



MUSIC STUDIO OPERATORS FROM GERMANY'S "RUHRPOTT":

Role, Services and Resources

Since the advent of phonography in 1877, the only constant in the record production sector has been change. Discussing the emerging network studio in the early 21st century, Théberge noted that

what constitutes a 'recording studio' – in terms of a specific configuration of spaces, equipment, techniques and human resources – has changed radically over the years. [- -] we have to understand the recording studio as something of a cottage industry: the studio is structurally independent from the record industry, it is dominated by single, stand-alone facilities, and recording studios are, for the most part, owned by individuals and small groups of individuals as limited partnerships. (Théberge 2012: 79)

Powerful computer technology and music software led to the emergence of home and project studios available to professionals and amateurs alike, allowing artists to record on their own with ever-improving quality (Kealey 1979; Negus 1992: 86; Jones 1992; Théberge 1997, 2012; Zak 2001; Leyshon 2009). For amateur and aspiring record producers, specialist knowledge has become easily available in educational programmes, magazines and the Internet (Jones 1992; Gibson 2005: 199; Martin 2014: 262). Thus, both the necessary equipment and skills to

produce music are principally accessible to everybody with a medium budget, at least in industrial countries. Ever since the early 1980s, these opportunities are affecting professional record production. Today, only few producers are working permanently for record companies (Leyshon 2009: 1318), small recording studios are starting rapidly while major studios are closing (Leyshon 2009; Théberge 2012: 84f), music production has become more widespread, decentralised or even virtual (Théberge 2004; Campelo & Howlett 2013), and the huge number of music studios has intensified the competition (Martin 2014: 113). Therefore, many recording studios in the last three decades have expanded their portfolio to post-production, video editing and related services (Théberge 2012: 86).

Closely related to the changing recording studio are the constantly changing roles of technical, artistic and administrative staff. Whilst the roles in the formative years of the record industry were clearly defined (Kealey 1979, 1982; Zak 2009; Burgess 2013), there has been 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" (Zak 2009: 70). Roles that initially were distinct and required collaboration have been merging over the years. The reasons are manifold and concern workflow (Zak 2001: 164-183), creativity (Kealey 1979, 1982; Zak 2001; Moorefield 2010) and finances (Burgess 2008; Martin 2014: 185-194). Varying and often unclear understandings of roles may be the reason for the lack of a general agreement on how record producers are defined and by what their work is characterised (Blake 2009; Moorefield 2010; Burgess 2013; Martin 2014; Auvinen 2016). Blake (2009: 36) sees the term producer as "the greyest of all grey areas" and in trying to define its role, he describes the professionals as "individual entrepreneurs, freelance operators, record label owners and record label employees". Corresponding to these multifaceted roles, he lists a variety of activities. In the phases of pre-production, production and post-production¹ they worked with the artists on their songs and performances, did the actual recording and edited, mixed and assembled for delivery to the record company. This description further demonstrates the blurring of formerly distinct

¹ The traditional production process of a recording usually had five separate phases: Composition (writing the musical work), pre-production (rehearsing, demo recording, project management, preparing the studio production), recording, production (mixing) and post-production (mastering). Nowadays, these phases are less distinct and particularly composition, pre-production and recording are merging (Hepworth-Sawyer 2009: 23).

roles. Blake (2009: 36) claims producers to be musical managers taking over tasks of composers, arrangers, programmers, conductors and recording engineers. All these duties substantiate the ever-increasing difficulty to pin down the producer's role (Zak 2001: 164–183; Moorefield 2010: 109). What is more, the roles differ in all phases of production (Martin 2014: 70) and vary between musical genres (Burgess 2013: 7; Martin 2014: 74). Consequently, research has commonly concentrated on the influence of technology on production, and focused on exceptional record producers while neglecting those of lesser reputation (Chanan 1995; Cunningham 1996; Zak 2001; Warner 2003; Blake 2009; Moorefield 2010).

In the last years increasing attention has been paid to the role of record producers (Howlett 2009; Zak 2009; Pras & Guastavino 2011; Burgess 2013; Martin 2014). One strand of practice-oriented publications discusses producer types. Wexler and Ritz (1993: 143) offer a tripartite typology identifying the producer as either documentarian, servant to the project or artist. Mellor (1998: 3–9) classifies five types. The “engineer producer” and “musician producer” are professionals with a respective background who still take on engineering tasks or work on the artists' compositions. The “executive producer” concentrates on employing the right specialist for each project and clearly is the opposite of the “entrepreneur producer” who takes control over the project from the very beginning for securing most royalties. The last type is the “freelance producer” without any permanent working relationship with record labels. In this context, Burgess (2013: 9–19) typology is probably best known, and it has constantly been updated in each edition. The most recent edition declares “artists” to be musicians producing on their own. Most documented in literature is the “auteur” as a producer with a distinct style taking great control over the product. The “facultative” producer tends to take care of technical tasks and supports the artist best possible. This type is closely related to the “collaborative” producer preferring a flat hierarchy and taking part in the creative processes of composing, recording and producing. The “consultative” producer is a mentor who counsels, coaches, advises and provides conceptual and visionary input.

Martin (2014: 75–76) criticises these typologies because “they do not serve as particularly useful models for identifying commonality within the role as they seek to provide insight through variation and discrete groupings”. Howlett (2009: 13) adds that the types likewise overlap and underrepresent. Therefore, they ex-

plore the producer's role from an insider's (Howlett 2009) and outsider's (Martin 2014) perspective with qualitative case studies. Martin (2014) proposes a tripartite model of interrelating social, musical and technical tasks in which technical skills are least relevant. The producer's main role was the one of a supporter (Martin 2014: 117–126) to whom social and communication skills were most important. Howlett (2009) understands the producer as a nexus between all phases of creative work from arranging, engineering, creative directorship, counselling, mediation, project managing to logistical administration, thus extending Frith's (1981), Hennion's (1989) and Negus' (1996: 60–64) notion of a mediator.

