

Making Tracks as a Recursive Problem-Solving Process. Towards an Ethnography of Recording Studio Practices in Popular Music Cultures

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The cultural and social valence of sound, as well as the modes of production of the physical artefacts used to preserve it, is the crucial dimension against which an ethnographic approach to the recording studio should probably measure its method and scope. This article presents a broad overview of the scholars and approaches that have focused on the recording studio, coming from the fields of ethnomusicology (with a focus on popular music genres and communities) and popular music studies. What emerges from this picture is the need to include this part of the popular music production chain (and perhaps not only that of popular music) as a fundamental step in the production of meaning attached to records. Such an outcome is the result of both the multiple collaborations that exist within the network of professionals and the particular conditions that the studio provides in terms of isolation from the outside world.

In discussing these topics I do not endorse a consideration of technological conditions and innovations as the main driver of historical change in the practices related to the studio; instead I have tried to put personal, relational, cultural and social dynamics at the forefront of an ethnographic approach to these working environments, and to consider technological change as a separate line of development and, quite possibly in some respects, as a by-product of this wider scenario. At the core of my conception of such a methodological attitude lies Timothy Taylor's understanding of technology as a:

special kind of structure. It is both a schema or a set of schemas, and a resource or set of resources. It is no accident that some have interpreted "technology" to refer both to tools and machines, as well as techniques and kinds of knowledge. [...] Technology is a peculiar kind of structure that is made up of both schemas and resources, in which the schemas are largely unspoken by technology's users, thereby allowing for some degree of determinism, while technology as a resource refers to what we do with it – that is, what is voluntaristic (Taylor 2001: 37).

Drawing on Sherry Ortner's interpretation of the 'practice theory' (1996), Taylor is able to devise a pragmatically-oriented theoretical approach aimed at investigating the many assumptions routinely made when studying topics that are so close to our everyday experience as to be taken for granted.

I would like to discuss the production of recorded sound in terms of problem-solving processes, related first and foremost to the production of material objects. In terms of production, then, the kind of work done in the studio can be best described as the creation of prototypes through *exploratory processes* that: «generate and externalize *preinventive structures*'

already present in the originating idea» (Sawyer 2011:136).¹ These exploratory processes may be inspired by the specific characteristics of the track recorded during a particular recording session, or – alternatively – they may follow already established paths related to broader cultural categories such as genres or the aesthetic attitudes distinctive of labels, studios, individual performers or producers. The individual track, that is to say the result of the concerted actions of the creative efforts that take place in the studio, would ideally work within the existing cultural coordinates and, at the same time, would contribute to the field with a degree of innovation that is (potentially) relevant in social terms and (hopefully) profitable from the economic point of view. As in the case of the genres discussed by Georgina Born when commenting on Brackett's work (2005) on black American popular musics, the mix of already established conventions and newly contextualised elements is a key factor:

genre works by projecting temporally, into the unruly, ongoing cauldron of alternative socio-cultural formations, potential moves and reconfigurations of those formations coded materially as aesthetic moves and transformations that are proffered as analogous to the social. When the teleology works, then music may effect a redirection or a new affective coalition of the identity formations that it set itself to mediate (Born 2011: 383).

Mass produced objects, especially in popular culture, strive for such a balance between what mediates social reality and what is perceived to be effective on an aesthetic and expressive plane for a specific – imagined and alleged – audience.

The focus on the track is a relevant starting point for the investigation of the nature of social meaning embedded in phonographic artefacts, as suggested by Jeremy Wallach, because their 'fundamental nature is rooted in sonic (that is, audiotactile) experience'; such a shift, he continues, can specifically help in: «assessing the limitations, pleasures, and possibilities of mass produced and widely circulating cultural forms such as recordings» (Wallach 2003: 54). Recorded music entails a particular mode of musical experience that should be considered on its own terms as the meeting point for operations of culturally bounded encoding and decoding of discourses already extantualized in the mass produced material object.² The conception of the ethnography of the studio as revolving around the realisation of a recorded artefact thus allow the researcher to focus on the 'native ontologies' of cultural practices, as well as to privilege the realities of activities over theoretical speculation:

thinking through things can only be understood as a methodological project as opposed to a theory in its own right, because those separate activities may well generate disparate ontologies. [...] It follows that the promise of thinking through things cannot be to offer another consummate theory, but rather a method for generating a plurality of concepts or theories (Henare-Holbraad-Wastell 2007: 23).

At the same time, the focus on what happens within the recording studio can help in the re-conception of these processes as 'transformational' rather than 'preservational', as their nature is the opposite of 'passive acts that exert no influence on what they preserve'; on the contrary, Katz continues, recording has affected: «nearly every aspect of musical composition» (2010, 213-4), including the use of sound itself as compositional material. At the same time, the realisation of a complex technological object requires the interaction between different skills and professionals, making the elaboration of a record a socio-cultural process that can be aptly investigated with approaches informed by ethnography.

