. 1 h, 6 min, 23 sec. Interviewer Tim Albrecht. Mp3-file in the possession of the authors.

B1 (2017) Detmold 16.5.2017. 44 min, 34 sec. Interviewer Tim Albrecht. Mp3-file in the possession of the authors.

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