The two recent dissertations by Howlett (2009) and Martin (2014) provide valuable insights into the role, self-concepts, practices and working conditions of contemporary record producers, and both complement research on the outstanding producers in music history. Yet, the practices and working realities of local, ordinary and aspiring producers in today's competitive times still are blind spots. Correspondingly, Auvinen recently emphasised that

Studying the work of non-canonized producers who are not widely known [- -] is important to music researchers, since it [- -] produces knowledge about the actual 'grass roots level' work and practices of music production and also 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, giving a voice to the unknown producer before the heroic narrative of the successful, exceptionally talented and hardworking individual comes into play. 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. (Auvinen 2016: 3–4)

Taking Auvinen's argument seriously, this study poses the following questions: How do professional music studio operators understand their role? What services do they offer? What are their perceptions on facilities and technical equipment? How do they acquire customers? Rather than limiting the scope to record producers, the focus is put on studio operators defined as music profes-

sionals owning, or permanently renting, and operating a commercial music studio. This decision on the one side tries to elude the blurry distinction between producers and engineers including all related roles. Concentrating on operating a music studio on the other side stresses the economic, material and administrative aspects often neglected when discussing respective roles. Additionally, Howlett (2009: 12) regards “capable technology” and the quality of the recording studio as one of the four key factors of a professional production complying with Leyshon (2009) who sees the size of the rooms and the quality of the equipment to be affecting the market value of a studio. Consequently, focusing on studio operators prioritises the studio as creative and economic space (Hennion 1989; Gibson 2005; McIntyre 2008; Bates 2012). Yet, it is expected that the terms “studio operator” and “record producer” overlap. Whereas record producers do not necessarily have to own a studio but often do (Martin 2014: 221, 231), studio operators are likely to produce or engineer at least partly. Thus, it will be of interest if studio operators are equitable with music producers. The overriding aim of the article is to show how studio operators are confronted with the everyday reality not only as music creatives but also as business people whilst including their views on the key resources: the studio and its equipment.

The study follows a sequential transformative strategy (Creswell 2013: 216–217) to approach the research interest from two perspectives. This mixed-methods design comprises of two distinct phases of data collection. Whilst methodically being valid to either prioritise quantitative or qualitative data, this approach begins with a brief quantitative analysis of studios in the target area to gain some orientation. Subsequently, interviews with four studio operators are evaluated qualitatively. To meet the requirements for this study, all studio operators needed to make a living from the studio and offer their services publicly. The geographical scope was limited to the Ruhr Area (“Ruhrpott”) in West Germany. With 5,1 million people living in 15 cities and on more than 4,000 square kilometres land, it is the largest metropolitan area in Germany and the fifth biggest one in Europe. As a former industrial region, the Ruhr Area differs from other creative metropolises as for instance Berlin, Hamburg and Munich. These cities are famous for electronic and pop music whereas the Ruhr Area with its “down-to-earth” image is home to many rock and metal music bands. Therefore, the study is as close to the “grass roots level” (Auvinen 2016: 3) as possible on a professional level.

Method

Quantitative analysis of music studios

The first part explores the music studios in the Ruhr Area based on their online presentations. Websites may seem outdated in times of social media but most professional studios still use them for presentational and marketing purposes. In this respect, websites provide information about the studio's services and resources to attract potential customers. The websites were sampled with online search engines and professional directories, resulting in 52 studios. Aside from text, pictures were a valid source of information. Using quantitative content analysis, categories were extracted by distinguishing information to be "available" or "not available" on the websites.

Qualitative interviews with studio operators

Following Martin's (2014) work on the record producer's role in the UK, the qualitative analysis in this study was inspired by the Interpretative Phenomenological Analysis (IPA). Smith (1996: 263–264) argues that the "aim of IPA is 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". The data of this study were gathered through semi-structured interviews with a schedule (Smith & Osborn 2015: 31–35) addressing ten areas such as the professional role, services, facilities, finances, technology and customers. In line with the methodology, the interviewer encouraged the respondents to talk freely about their professional experiences. The average length of the interviews was 54 minutes, which is common for IPA approaches (Smith & Osborn 2015: 35).

Sampling in phenomenological research is purposeful to ensure that all participants have experienced the phenomenon in question (Cresswell 2013: 83). Thus, the sample does not need to be representative; it rather strives for different characters of a special group (Smith, Flowers & Larkin 2009: 49). To increase diversity, the participants were at different stages in their professional career. Yet, they needed to have an equal professional status, specifically full-time music studio operators, to ensure comparability (Smith & Osborn 2015: 28). Sample sizes in IPA studies range between one and six cases, prioritising depth over breadth

(Smith, Flower & Larkin 2009: 51–52). This sample consisted of three music studios run by four operators. Two of the interviews took place in the studios and one in a public café. Like in many other studies (Gibson 2005: 199–200; Martin 2014; Auvinen 2016), all four participants were men because no woman matched the criteria in the target area. This complies with the general situation in the record industries where women still are less engaged in technical and producing roles (Negus 1992: 86, 1996: 63f; Martin 2014: 274). It is further in line with empirical findings of girls and women being less interested in music technology in schools and higher education courses (Born & Devine 2015: 146-151; Hallam et al. 2017: 117).

Location	Mühlheim an der Ruhr		Duisburg	Hagen
Studio existence	18 months		6 years	40 years
Ownership	Shared ownership		Shared ownership	Full ownership
Anonymous label	SO-A1	SO-A2	SO-B	SO-C
Sex	Male	Male	Male	Male
Age	32	30	27	60
Highest formal education	Undergraduate degree in Music	Undergraduate degree in Music	Undergraduate degree in Business Administration; postgraduate degree in Marketing & Sales	Secondary school degree
Musical expertise	Piano, guitar	Guitar	Guitar, bass	Guitar, bass, drums, keyboard, vocals
Experience as producer / engineer	16 years	7 years	9 years	45 years

Table 1. Sociodemographic data of the studio operators

The interviews were transcribed according to IPA standards (Smith & Osborn 2015: 37–38). Since the content is central to the interpretation, prosodic aspects such as pause lengths and nonverbal utterances were not transcribed. In the phase of analysis, significant statements were highlighted, themes noted and similar themes clustered hierarchically. Extracted material was moved, condensed and edited while keeping the process dynamic in the sense of a hermeneutic cycle (Smith & Osborn 2015: 40-48). Besides summarising common statements of

the participants, IPA studies characteristically present quotes of the participants expressing their reality with own words too (Smith & Osborn 2015: 49, 51). The selected quotes were translated from German into English taking care to retain their characteristics. This means that grammatical and semantic errors deliberately were not corrected in order to preserve the statements as authentically as possible.

Music studios in the Ruhr Area

Services

Music studios have been in constant change with technological development affecting the professional practices. Figure 1 demonstrates the broad range of services offered by studios in the Ruhr Area.