Putting the object at the centre of a theoretical framework in order to investigate the making of recorded artefacts also means acknowledging their 'secondary' agency, defined as the 'objectification in artefact-form' that shows 'how social agency manifests and realizes itself, via the proliferation of fragments of 'primary' intentional agents in their 'secondary artefactual form' (Gell 1998: 21). The reconstruction of the network that goes to constitute the 'primary'

1 Sawyer employs here the terminology proposed by Finke-Ward-Smith (1992).

2 Here Wallach refers back to the terminology proposed by Bauman and Briggs, who define 'extantualization' as: «the process of rendering discourses extractable, of making a stretch of linguistic production into a unit – a *text* – that can be lifted out of its interactional settings. A text, then, from this vantage point, is discourse rendered decontextualizable» (Bauman and Briggs 1990: 73).

level of agency to which Gell refers is the specific task of an ethnography of the recording studio as the site where the transformation of ideas and concepts into material objects takes place. In the gap between primary and secondary agency lie the ambiguity of the text, its status as a medium subjected to processes of abductions (to use Eco's terminology, quoted by Gell himself) in the semiosis of artistic objects, and the possibility of providing more factual grounds for our interpretations.³ At the same time, the value of Gell's theories for musical mediation can be important because of their potential to: «reveal music as a medium that destabilizes some of our most cherished dualisms concerning the separation not only of subject and object, but present from past, individual and collective, the authentic from the artificial, and production from reception» (Born 2005: 8). In this vein, such alleged oppositions emerge as culturally constructed rather than grounded in the material ontology of things, and the series of such clear-cut divides appears more blurred than at first sight. Placing the artefact at the centre, moreover, implies a slightly new configuration of the different mindsets Thomas Turino proposes for the definition of the kind of social relationships each recorded artefact proposes to its listeners (2008: 23-92); rather than sets of *continua* with irreconcilable extremes, they call for a consideration related to how these different ontologies might coalesce and merge.⁴ High-fidelity recordings can, in fact, point to the reproduction of a participatory performance – as when a highly improvisational record retains the imperfections and the casual noises of the musicians in the studio as part of the liveness effect – or they can suggest a presentational performance – as when a classical orchestra is recorded playing in a dry, neutral acoustic space. Studio audio art can, conversely, obtain very different results in terms of either presenting sounds that might seem impossible (or really unlikely) to perform – the case of many of the electronic effects and transformations we hear in the rhythmic manipulation in genres such as EDM and trap –, or work towards the evocation of a performative stance in even the most posthuman acts – as in some contemporary examples related to the use of voice and vocal manipulation via Autotune, Melodyne and other studio tools (Gibson 2010; Danielsen-Brøvig-Hansen 2016: 117-132).

My point here is that if we think about recorded artefacts along these sets of *continua* (participatory/presentational and high-fidelity/studio-art), they can perhaps be better represented as points on a Cartesian plane. I find such an approach to recorded artefacts quite restrictive and prefer to follow the assumption that any phonographic effect, including liveness and authenticity, is instead predicated on the more or less pronounced inner contradictory status of recordings as both the reproduction of an event and its representation. At the same time, their reception is built on the sense of participation they engender, as well as on the awareness of their artificiality: it is what Gracyk defines as the «ontological priority» (1996: 39) that performance retains with respect to recording that produces such a fundamental contradiction and the Eisenberg 'paradoxes' of phonography as a form of art (2005: 130).⁵ The problem-solving process of realising a record focuses on this contradictory nature of the object in order to find a suitable space for musicians to express their subjectivities and for the audience to find its proper space within the performance staged by the phonographic artefact.

³ For a definition of abduction in Eco's writings, see *Semiotics and the Philosophy of Language* (1986: 39-43).

⁴ Similar distinctions persist in music scholarship across repertoires and boundaries, as can be seen in a recent essay by Allan Moore on recorded British folk songs, in which he describes the opposition between 'documentary realism' and 'studio-conceived aesthetic' in terms not so dissimilar from those put forward by Turino (Moore 2015).

⁵ As a perhaps extreme example, this is the case discussed by Auslander when speaking about David Bowie's performative *personae* (2008: 102). Other examples of the same set of contrasting issues between the need to be faithful to a live aesthetics using studio production have been discussed by Christopher Scales (2012) and Louise Meintjes (2003) with regard to contemporary *powwow* and Zulu music, respectively.

A Peek at the Process: Ethnomusicological and Popular Music Studies Approaches to the Recording Studio

The recording studio has been a research topic addressed on a number of occasions by both ethnomusicologists interested in popular music cultures and by scholars interested in popular music in general. In the next paragraphs I shall sketch an overall frame for these studies, so as to gain a wide perspective on their focuses and methodological approaches. One of the problems the more ethnographically-oriented scholars point to when talking about the cultures of popular music is the fluidity of the 'field' and the related change in the concept of 'fieldwork', an area that can no longer be circumscribed within fixed boundaries. In his book about the American-Japanese noise scene, David Novak speaks about an ethnography 'in the circuit' as opposed to 'on the ground'; at the same time, he reclaims the benefits of this choice because it has the potential to investigate: «this marginal experimental form as a frame for the broadest scales of cultural globalization» (Novak 2013: 27). A similar point is made by Thomas Burkhalter when working on his 'multi-sited ethnography' (Marcus 1995) of the popular music grassroots scenes in Beirut:

music making in an increased digitalized and globalized world is influenced more than ever by both virtual transnational trends and phenomena and by local musical and nonmusical spheres of influence. Contemporary music analysis has thus to link analysis of music (and music performance) with cultural and social studies and collect data in transnational contexts (Burkhalter 2013: 30).