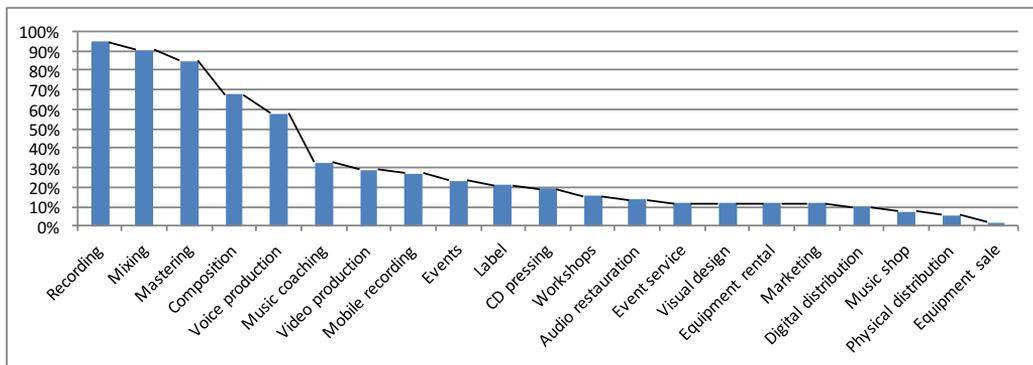


Figure 1. Relevance of services (N = 52)

Recording (94%), mixing (90%) and mastering (85%) still are the main business activities. Most studios advertise recording and mixing whereas mastering is not offered necessarily. By contrast, only one studio specialises in mastering not providing any other creative services. Composition (67%) and voice recording (58%) are common additional activities. Next to the traditional core activities, over a quarter of the studios offers music coaching, video productions and label work. Every tenth studio advertises audio restauration, equipment rental, photo

services, graphic and web design. Beyond these services, every fifth studio advertises “events” as for instance bachelor and birthday parties.

Resources

Presenting facilities is important for 85% of the studio operators. Apart from the obligatory studio rooms, a quarter of the studios offer their customers a kitchen, and only three studios (6%) advertise in-house sleeping places. Approximately half of the studios present their technical equipment. More studios list their hardware (60%; microphones, pre-amplifiers, converters, effects) than their software (46%; digital audio workstations, plugins). In-house musical instruments are displayed by 48% of the studios. Overall, the facilities and the equipment seem to be important for marketing purposes. With the massive rise of home and project studios, big and acoustically optimised rooms as well as a variety of professional equipment, both analogue and digital, are expected to be selling points for studios. References are another major strand of marketing. 88% of the studios list a portfolio of their customers, which usually comprise of musical artists and companies. In contrast, press commentaries of all forms seem to be of little relevance (8%). Neither is it common to advertise permanent collaborations with sponsors, event services, labels, booking agencies or distributors (6%). In addition to the website, 43% of the studios have social media accounts.

Interviews with professional music studio operators

Services and income sources

With the primary work area being band productions, all four studio operators regard recording, editing and mixing as natural services. Additionally, all offer arranging services to their customers. Before the actual production, the interviewees get an impression of the band and give constructive feedback to improve the songs and performances. so-B describes the typical procedure of a production:

I meet with the bands in their rehearsal room or they come by for rehearsals. We record the songs with a Zoom or something like that. We then listen to them to check the tempos, are these all right? Are the pitches ok? Maybe we decide to go down a semitone or make the song a bit faster. We roughly check the lengths, which of course is not so important because this still can be done afterwards. At this point, it is more important to get the rough blunder out of the numbers. Often, we are confronted with the fact that they have five numbers but can afford only three. Then we select the best three numbers. [- -] You work with the songs until you can feel what material is best. Once you have it, you condense it. (so-B)

One of the main motifs for working with the bands in their own rehearsal room is to prepare the songs for a more effective recording and for keeping it within the agreed budget. This involves choosing the best songs and improving them with the benefit of an outsider's perspective. The quote indicates that so-B focuses on parameters that cannot easily be changed in the mix like the vocal range and the tempo. so-A follow a similar procedure, which seems to be typical for aspiring studios that mainly record amateur and semi-professional bands. so-C also works on the songs but in a different way. Instead of visiting the bands, he prefers to get a demo recording to begin with. After analysing the interaction of the band, the compositions and arrangements, he rewrites or adds parts and may even recompose the song. To ensure good performances, he sends his changes back to the band to give them the opportunity to practice. Apart from full productions, the aspiring so-A and so-B also report on bands asking for recording single instruments like drums to support self-produced recordings. Better-established enterprises such as that of so-C seldom get requests of such kind.

Each of the three studios offers mastering services but they do it with different motifs. The two aspiring so-A and so-B collaborate with mastering studios, yet they admit to often "just insert Izotope to the mixes" (so-B) because many of their customers lack the budget for a professional mastering. Again, this is different in the established studio:

For me, there is only one way. All that's leaving my house is already mastered in the mix. [- -] Because everything that's coming afterwards can only be a form of compromise. When I sit here and mix, then everything goes through all my mas-

tering systems. This is because everything from the final compression to level optimization and so on will affect the sound. [- -] The musician, who takes his CD back home, knows very well: In the end, this and only this is on the CD and nothing else. Because you change levels. For example, you insert a master compressor and the final limiter and suddenly you notice a change. The snare goes down a bit, the guitars come up a bit, we don't want this. And so I can control it with all my individual tracks. I cannot do this afterwards in a stereo mix. [- -] And this is my philosophy and I have been following it at all times. (so-C)

There seem to be two main intentions behind this practice. so-C wants to make sure the artists get the sound they hear in the studio. However, it also appears that he aims to take control over the production from the beginning to the final master. Since being greatly involved in the arranging and songwriting process, he is eager to be the principal artistic leader of the whole production. It remains unclear what he thinks about not having another set of neutral ears as such of an independent mastering engineer. Throughout the interview, he seems to be very confident regarding his skills and capabilities.

The different reputations of the studios affect the range of services too. Whilst the established so-C only offers music production for bands, the other interviewees do not see their enterprises as pure music studios but as an "agency for creative services" (so-A1). so-B mentions scoring, voice-over-productions and jingle productions as good sources of income. To do these jobs he has a network of collaborators including, for instance, voice-over artists. Additionally, he offers filming services for which he has two camera operators. so-A focus on the creative services even more. Although they seem to prefer music and band productions, their main motto is to support creative work of all kind including commercials and radio dramas. Like so-B, they have some specialists collaborating with them to realise the various requests. Their key selling argument is to take care of everything that supports the customer. Currently working on expanding their network, so-A envision to being mediators someday so that they could employ the respective experts for realising creative work on their behalf. They do not feel able to do everything on their own and thus they depend on collaboration.

The studios vary in their philosophy of renting their facilities. For some time in the past, so-C allowed his friends to record in his rooms. Nowadays, the

closest to renting for him is being booked as an engineer; however, he gives the impression that he prefers to be the producer. so-A do not rent their studio as it contradicts their philosophy of being creative supporters. In case of music recordings, they "try to be part of the band during the time of production" (so-A1). Unlike the other respondents, so-B explains that renting his rooms is his main source of income.