Neither of these studies, however, presents any specific problematisation with regard to the studio as a site for ethnographic research, perhaps because they focus on marginal and underground genres and small relational networks.⁶

One of the earliest attempts to address popular music with an ethnographic approach, Harris M. Berger's *Metal, Rock and Jazz: Perception and the Phenomenology of Musical Experience*, provides nothing more than a quick mention of the recording studio in the reconstruction of the musical scenes of Cleveland and Akron, even though the book extensively analyses some of the records made by these local bands (Berger 1999). In a similar way, the classic text by Sara Cohen on rock culture in Liverpool also fails to show any particular concern for the studio by positing a fundamental opposition between studio practices and live recording practices as different forms of music making. She then associates the former with commercialism and commodification because she thinks that her research suggests that this is the attitude widely shared by grassroots bands and performers with regard to making (and selling) records (Cohen 1991: 179-186).

In the 'Introduction' to their edited collection *Wired for Sound. Engineering and Technology in Sonic Cultures* – probably the first attempt to gather together a substantial number of reflections on recording practices as a site for ethnographic inquiry – Porcello and Greene wrote:

Ethnomusicologists and ethnographers who study world musical cultures have until recently tended to ignore electricity-based technologies in their studies of music making, community building, and performativity. We have tended, for example, analytically to favor technologies (such as instruments) made of organic components over those that originate with a Western electronic hardware manufacturer, even when such technologies are used with immense creativity (2005: 4).

I have already pointed out that even in a foundational text such as Turino's *Music As Social Life* (2008) the separation between live and recorded musical fields does not fit entirely well into the context of the mass-mediated practices of popular music. My argument is that, even when popular music performance and practice do not: «involve formal presentations, the star system, or recording and concert ticket sales» and «are more about *the doing* and social

6 Also in a key methodological attempt such as the edited collection *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology* (Barz and Cooley 2008), such a gap between the attention to an expansion of the concept of fieldwork and the lack of reference to the studio as a specific point in the cultural geography of musical practices remains striking.

interaction than about creating an artistic product or commodity» (*ivi*: 25), as in the cases of grassroots and local scenes, the framework in which they find themselves – i.e. the current techno- and global-scape – constantly contributes to increasing their in-betweenness in the realms of live and mediated music. The production of records, the system of celebrity and stardom, and the social occasions for music making are actually embedded in the mindset brought and spread by recording technology. Today more than ever, given the current ubiquitous use of mobile devices for audio and video recording, addressing any practice related to music making requires us to acknowledge a feedback loop between what is performed live and what is (or can be) mediated, and such a historical condition can be seen as the latest step in a far-reaching process that began with the invention and social diffusion of the phonograph.

The above paragraph does not intend to suggest that the relevance of recording is uniformly ignored; rather, that these approaches are more recent among ethnomusicologists. In his book on Indonesian popular music, Jeremy Wallach documents the workflow in three different studios, each of which is chosen because it represents a specific cultural constellation where three main factors interact: ‘metacultural understandings of genre as they are applied to music production, the use of sound technology as a tool for cultural innovation involving the hybridization of existing genres, and the social dynamics among the participants’ (Wallach 2008: 92). What he argues is that the balance between these aspects differs radically from what can ordinarily be found in the West, which also enables him to rule out any deterministic approach to the relationship between technology and cultural production. Just as using the same equipment does not necessarily result in standardisation and homogeneity, so working towards the realisation of the same objects – namely, records – does not imply overlooking the aesthetic qualities that make art a valuable form of commodity in everyday life and a symbol for overall hierarchies of power, operating first and foremost within the specific context in which it is produced. As argued by Louise Mentjies:

drawing correspondences between the production of music, local imaginaries, forms of knowledge, and scholarship brings into mutual relief the poetic, performative, indeterminate, emergent, and invested qualities of them all. I am arguing for the centrality of aesthetic expression to the production of knowledge and power, and of forms of power to the production of expressive culture (Meintjes 2003: 16).

Besides the application of such ethnographic observational methods for fieldwork research in the recording studio, some scholars have gained insight into studio culture by direct involvement as part of the field. Ray Hitchins, working as a guitarist in Jamaican recording studios, provides a rich account of the special terminology, musical nuances, and production tricks that characterise that specific music scene. In particular, he recounts how long it took for him – musically trained in the UK – to adapt to the particular workflow and conventions operating there, which are largely dependent on the decisions of the sound engineer as the dominant figure (2013).⁷ Eliot Bates, recasting his experience as a studio technician in Istanbul, stresses a similar point when he underlines how the socio-technical environment of the studio allows the emergence of particular:

techniques that arose from repeat encounters between users and tools, and an outside observer witnessing recording encounters might conclude that the tool was more in control of the user than the other way around. Only a small fraction of the available DAW features are ever used, and many of the features that are used are routinely “misused” or used in ways outside the scripts intended by the tool’s initial designer (Bates 2016: 151).