Well, we are doing a great lot of rental. We let the studio with all our technology in there. To external producers. We usually get to know them through friends of friends and to begin with, we meet to see if they are cool. Yes, it is a risk, but we must take it. The empty studio then, well, the studio with technology but without backline costs 140 euros a day. This is a snap. But with these opportunities we have a certain utilisation. We always try to manage that three to four days at a time are rented in a session. This is usually appreciated. (so-B)

Days without utilisation are unprofitable and thus he rather rents the studio for little money. He does not seem to mind renting instead of producing. Hence, he sublets his rooms to renowned bands as rehearsal space for the longer term and he lets rooms for rehearsals or recordings on a single-day basis as well. For optimising profitability, he also does business beyond his facilities.

I am running aside a website where you can rent microphones and preamps. This is our own stuff we send out to the whole world. [- -] I mean the thing again is that it is a cross-subsidisation. Use your capacities a bit more efficiently. Currently, we have a few microphones on the go. Those are some U87s and so on. [- -] The things also get broken easily. Sure, it's how it is in the rental business. [- -] Yet it always pays off somehow. These are a few hundred extra euros a month we are making with it. And that for sure is easy money. (so-B)

Just as with his rooms, every day that the equipment is not used commercially causes him a financial loss. In the end, he has no other choice than to rent his equipment even if it involves risks of wear and damage. Another of so-B's strategies to earn money when not producing is to write for recording magazines although this work admittedly was time-consuming and little profitable.

Professional self-concept

All studio operators are autodidacts having found their way into this profession because of their passion for music. Hence, they see themselves primarily as music producers, albeit to various degrees. so-B understands himself as a “studio operator” as well. so-A₁, in contrast, explicitly stresses “[being] ‘studio operators’, that absolutely isn’t how we see ourselves. Instead, it really is being the music producer”. Despite the differences, they all see the need of owning a professional studio. so-A initially did not want to start a studio of their own but intended to work as producers renting rooms for their recordings. However, the role of contemporary music producers forced them to run a studio:

I believe he [the producer] is really everything nowadays. Before, in the true sense of the word as it came into being, he was the one being booked for the recordings. But there still was the technician in the studio guiding the recording. And the producer really attended this creative process. But this is just not the case anymore, or naturally, very rarely. [- -] This is all very small here, everything is very well thought out and well-arranged. But, of course, also built in such a way that the costs are kept low. And this means that we, at least for the moment, do not have productions for which we get a technician and producers paid. The bottom line is that you have to handle everything on your own.

(so-A₁)

It looks like so-A would prefer to be “traditional” music producers without having to carry out engineering tasks. Considering that they offer a range of services to be “creative supporters”, this quote indicates that they would prefer producing mainly music, and that most other work stems from financial necessity. Furthermore, they declare not being fond of the managing tasks required of operating the studio. This is quite different in the case of so-B who regards himself more as a creative entrepreneur who believes in his ability to sell. He stresses his good communication skills and strong will to provide professional reliability as excellent selling arguments. He understands his tasks to balance out the chaotic nature of many customers and to hold everything together with his experience as a project manager. What is more, he is certain that his studio still exists

because he operates it under strictly economic principles. As is the case for most local studios, many customers are known to him but he never offers them any special "happy, happy friendship deals". His concept is to rent at low costs to have his rooms and equipment continuously utilised. In the past, so-C recorded in studios all over the world due to the artists' wishes to work in certain studios. He then decided to build his own studio primarily for acoustic reasons. Regarding himself as a pure record producer, he is not fond of doing the managing tasks required of operating a studio. Therefore, his wife takes care of these duties.

All of the four studio operators understand themselves as artistic advisors not only shaping the sound of the productions but also providing feedback on the arrangement and compositions. so-B explains:

Yes, artistic direction. There are of course artists who really want you to throw yourself into the project and say, 'Hey, the part is cool, but here is a bridge you can make longer or shorter.' Especially young bands. We've noticed all along that the bands that have achieved fame had always been the ones asking, 'How would you do that now?' I think that's a good thing when you don't know the songs that they are already playing for two years. And it's you coming along and say, 'Well, the bridge is super long, isn't it?' Then they think about it again. You write it down for them to be on the safe side. They'll listen to it and say, 'Hey, it's actually better'. (so-B)

The bands greatly benefit from so-B's impartiality when working on the songs. This resembles so-A who also work with the artist to improve the compositions as part of a creative team. so-C has an ambivalent notion of his role as an artistic advisor. Although he proposes significant changes to the compositions before the recording, he also stresses the importance of retaining the band's characteristics in the production.

In principle, there is always a very important rule. You must never bend a band. The band must decide on their own on whether they like it or not. Because everything else, I can straightaway get my studio musicians to record an album for them. That's not what I need. I just want to keep the individual characteristics of each band. [- -] So, eliminate the mistakes and highlight the strengths. This is the thing a good producer should do. He should never bend the band. This is

not my intention. If I think the band are good and I produce them, then I like the band the way they are. I do not come along and start to turn the band inside out.

This would be nonsense. (so-C)

Ultimately, his ambivalence indicates a fine line between giving constructive feedback from the outsider's perspective and supporting the artists by highlighting their individual style.

Closely related to being artistic advisors, all studio operators take on the role of supporters even if the work does not pay off. Yet, they differ in the way they deal with small budgets. Being business-oriented, so-B advises bands to reduce the number of tracks to ensure a good production quality while still investing more hours than agreed upon. so-A even more place the customers before everything else:

We are always trying to take more time for a project than maybe agreed beforehand. This actually happens all the time. So, if we do that, then we want to make it just right. And if it is just the case that the budget is scarce, and we ultimately are not paid for it properly, then that's the way it is, so what. But we rather take a loss than to create any product we don't like and for which we do not stand.

Then we neither would have achieved anything. (so-A1)

This effort seems to be resulting from the aim both to produce work possibly attracting future customers and to fulfil personal aesthetic criteria. Their professional philosophy very likely is that the artist always comes first. Contrary to the aspiring studios, so-C's professional career has arrived at a point where he does not have to work under purely economic principles anymore. For him, it is important to have the luxury of taking more time than being paid for. This helps him to reduce stress and to support the artist best. Unlike the other respondents, he prefers working with promising newcomers and he does not want to collaborate with major labels for not having to represent the interests of these companies. His primary intentions are to promote newcomers by producing them with additional services.