We will return to this definition of ‘techniques’ later, when we try to summarise one of the likely topics for future research in the field by attempting to reconstruct a ‘common practice’ (or a total lack of it) in relation to the many practices to be found in the recording studio.

Scholars more closely attuned to popular music studies have repeatedly addressed the

⁷ The chapters by Thomas Turino and Alessandro Cosentino in this book describe instances of the similar manipulative, dominant role of the sound engineers in the recording studios they encountered during their fieldwork, in Zimbabwe and Botswana respectively.

recording studio as a relevant place for researching the topics in which they are interested, even though they rarely address it overtly as a location for ethnographic inquiry; however, what is often lacking in their approach is a clear problematisation of the role and position of the scholar in this context. Nevertheless, most of them – consciously or not – share the same sense that ethnography is methodologically unavoidable for the investigation of some aspects related to current popular music cultures because:

it can ground general theoretical claims in the specific experience of the individuals, lead the scholar to interesting questions that may not have arisen through observation alone, and call attention to aspects of the researcher's relationship to the phenomenon being studied. [...] And, perhaps more importantly, it can help the researcher to develop analyses that are relevant to the community being studied' (Schloss 2004: 6).

In his research on sample-based hip-hop, Schloss's fieldwork is the basis of the very conceptualisation of the studio as an environment removed from the outside world and everyday life (Schloss 2004: 45-48); this is an important feature that will re-emerge later when I discuss the discourses about creative environments – not necessarily restricted to music – in current academic debate.

One of the important aims of pioneering scholarship with regard to the recording studio was that of recognising the impact that the sound engineers working in the studio have on the production of the final phonographic artefact. They can thus be considered both as part of a creative environment and as co-workers with the musicians, sometimes crossing the boundaries with (or assuming altogether) the role of producer. This is the case in the transition from the 'craft-union' mode of collaboration between musicians and record mixers to the 'entrepreneurial' and 'art' modes described by Edward Kealy on the basis of interviews – collected in the guise of a scholar and former fellow professional – with studio workers (1990). While developing his project for a *Musicology of Record Production* (2014), Simon Zagorski-Thomas also relies on his previous experience as a sound engineer in order to place his research firmly in studio practice; the divide between his own experience and what he collected from other sources is not always clearly articulated in his writings, his concerns being more general and theoretical rather than methodological. In his book, as well as in an earlier contribution on the recording practices of the drum kit in rock, in which he overtly claims to work with an ethnographic approach, he chose not to share with the reader the identity of the: «drum teachers, performers and record producers» (Zagorski-Thomas 2010: 197) he interviewed and observed in the studio. Something similar happens in the edited collection *The Art of Record Production*, where the only article mentioning ethnography is Michael Jarrett's inquiry into the presence (or invisibility) of the producer in jazz and country music (2012), even though most of the essays included in the volume rely on information gathered through working, carrying out interviews, or observing studio practices as they happen.⁸

Other scholars in the same field prefer a historical take in their reconstruction of the work done in the studio within the cultures of popular music; but, again, although their work relies very much on interviews with professionals, they do not overtly acknowledge their work as ethnographic. An example is Susan Schmidt-Horning's thorough history of studio recording in the USA, *Chasing Sound*, in which she puts forward an important concept, that of a 'tacit knowledge' shared among studio professionals: it encompasses the new skills recordists began to develop in the early days of recording which: «constituted an autonomous body of technical knowledge separate from science» (Schmidt-Horning 2013: 25).⁹ The existence of

8 Much the same could be said of many of the articles collected in *The Cambridge Companion to Recorded Music* (Cook et al. 2009); here, too, the dialogue between academics, producers and musicians is part of a general focus on recorded artefacts as 'texts' (i.e. cultural objects to be interpreted and analysed according to their cultural and structural characteristics), rather than as 'products' of complex relational interactions between people and technologies.

9 Other similar attempts are to be found in David Morton's *Off the Record* (2000) or Greg Milner's *Perfecting Sound Forever* (2009); although this research is aimed at a different readership and has a different background, it is entirely based on documents, specialist and popular journals, newspapers, and occasional communication with professionals. Although Morton puts forward the practices of the studio as integral to his interests, the reconstruction of the human and personal dynamics within the studio are relatively overshadowed by his focus on technological change and on the relationship with broader cultural transformation.

such a body of techniques and knowledge is what I shall call in the final part of this essay the ‘common practice’ related to studio work. One of the possible approaches I would advocate for an ethnography of the recording studio is precisely related to these kinds of ‘benchmark processes’ or: «what is taught both theoretically and vocationally, disseminated via textbook and manufacturer guidelines» (Bennett 2019: 76), in opposition to the ‘maverick techniques’ defined as «the ones that musicians [...] remember, that stick out above the mundanity of common studio practices» (Bennett 2019: 75). The potential for these layered conventions and widely shared modes of approaching studio work could be the starting point for an ethnography of the ‘culture of the recording studio’; they set standard, orthodox ways (more often theoretical than applied, I suspect) to perform certain tasks, against which particular examples and exceptions abound. Nevertheless, they are interesting because they constitute a sort of common ground that informs discourses, concepts and operating styles in and around the recording studio as part of a broader socio-technical global culture.

There is also a tradition of scholars who posit the creative process as crucial for the interpretation and analysis of the work of some particular performers, genres or labels, and who reconstruct their practices inductively; their research is thus based on the reconstruction of the workflow in the studio according to memoirs, biographies, interviews, and records, as well as bootlegs and outtakes issued after the original release.¹⁰ In such a category I would also include the literature that collects ‘session logs’ – such as Heylin (1995) or Lewinsohn (1988) – whose interests are more related to a reconstruction of what musicians have played, and what songs and sessions have been released on whatever official or unofficial discographic release. The amount of data they collected and made available to scholars (also in the form of documents and interviews) represents a useful resource for the reconstruction of the practices of the recording studio in the vein of a retrospective ethnography focused on the reconstruction of personal, relational dynamics and processes.

A different category encompasses scholarly works that approach the studio as a creative environment in order to attempt a broad theoretical formulation of the processes that take place therein, as in the works of Phillip McIntyre (2016) and Paul Thompson (2016; 2019). Their importance is due to their degree of abstraction and systematisation, largely overlooked in other approaches, which provides scholars in this field of study some ready-made models and concepts to work with (or against, in those cases when practice and theory do not match). An extended ethnographic period of research – from 1994 to 2004 – was at the core of McIntyre’s elaboration of the ‘system model’ derived from Csikszentmihaly (1997). At the time of his research, McIntyre was involved in the music business at various levels, and this offered him access to a vast number of Australian professional musicians (ranging from worldwide acts, such as the INXS, to local celebrities) which provided what he defines as: «an insider’s viewpoint difficult for others to obtain» (McIntyre 2016: 49). In applying the ‘system model’ – in the version revised by Kerrigan (2017) – to the studio environment, Paul Thompson further implements the theoretical extent beyond its previous formulations by introducing the scalability of the system at different levels (individuals, group, working environment) and the conceptualisation of the whole system in terms of a nested configuration of field-domain-individual triads. Each level performs a specific task with regard to innovation, consistency with the habits of the field, and position in the broader domain (Thompson 2016: 85). A further contribution with regard to creativity is Allan Watson’s *Cultural Production in and Beyond the Recording Studio*, in which he develops a thorough examination of the practices related to recording from a spatial (the studio as a location *per se*, but also as a place in a broader cultural geography) and relational perspective, thus also emphasising the emotional labour that takes place within its walls, which is no less relevant than any other technical or performing activity (Watson 2015: 47-61). In such a tradition of scholarly work, the studio is understood as a site where the entire process of production and reception is replicated and simulated on a small scale in order to achieve the best possible result to be transferred to a mass-distributed product, so that:

10 See, for example, Doyle (2005), Flory (2010).

the challenge for ethnographies of studios is to seriously consider what it means to produce things that do not exist. [...] Producers need a studio because things are open, they are not given, they do not belong *a priori* to one kind of professionals – which implies that a professional can only be a bad spokesperson, even of things he knows better. She needs other eyes, other ears than hers. Studio is a place where realities may be *déployées*, spread out, made present, re-presented – with a hyphen – by diverse professionals (Hennion-Farías 2016, interview 1).¹¹

The essential nature of the studio is a place where relationships between trusted professionals, each with his/her own specialised skills, can develop new ideas by working towards the realisation of suitable products for the audience they are aiming at. How these relationships are established, what kind of unspoken assumptions and conventions they imply, and on what grounds they are based, are questions of specific interest to scholars concerned with the understanding of the power and relational dynamics involved in record production.

In concluding this overview of the state of the art of the literature relating to the recording studio and popular music, I would like to underline how much the project of an ethnography of the recording studio can converge with the idea of ‘acoustemology’ proposed by Steven Feld as a methodological background that: «engages acoustics at the plane of the audible – *akoustos* – to inquire into sounding as simultaneously social and material, an experiential nexus of sonic sensation» (Feld 2017: 85). What such a perspective adds to the existing approaches is the attention to sound and its production techniques – and hence also to the work done in the studio in capturing, modelling, mediating and transforming performance into an artefact – as a site for developing an insightful perspective on living musical practices and their social relevance.

Understood in this way, studio practices also actively cross the disciplinary boundaries between what is pertinent to popular music studies and ethnomusicology (and even musicology, if the focus is widened to include art music, experimental, and avant-garde forms of music-making), as long as these consider record production as part of their research agenda. The benefits of such a convergence can be mutual: popular music studies gain a connection with an already developed and articulated set of methods for approaching ‘fieldwork’ – even though we might discuss where the ‘field’ should be located –, and the investigation of traditional music practices gains a vantage point on the scale of the global circulation and production of music:

We might expect the widely disseminated and multifarious recordings of popular music as broadcast from centres across the planet to have the capacity, at some point, to open up window on music-making in another cultural context. The view here is that popular music – as highly mediated, chart tailored, hopefully trendy, record company funded and produced, designed for music profit – can indeed provide a bridge to other musical worlds (Wade 2015: 16).

Again, the crucial move is to place the recorded artefact at the centre, as a way to redraw the boundaries and mutual connections between different fields of music studies, understood in terms of a wide set of practices and concepts. Addressing record production as a specific site of music-making, where performance is shaped, transformed, and modelled according to criteria that are neither ‘natural’ nor ‘transparent’, nor driven exclusively by the commercial desire for commodification, is a first step on this path towards a convergence between these different disciplinary traditions.