We also have the [name of record label], which is actually only a starter label.

[- -] This also bears the advantage that, of course, the name [- -], when it is on a production, gets you a foot in the door because no journalist throws the CD into the waste bin. This is just some form of supporting marketing. People simply get some sort of guarantee that the others, the journalists, or whatever, the organizers, are listening to the thing at least for a moment. (so-C)

Contrary to the shared notion of supporters, the views of the respondents about their role as an artist vary considerably. so-A acknowledge their active role in improving the songs and having a personal production style, yet they prefer labelling themselves as "creative directors". so-C takes great artistic control, expects to be paid accordingly, and very strictly insists on his share on copyright and royalties. In contrast, so-B refuses to be called an artist at all. He understands himself "as a curator maybe, as someone just putting the pieces together. But for me, an artist is the one who plays and who has written that piece".

Engineering is natural for all studio operators, even though they differ in their liking of doing technical tasks. Statements about the relevance of equipment and technical skills show some uncertainty. For instance, so-A1 comments on technical skills: "Yes, they must be there, of course. Well, you must know what you do. But that isn't the essential thing". Still he admits that many people would regard them as "nerds" for tasks that were completely self-evident. Whatsoever, doing specialised tasks have become taken for granted. so-A2 adds accordingly:

Well, that's how it is in the end, on the one hand, what you have been asking before to which extent we are engineers, well this of course must work [- -] without talking about it. The sound. And what makes the sound unique, this again is our creative contribution, which not only shows in the recordings but of course also in the mixing and mastering; well, less creative in the mastering. (so-A2)

Although technical skills are necessary, just having them is not what is important to him. Rather, the creativity involved and the unique sound are what matters. For so-C, technical skills are nothing he thinks about anymore after forty years in the business. He declares "Of course you have to know which button to push or not. And most importantly you have to know what you want and what you're going for". As part of his role, he feels the need to take care of all techni-

cal issues so that the artist can concentrate on the music. His primary aim is to ensure the musicians' performance and thus all technical matters should be kept away from the artists.

This whole story is a technical thing, which in my view has nothing to do with musicians. This is the job that Mr Producer should take over. The musicians should concentrate on their music. And having fun not thinking about, 'Uh, how can I optimize my guitar for getting it into this tin can the best'. It is simply a story that others should realise. (so-C)

He further explains the problem of home recording was that emotionality got lost if musicians were spending months on technical issues.

For me, music is always emotional, this is a very important thing. The whole emotion is out. Disappearing all at once. It is only reduced to technique. And this is not so funny anymore. Then the music ends. You may have a product by then. But this product whatsoever is not the product that corresponds to musical quality. [- -] The music must be captured. And, that is why the musician should concentrate on his music and leave the rest to other people. (so-C)

This quote highlights that so-C differentiates between musical and technical qualities. For him, a well-produced record is of little value if the composition and the artist's performance lack quality.

Studio facilities and technical equipment

Although music producers may have studios of their own, the main attribute of studio operators per definition is having studio facilities and equipment. What is more, the rooms are what distinguish them from home recording too. Thus, the respondents' views on their resources are revealing. None of the interviewees considers sleeping places important. so-B explains that such a demand dwindled because bands usually were glad to get away from the studio after a long day of recording. He is proud of his location that comprises around 180 square meters.

In Duisburg, the rent was at an affordable price. Furthermore, he is convinced that his unique selling proposition is his large recording room that has 110 square metres with ceilings six metres high. He further explains that lately many bands have been showing interest in live recordings again and that he is getting quite a few customers wanting to record in this exact room. Hence, he is working on improving the acoustics to expand his selling point further. so-A initially planned to record in rented spaces and to mix in their own rooms. This strategy did not pay off yet and so they could not help but add a recording room to their studio. On the importance of rooms, so-A1 declares:

Until now, the studio has definitely been a necessity for most things we have ever done. Somehow working as a producer and being booked by bands additionally to the studio, for this we are still working in too low a region as far as the budget is concerned. The bands we've worked with so far just do not have the means to book a studio and pay for someone else managing the creative part. [- -] The bands able to afford it are very unlikely to book us without us being able to show some big productions. In order to get into those circles, you somehow have to start a bit lower. For this, the studio is of course crucial, because without one it wouldn't make sense, would it? (so-A1)

They see the need for having studio rooms when working as music producers and unless being able to show renowned productions, the finances would not allow working in external spaces. Therefore, having a studio does not seem to be the long-term objective of a beginning producer but rather a requirement demanding investments in facilities and equipment. This has been different for so-C who forty years ago worked without a studio of his own. Good acoustics have become of such importance to him that he now refuses to work somewhere else.

Mixing, for example, is done only in my shack. There I've got my acoustics, which also bear the brand [name]. This is to say, I am the acoustician. And this studio has always been quite some legend for acoustics. Yes, this is because you can absolutely rely on it. What you hear or what is said sounds all the same afterwards, also, somewhere else. Whether in the car or wherever. (so-C)

Besides the personal preference to mix in familiar surroundings, so-C highlights that the rooms' acoustics are valuable for successful marketing.

Complying with the different self-concepts, all respondents have distinct opinions on technical equipment. For so-A, the equipment is of very low importance. They do not need the perfect equipment because their intention is to be creative exactly through working with limited means. Similarly, so-B stresses that it nowadays was possible to record high quality with equipment worth about 1000 euros. He sees the value of a professional production in the fact that "everything is properly recorded. The room sounds good. Someone has watched out that everything fits together. And that this someone has listened with a neutral ear". For him, the equipment is far less important than the producer's experience and a room with great acoustics are. However, he still admits to invest a lot of time and money to keep his technology up-to-date and ready for renting. For so-C, high-quality equipment distinguishes a professional from an amateur production. He is sceptical that a laptop and a few inexpensive microphones are sufficient to achieve good quality, especially when it comes to vocal and drum recordings. What is more, he disprizes most digital technology for various reasons. Analogous workflow is what he prefers. This required thinking in advance about what to record and making decisions due to the limited number of tracks.

Nowadays people are told, 'Well, sing 20 vocal tracks for a start. Then, I will see what I can do with it'. This is not great. Let's put it this way. After the twentieth track at the latest, the poor singer sits there and only pays attention to the sound and to do the technique right. (so-C)

Furthermore, he criticises the standardised sound of plugins and presets. Relatedly, he disdains the copy and paste mentality and quantisation destroying the feeling of the music. This position yet did not prevent him from extensively explaining how he embraced the new possibilities of MIDI technology that allows changes in all phases of production.

Customer acquisition

All respondents acquire most of their customers by recommendation, partly by their professional network, and partly by their reputation. so-B explains:

I would say, among our common orders, we get 80% over networks, connections, word-to-mouth recommendation. And that is why you always move in such an atmosphere of people. The bigger the atmosphere is, the more orders you get, this is as simple as that. Over the homepage, such cold inquiries come like 'Hey, we're a band and we want to make an album'. This happens but twice a year maybe or so. (so-B)

In all interviews, there is a distinction between producing musical artists and other audio work. For instance, so-B believes that having spent money on a professional website has been a good investment.

We actually have quite a lot of official inquiries. For example, Stadtwerke [municipal utilities] need a new audio-logo, and they want a website with legal information. They don't go to Facebook or something like that. This actually is very often the case. (so-B)

Likewise, so-A₁ highlights the studio website being important to present a professional image. Both so-A and so-B agree that a reliable impression is necessary to attract city officials, commercial and other agencies, or companies as potential customers. Yet, they also agree that bands do not choose the studio because of their website. At least for the aspiring studios, communication on social media is more effective and bands generally prefer this means of contact. The market situation for so-A sometimes is so precarious that they contact bands on social media to offer them their services. Overall, in case of music productions, both studios A and B mainly work with amateur bands that pay for themselves or are crowd-funded. so-B is content with the artistic quality of his clients whereas so-A wish to develop a clientele that is more professional. Working with professional bands would be paid better and besides, they would not have to do the recordings after work hours of the band members so often.

so-C's situation is different. Due to his good reputation, he is in the fortunate position to choose the customers he wants to work with. He does not regard his website as effective to acquire customers but still maintains it to be visible online. In contrast to the aspiring studios, he would like to have more queries from less famous bands, which he rarely receives because he is "quite a big name and the people just are afraid to ask". He explains to have worked for major labels regularly in the past but would not do this anymore because he opposes to represent the interests of a label. Rather he prefers to support the artists. Due to this good market situation, he did not have to try very hard to sell his services. He invites potential customers to the studio, checks if they get along well, and usually sends them home again to think about the offer thoroughly.

Discussion

The study set out to explore the role, services, resources and practices of music studio operators. It concentrated on "studio operators" to elude the blurring of roles in music production nowadays and to put a greater focus on economic, material and administrative aspects. Data throughout the study indicate that there are slightly different understandings of economic studio operators and artistic record producers. However, the roles are not distinct and many professionals perceive themselves as music creatives with additional services. The analysis of the websites demonstrates the main services being recording, mixing and mastering followed by other artistic work such as composition and music coaching. Even though less frequent, the product range includes publishing and dissemination, renting of studio facilities and its equipment, technical audio services, advertising and music events. Some of these services cannot be offered by every music producer because they require studio facilities and equipment. Yet, it can be expected that many studio owners and operators primarily see themselves as music producers. This proved to be true at least for the participants of the sample.

In the interviews, all respondents label themselves as "producers". so-A even reject the term "studio operator", and they would prefer to work without the burden of managing a studio if the finances allowed to do so. However, they realise having a studio is necessary to attract customers and to establish their

names. The experienced so-C built a studio for acoustic reasons, complying with Mellor's (1998: 38) primary criterion of a studio to have "a pleasant acoustic environment to perform and record in an accurate control room for judging the mix". Unlike so-A, so-C is not financially dependent on his own space because he has achieved a reputation that alone attracts enough customers. What is more, he does not recommend professionals in the early stages of their careers to start a music studio because it was not profitable anymore, which complies with Leyshon's (2009: 1314–1317) empirical findings on the recording industries. This advice clearly contradicts the experience of the aspiring producers who depend on their studios to be able to work at all. so-B differs from the other respondents. He operates his studio under strict economic principles and administrates the rooms like commercial estates. Letting the rooms and equipment were highly lucrative and he sees the large rooms as the main capital distinguishing his enterprise from amateur or semi-professional project studios (Gibson 2005: 196; Leyshon 2009: 1318). It is likely that his background in business administration is the decisive factor for this greater focus on material resources, yet this assumption demands further empirical confirmation. Furthermore, so-B is the only respondent who values his online presentation and so he hosts several homepages for his diverse services including rental.

The results of the websites and interviews suggest that having studio rooms, instruments and recording equipment above average in terms of quantity and quality is an important sales argument of many aspiring professional music producers. Both parts of the study largely support Théberge's (2012: 79) argument of the recording studio being a "cottage industry". The data indicate that most studios are independent from record labels and that they are owned by individuals or small groups. These collaborate to offer a broad range of services to attract both music and non-music related customers (Gibson 2005: 193; Théberge 2012: 86). Established producers are not dependent on a studio of their own but may prefer to have one for various reasons. Martin (2014: 2014) declares that in order "to cope with a 75-80% reduction in their income, producers have removed the significant expense of hiring professional studios and have instead constructed domestic workstations that, aside from the initial investment, require minimal enduring cost". This motivation is apparent in the case of so-A who have installed their studio in the attic of the house one of the two is living in. Martin (2014: 220–231) further observes that many professional producers prefer work-

ing at a domestic space, even under worse technical and acoustic conditions, for the sake of “familiarity, economic factors or a desire for convenience”. This motivation matches so-C who has integrated his studio into the house he lives in with his wife. In Martin’s (2014: 231) study, five of the eight producers have a personal studio as their main working environment, leading him to conclude that the “relationship between individual music producers and specific spaces is seemingly becoming more fixed as a part of their necessary reaction to budget cuts and avoidance of professional studios”. Thus, the trend of recording producers to become studio owners eventually may be a consequence of the recording industries’ ever-dwindling budgets since in the 1970s (Leyshon 2009: 1321–1327). However, pure record producers might still be different from studio operators as indicated by entrepreneurs like so-B and the range of services offered on the studios’ websites.

All respondents of this interview study have a background as a musician and are freelance producers (Mellor 1998: 3–9). In Burgess (2013) classification, they share traits of “consultative” and “collaborative” producers. Taking on the role of a mentor, counsellor, coach and professional advisor, they give artistic, conceptual and visionary input on the productions and songs. so-A could be classified as “facultative” too, since their philosophy is to support the customer in every possible way, complying with Martin’s (2014: 121–126) observation of many producers trying to ensure the artists’ well-being. More than the other three, so-C fulfils the role of the artistic “auteur” in tradition of renowned producers. What is more, he belongs to the group of independent producers having started studios of their own in the 1970s with a business model “based more on the producer’s royalty income than on the efficient management of the studio assets themselves” (Leyshon 2009: 1322). It is likely that this role requires a certain amount of experience and reputation, and thus it may be performed by aspiring producers only with difficulty. Martin (2014: 75–76) criticises Burgess typology for not being useful to identify commonality within the role. The findings however demonstrate that the participants belong to several of the types to different degrees, which makes the model helpful for differentiation. Yet, the types overlap and underrepresent (Howlett 2009: 13), and hence they are not sufficient for detailed characterisations of the multifaceted roles common today.