11 In the interview quoted here, Hennion summarises and elaborates on his work related to his extensive fieldwork research into the production of the *chanson de variété* in French popular music and his concept of the studio as a site for multiple mediations of culture involving a plurality of actors (Hennion 1983; 1989).

Gaining Access to the Recording Studio: Reflections on some Recent Research Experiences

If we wish to consider the studio as an ethnographic research field, we should first perhaps evaluate whether scale matters when speaking about record production, and how the conditions of accessibility to such kinds of environments might jeopardise the fieldwork and the gathering of data for our research. Is there any difference, in terms of addressing and understanding the problem-solving processes that the phonographic elaboration of a song implies, when we are dealing with a grassroots recording session for a local band or, conversely, with a huge mainstream pop act? I am inclined to say that the difference might be quantitative rather than qualitative, according to the amount of resources, technology and time that are available in the different situations. What these circumstances have in common is the relationship they establish with the medium, and any act of mediation is subject to the influence of the uninvited (yet inevitable) presence of the public in the studio, to the extent that what happens there has been defined as a: «*simultaneous production-consumption process*» (Hennion 1983: 188-192).

In order to elaborate on this point, let me report here two first-hand experiences I have had in my recent work, each related to a different scale of performers and acts, but linked by their shared reference to the recording studio as the crucial site for the activities I was studying. The first is related to two major figures in post-war Italian popular music, for whom I was asked by the Istituto dell'Enciclopedia Italiana to write a biographical profile for the project *Italiani della Repubblica*. In dealing with important figures such as Lucio Battisti (Bratus 2017) and Rino Gaetano (Bratus, 2020), I tried to take an original perspective on their work by asking sound engineers, producers, assistants and fellow musicians about their experiences with them in the recording studio.¹² In both cases this sort of retrospective ethnography, which documented events and practices that happened long before I was even born, provided relevant insights that I was then able to include in my critical reading of their life and work.

For reasons of space, here I shall offer only an insight related to Lucio Battisti. A revelatory moment in this research took place during my interview with Walter Patergnani, the sound engineer with whom Battisti worked in his early career at the Dischi Ricordi label. Patergnani explained to me that his relationship with Battisti was very friendly and collaborative, since the latter had had a strong technical education during high school; he was thus able to ask the technicians to solve problems and to build new devices for the treatment of sound, miking and post-production by foreseeing the practicalities that these implied. This helped me to frame my subsequent interpretation of Battisti's artistic and professional story as one closely related to the studio as a creative environment designed to produce artefacts that stand for themselves, and for his record production in terms of the development of a consistent interpretation of the 12-inch 33 RPM album 'format'. What struck me in this respect was that, after years with the Ricordi label, when Battisti founded his own recording and record production company, – Numero Uno, a joint venture with other musicians and Mogol, the lyricist with whom he worked on most of his records, – both sides of each of his albums consistently contain 4 tracks and are all of a very similar total duration.¹³ My hypothesis is that as a result of his technical knowledge (and his relationships with technicians and sound engineers), he was placed in the best position to understand the production of a record as the realisation of a highly refined material object: the similar (and not excessive) duration of the two sides of the album resulted in a balanced trade-off between groove distancing and depth, and this in turn ensured the best results in terms of

12 A further example of a similar approach may be found in this same volume in Vera Vecchiarelli's chapter about Fabrizio De André's performing and creative practices in the recording studio.

13 Some data in this respect can give a rough idea of the degree of consistency between the different albums. Taking into account the first albums produced with the Numero Uno label and the last release for Dischi Ricordi (for the latter Battisti was granted total creative control), the duration of the A-side and B-side of records (all containing 4 tracks each) according to the tracklist printed on the record is as follows: *Amore e non amore* (1971), A-side 18'26 – B-side 17'10"; *Umanament uomo: il sogno* (1972), A-side 16'53" – B-side 16'52"; *Il mio canto libero*, A-side 18'53" – B-side 18'59"; *Il nostro caro angelo* (1973), A-side 20'03" – B-side 20'20". Interestingly enough, the same format in his record production continues into the final years of his career, when the LP was increasingly substituted by other formats (cassettes and CDs) which did not have the same limits in terms of space or sound results.

audio quality. The awareness of the final result, in other words, seems to shape the entire LP as a cohesive artistic product.