The studio operators all carry out the role of a neutral advisor, who is important to ensure the quality of a production. Observing the band's performance from an objective outside perspective, a producer can give impartial counselling, select the best take and advise on changing the compositions or performance styles (Freeman-Attwood 2009: 57). The high level of experience involved in this role helps to mediate between the artist and its audience (Frith 1981; Hennion 1989; Negus 1996: 60–64). Such a role complies with one of the main functions described by Martin (2014: 121-126) as the social actor being both a mediator and decision-maker. This is especially apparent in the case of so-C who makes technical and musical decisions to ensure the artists' creative flow. In general, all respondents confirm the common notion of the producer being primarily a social rather than a musical or technical actor (Zak 2001, 2009; Burgess 2003; Howlett 2009; Pras & Guastavino 2011; Martin 2014). Yet with more experience and reputation, the ratio seems to shift to the musical agency. Further research is required to confirm this observation.

Both the websites and the interviews demonstrate that for modern studio operators it is a matter of course to perform technical duties. As Martin (2014: 185-194) notes, many aspiring producers must engineer for financial reasons. This argument is explicit in the statements of so-A and so-B, but so-C takes engineering services for granted too. However, there is little agreement on the importance of studio equipment. The websites present lists and photos of material resources as selling points, and so-C regards his expensive, mostly analogue equipment as decisive for a better professional quality than it is the case with amateur productions (Leyshon 2009: 1322–1327). Additionally, professional (analogue) equipment is a means of achieving a unique sound different from common plugins and presets, complying with Martin's (2014: 250-262) findings among renowned producers. so-B also declares to invest into his gear. Such a practice contrasts the belief of many producers in Martin's (2014: 263) study that "competing for work on the grounds of expensive technology is not a viable business model". Yet, it must be considered that Martin's participants are established producers probably having access to equipment above average without the absolute need to upgrade. so-A correspond to Martin's (2014: 232) finding that "producers feel that technology is and always should be secondary to the creative ideas of the studio, producers do not feel that they need particularly expensive equipment in order to do their job and that producers favour simple studio setups in order

to be functional". Despite individual differences, all interviewees perceive technology to be subservient to creative ideas (Martin 2014: 233–249).

All respondents share a common motivation, the passion for music and working with artists. Consistent with Martin's (2014: 176–177) and Leyshon's (2009: 1316) findings, they all work with minimal budgets and invest more hours than being paid for. Their primary aim is to create a high-quality product that would satisfy the artists and help them on the competitive market. Since economic and administrative duties are generally not popular except for so-B, the studio operators may preliminary be characterised as music creatives with a focus on music productions whilst also open towards other creative services as required in the music businesses of today. More case studies are required for confirmation.

Methodical reflections

The study was inspired by the Interpretative Phenomenological Analysis (IPA), a method currently less common in music research. Whilst there may have been other qualitative approaches equally suitable, this method has been chosen to increase coherence with Martin's (2014) work on the role of music producers. IPA has also been used successfully in other areas of music research, for instance in performance studies (Sansom 2007) and music therapy (Pothoulaki, MacDonald & Flowers 2012), to focus on the social aspects of creative practice. Complying with Martin's argument, 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. (Martin 2014: 66)

IPA other than more abstract qualitative approaches remains closely connected to its primary sources, giving the respondents the opportunity to describe

their experiences in their own words. It combines emphatic hermeneutics with a questioning hermeneutics, which "is likely to lead to a richer analysis and to do greater justice to the totality of the person" (Smith & Osborn 2015: 26). So far, little is known about the work realities of music producers. Thus, rather than aiming at developing a theory, the study intended to extend the literature with data of another related area – that of music studio operators. With this goal in mind, IPA's strong point arguably

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)

This approach has been constructive in the phase of data analysis. Future qualitative studies in music research may adapt phenomenological methodologies, possibly instigating a respective methodological discourse.

Sampling in qualitative research involves the challenge of findings volunteers within the target group, which especially in this case were the highly specialised professions of music studio operators and record producers. Increasing the variance between the participants has been successfully achieved by sampling respondents with different levels of professional experience. This decision proved to be sensible since the effect was apparent in every category: Services, self-concepts, philosophy on resources and financial aspects. Unfortunately, the strong gender bias common in studies on the record industries could not be resolved in this study as well. The significant minority of female music studio operators in Germany's Ruhr Area seems to be a demographic feature, complying with the low representation of women in music production in the UK (Martin 2014: 274). Although the experience as the dominant differentiating factor has been effective for exploring different working realities of music studio operators, subsequent research should take gender into account in their sampling to give female record producers a voice.

Conclusion

Technological advancement and affordable studio equipment have led to major changes in the record industries. Roles in the studio are merging and thus the range of tasks and required skills are expanding. This study set out to complement Howlett's (2009) and Martin's (2014) work on the role, self-concepts, practices and work realities of contemporary record producers by focusing on more ordinary producers in places far away from the creative metropolises. What is more, it put a higher priority on the studio as a place where creative practices are subject to change. Thus, it concentrated on the "studio operator", potentially a contemporary form of music producers, to pay greater attention to economic aspects. The results show considerable overlapping in the roles and highlight the starting producer's need to tap new resources of income. The findings point to alternative interpretations of the producer's role towards a creative entrepreneur who sees the primary capital in studio facilities whereas producing or engineering is only an additional source of income. Clearly, aspiring professionals must assert themselves on a competitive market. Thus, services not music-related seem to be a matter of course for many of today's studio owners and music producers. Further studies are warranted discussing a larger number of studio operators with their individual experiences, ultimately providing a solid basis for systematic analyses of aspects as for instance personality, self-concept, reputation, place and musical genre.

References

Interviews

- so-A (2016) Mühlheim an der Ruhr 8.9.2016. 48 min, 13 sec. Interviewer Jan Holthaus. Mp3-file in the possession of the authors.
- so-B (2016) Köln 4.9.2016. 59 min, 4 sec. Interviewer Jan Holthaus. Mp3-file in the possession of the authors.
- so-C (2016) Hagen 7.9.2016. 56 min, 29 sec. Interviewer Jan Holthaus. Mp3-file in the possession of the authors.