The second experience I can refer to in this context is more attuned to a direct contact with the process of songwriting and production (actually, pre-production in proper terms) in popular music, even though not in the context of a traditional studio setting. *La Città della Canzone* (www.lacittadellacanzone.org) is an annual workshop for aspiring singer-songwriters organised, from 2013 onwards, by a team of professors, post-graduates and graduate students from the Department of Musicology and Cultural Heritage at the University of Pavia (Cremona). Each year, three or four songwriters are chosen by the organising committee to bring their own tentative draft for a song to the week-long workshop, during which they work under the guidance of an established professional in the field (usually a singer-songwriter him/herself or a producer) at finishing the song and recording a 'demo' track. I will not go into details regarding the project here; in the context of this discussion let me just mention the extent to which a situation of this sort can provide helpful glimpses into the dynamics of the creative process of songwriting. In such circumstances we, as the organising staff, have realised how much the choice of finalising the result on a demo track has the effect of streamlining the work during the week, and how this demonstrates the need for recording techniques to be adapted to accommodate the working habits and priorities of individual songwriters, producers, and specific tracks. Finally, the fact that the workshop takes place within the Department (the setting is in spaces at the university, teachers in disciplines related to popular music routinely take part in the activities,¹⁴ and local students participate as musicians and/or creative co-workers) helps in the formation of a sort of 'studio condition' where isolation from the external world and a build-up of trust among the participants is easily attained. In such a context it is not hard to establish the kind of laboratory-like, collaborative environment which is characteristic of the studio as a site where problems are posed and solved through a recursive and concerted trial-and-error process by a group of people who are constantly aware that their shared goal is to produce the best possible result, given the temporal and material constraints they have to face.

The role of trusted relationships is part and parcel of the current theorisation of the studio: such a place is increasingly understood as a site where epistemic-isation happens, meaning that: «our grasp of the world is routinely mediated through expert knowledge and abstract systems» (Michael 2016). The studio needs to be investigated ethnographically, precisely because these abstract systems are culturally embedded in the structures of the reference community that produces them and rest on relationships marked by differences in cultural and economic capital between the parties involved in the process. In the studio, human relationships meet technology and converge towards the figure that Akrich, Callon and Latour label the 'spokesperson':

the innovator can only put himself in the hand of some (very rare) speakers, of whom he never completely knows who or what they are representing, and whether indeed they really are representing them. Doubt, trust, then gratitude and admiration, or on the contrary, suspicion, defiance and even hate, are at the heart of innovation. These passions do not interfere with the work of the researchers or researcher; they are the innermost and fundamental constitutive elements of their work (2002: 222).

The role of the spokesperson can be superimposed on that of the producer in the production chain of a recorded musical artefact as the person that guarantees the conditions for researching innovation. In the research for newness, producers have the role of ensuring that studios fulfil their role of 'immunised experimental spaces' serving a double function:

On one side, they shelter unknown ideas, concepts and moves. They protect them from destructive coincidences and provide 'breathing space' for designs, narratives or dissonant compositions. The frames provide opacity and secrecy; they hinder illicit copying and avoid premature, distorted accounts. On the other side, frames help to intensify the interactions that take place within their confines. Within the limitations of these two kinds of spaces the frequency of topical communication is increased, trust between participants builds up and the scrutiny of others is endured (Hutter-Farías 2017: 439).

¹⁴ *La Città della Canzone* workshop was formally included, from the sixth edition in 2019, as a practical seminar within the courses of Popular Music Studies (Alessandro Bratus) and History of the Auteur Song (Stefano La Via).

The relevance of this is what the project *La Città della Canzone* highlights: a bunch of strangers can become involved in a common artistic endeavour because of the personal involvement in the creative process on the part of all the participants. What equalises all the people involved in the workshop is the focus on the task of creating the new song and thus the sharing of a basic sense of intimacy and mutual involvement where they can feel safe even when they are outside the boundaries of their respective comfort zones.¹⁵ In this perspective, the participants-observers: «cannot restrain themselves from becoming ‘native’ members of collectives and thus actively involved in creation processes» (Fariás-Wilkie 2016, ch. 1). By sharing a common creative aim, they are involved in the ‘vibrancy of the studio environment’, an experience that can be experienced rather than recounted, felt rather than measured (Bates 2016: 19).

The idea of the studio as a sheltered location also resounds with the current transition towards the ‘networked studio’ as a sort of ‘non space’ and ‘non place’ within a historical trend of disconnection between the studio and its surroundings, since it is increasingly placed within private spaces, yet connected to a larger web of other ‘non spaces’ and ‘non places’ (Théberge 2004: 779). In this transformation an essential element is the ‘design of the interior acoustic space of the studio and its detachment from the outside world’ (Théberge 2004: 763), as the studio provides both *insulation* from the unwanted noises coming from the outside world and the *isolation* that provides the laboratory-like conditions for creativity.¹⁶ The need for isolation had already been highlighted by Théberge in his previous book on the use of technology by musicians when he described the home studio as: «above all, a private space. Studios tend to be located in bedrooms, dens, or basement rec rooms, far from the main traffic of everyday life» (Théberge 1997: 234). A quiet place to record and assemble the recordings made there or elsewhere is required to achieve a satisfactory result in terms of the quality of a recorded track, but perhaps it is also a symbolic shield from everyday life that makes the studio an ideal creative environment. Whatever conditions are thought to be key to establishing the best possible conditions for creativity to develop can contribute to shaping the design of the specific configuration of each studio. From this point of view, the studio is a ‘non space’ because it should be built so as to be adaptable to a number of different working methods and conditions, according to the desired result in terms of sound, the individual qualities of the musicians, and the availability of time and economic resources. At the same time, each particular studio builds its own specific environment by assembling a number of analogue and electronic devices, by arranging the space in ways that accommodate both the needs of the musicians to interact and that of a good acoustic rendition, by setting up the conditions that allow communication with the technicians and sound engineers, and many other details that contribute to shaping its own identity. From this point of view, the recording studio is all but a neutral place, it is actually a liminal space that allows all the participants to find themselves in a space entirely devoted to the creative act, whose specific features and configuration should be carefully considered to best fit the needs of all the people working there. The management of the dynamics happening within the walls of such a space is the task of the producer, a key figure who underlines the importance of a balanced focus between the technical and the relational sides of ethnographic research on the recording studio, and perhaps of the primacy of the latter over the former.