Literature

- Auvinen, Tuomas (2016) "A New Breed of Home Studio Producer". *Etnomusikologian vuosikirja* 28, 1–33.
- Bates, Eliot (2012) "What Studios Do". *Journal on The Art of Record Production* 7.
- Blake, Andrew (2009) "Recording practices and the role of the producer". In: Cook, Nicholas; Clarke, Eric & Leech-Wilkinson, Daniel (eds) *The Cambridge Companion to Recorded Music*. Cambridge: Cambridge University Press, 36–53.
- Born, Georgina & Devine, Kyle (2015) "Music Technology, Gender, and Class: Digitization, Educational and Social Change in Britain". *Twentieth-Century Music* 12:2, 135–172.
- Burgess, Richard James (2008) "Producer Compensation: Challenges and Options in the New Music Business". *Journal on the Art of Record Production* 3.
- Burgess, Richard James (2013) *The art of music production. The theory and practice*. 4. ed. Oxford: Oxford University Press.
- Campelo, Isabel & Howlett, Mike (2013) "The 'virtual' Producer in the Recording Studio: Media Networks in Long Distance Peripheral Performances". *Journal on the Art of Record Production* 8.
- Chanan, Michael (1995) *Repeated takes. A short history of recording and its effects on music*. London: Verso.
- Creswell, John W. (2003) *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. 2. ed. Thousand Oaks: Sage.

- Cunningham, Mark (1996) *Good vibrations. A history of record production*. Chessington: Castle Communications.
- Freeman-Attwood, Jonathan (2009) "Still small voices". In: Cook, Nicholas; Clarke, Eric & Leech-Wilkinson, Daniel (eds) *The Cambridge companion to recorded music*. Cambridge: Cambridge University Press, 54–58.
- Frith, Simon (1981) *Sound effects. Youth, leisure, and the politics of rock 'n' roll*. New York: Pantheon Books.
- Gibson, Chris (2005) "Recording Studios: Relational Spaces of Creativity in the City". *Built Environment* 31:3, 258–273.
- Hallam, Susan; Varvarigou, Maria; Creech, Andrea; Papageorgi, Ioulia; Gomes, Teresa; Lanipekun, Jennifer & Rinta, Tiija (2017) "Are there gender differences in instrumental music practice?". *Psychology of Music* 45:1, 116–130.
- Hennion, Antoine (1989) "An Intermediary Between Production and Consumption: The Producer of Popular Music". *Science, Technology, & Human Values* 14:4, 400–424.
- Hepworth-Sawyer, Russ (2009) "Pre-Production". In: Hepworth-Sawyer, Russ (ed.) *From Demo to Delivery. The Process of Production*. Oxford: Focal Press, 21–40.
- Howlett, Mike (2009) *The Record Producer as Nexus: Creative Inspiration, Technology and the Recording Industry*. PhD thesis, University of Glamorgan.
- Jones, Steve (1992) *Rock Formation. Music, Technology, and Mass Communication*. Thousand Oaks: Sage.
- Kealey, Edward R. (1979) "From Craft to Art. The Case of Sound Mixers and Popular Music". *Work and Occupations* 6:1, 3–29.
- Kealey, Edward R. (1982) "Conventions and the Production of the Popular Music Aesthetic". *Journal of Popular Culture* 16:2, 100–115.
- Leyshon, Andrew (2009) "The Software Slump?: digital music, the democratisation of technology, and the decline of the recording studio sector within the musical economy". *Environment and Planning A* 49, 1309–1331.
- Martin, Adam (2014) *The Role and Working Practice of Music Producers: An Interpretative Phenomenological Analysis*. PhD thesis, University of Hull.
- McIntyre, Phillip (2008) "The Systems Model of Creativity: Analyzing the Distribution of Power in the Studio". *Journal on the Art of Record Production* 3.
- Mellor, David (1998) *How to become a Record Producer*. Kent: PC Publishing.
- Moorefield, Virgil (2010) *The producer as composer. Shaping the sounds of popular music*. London: MIT Press.

- Negus, Keith (1992) *Producing Pop. Culture and Conflict in the Popular Music Industry*. London: Routledge.
- Negus, Keith (1996) *Popular Music in Theory. An Introduction*. Cambridge: Polity Press.
- Pras, Amadine & Guastavino, Catherine (2011) "The role of music producers and sound engineers in the current recording context, as perceived by young professionals". *Musicae Scientiae* 15:1, 73–95.
- Sansom, Matthew (2007) "Improvisation and Identity: A Qualitative Study". <http://www.criticalimprov.com/article/view/48/427> (accessed 1 July 2017)
- Smith, Jonathan (1996) "Beyond the Divide Between Cognition and Discourse: Using Interpretative Phenomenological Analysis in Health Psychology". *Psychology of Health* 11:2, 261–71.
- Smith, Jonathan, Flowers, Paul & Larkin, Michael (2009) *Interpretative Phenomenological Analysis*. Thousand Oaks: Sage.
- Smith, Jonathan & Osborn, Mike (2015) "Interpretative Phenomenological Analysis". In: Smith, Jonathan (ed.) *Qualitative Psychology*. 3. ed. Thousand Oaks: Sage, 25–52.
- Sterne, Jonathan (2014) "There Is No Music Industry". *Media Industries Journal* 1:1, 50–55.
- Théberge, Paul (1997) *Any sound you can imagine. Making music/consuming technology*. Hanover: Wesleyan University Press.
- Théberge, Paul (2004) "The Network Studio: Historical and Technological Paths to a New Ideal in Music Making". *Social Studies of Science* 34:5, 759–781.
- Théberge, Paul (2012) "The End of the World as We Know It: The Changing Role of the Studio in the Age of the Internet". In: Frith, Simon & Zagorski-Thomas, Simon (eds) *The art of record production. An introductory reader for a new academic field*. Farnham: Ashgate, 77–90.
- Warner, Timothy (2003) *Pop music – technology and creativity. Trevor Horn and the digital revolution*. Aldershot: Ashgate.
- Wexler, Jerry & Ritz, David (1993) *Rhythm and the Blues: A Life in American Music*. New York: Alfred A. Knopf.
- Williamson, John & Cloonan, Martin (2007) "Rethinking the music industry". *Popular Music* 26:2, 305–322.
- Zak, Albin (2001) *The poetics of rock. Cutting tracks, making records*. Berkeley: University of California Press.
- Zak, Albin (2009) "Getting sounds: The art of sound engineering". In: Cook, Nicholas; Clarke, Eric & Leech-Wilkinson, Daniel (eds) *The Cambridge companion to recorded music*. Cambridge: Cambridge University Press, 63–76.