15 ‘As cultural historians and sociologists have suggested, the modern invention of intimacy did not just involve an interpersonal space protected from the public view, but also one in which individuals engage with each other in a comprehensive manner, not reducing each other to specific public roles’ (Fariás-Wilkie 2016, ch. 1).

16 Théberge draws these concepts and terms from the writings of Antoine Hennion (1989, in particular), who uses the French term *isolation* precisely because it affords this kind of double meaning.

Abstracting a Common Studio Practice: An Ethnographic Take on Manuals and Textbooks

In the alternative between an ethnography ‘in’ or ‘about’ the recording studio¹⁷ the focus on the final product helps to shift the researcher’s attention from exclusive attention to technology to the relational dynamics established during work in such a place. As the moment in which different ‘performative concepts’ (Bratus 2016: 126) related to a specific piece of music apparently find a synthesis in a recorded artefact, the studio is a site for negotiations and confrontations: between different sensibilities, ideas about the qualities of sound and the preferences of the audience, and – more generally – related to the overall communicative outcomes of the material object being prepared. My point in assessing the scope of an ethnography of popular music studio production is to shift the focus from a technological history of the tools and phonographic formats to the creative use of the sound capturing and editing devices as relational triggers for the rise of the modern conception of the studio as a working environment for collective creativity. This is not meant in any way to downplay the relevance of technological change *per se*; rather, it is a reminder of the relevance of the particular interactions that take place within the isolated and insulated walls of such a special location, thus defining its proper role in the production chain of recorded artefacts. In a similar vein, in the index of Albin Zak’s groundbreaking book on studio production – *The Poetics of Rock* – the ‘studio’ entry redirects the reader to ‘recording places’ (2001: 157). Such a link is thought-provoking: even within the industrial framework of mainstream rock on which he focuses – and to which he belongs as a recordist himself – the studio is considered only as a place where recording sessions are organised, and it does not necessarily include the presence of an architectural structure with particular acoustic features, or the presence of specific pieces of equipment (*ivi*: 99-107).

In the attempt to develop a specific discourse about the ‘common practice’ of the recording studio, a first exploration of the instructional literature (manuals, textbooks etc.) can lay the ground for future research. In doing this, for the sake of space and in view of the specific focus of this article, I shall consider only published works, despite the fact that a great deal of information about these practices is today delivered in the form of video lessons, online tutorials, and streaming of recording or mixing sessions. Nevertheless, for the kind of cultural prestige still retained by the book (or the manual, in this particular case), I think this can still be a valuable source of information about a shared knowledge of ‘how things should be done’. Such a shared set of unwritten rules, even when routinely broken, can outline the boundaries of the broader ‘domain’ of the audio recording culture (in ‘system model’ terminology) with which the creative contribution of the individual is confronted and – eventually – validated, so as to become part of the specific ‘field’.

I am not interested here in the technicalities related to specific aspects of recording studio practices; rather, I am eager to see what kind of assumptions the manuals make about the techniques employed in the recording studio with regard to general concepts such as musical genres and the related audience expectations. A first case in point in this respect concerns the sound of the drum kit, an instrument whose recording presents a wide variety of possible configurations. In discussing this topic in technical literature, jazz seems to be one of the main reference points in terms of the sound aesthetics of the drum kit: quite a few microphones are usually employed in recording this genre, although the specific recommended configuration and respective positions of the individual mikes may vary. John Eargle, for example, recommends a 3-microphone setting (a dynamic or condenser for the kick drum and a pair of condenser cardioids for overhead) for bands up to 9 elements, so as to retain the live feel of a ‘real’ band, with additional ‘spot’ microphones on individual percussions when required (Eargle 2006: 269-270; 279-286). A small Italian reference manual, while suggesting that each element of the drum kit should be miked separately, begins by saying that: «in *jazz*, usually miking is kept to a bare minimum, so as to highlight and not to interfere with the naturalness

17 For an articulation of such a distinction, see Marco Lutz’s chapter in this same volume.

of the performance» (Coppola 2004: 83).¹⁸ The connection between a 'livelier' sound and a small number of microphones is repeated by John Shea, although he does not specifically mention jazz: «Mic placement is also dependent on the sound the producer is after. [...] If a more live or open sound is sought, the drums will be placed in a more reflective area of the studio and fewer mics will be used» (Shea 2005: 390). In *Modern Recording Techniques*, Huber and Runstein confirm that, apart from the essential microphones for the kick and for the snare drum: «At an absolute minimum, the entire drum set can be adequately picked up using only four mics by adding two overhead pickups, either spaced [...] or coincident [...]. In fact, this 'bare bones' placement was, (and continues to be) common on many classic jazz recordings» (2014: 157). When recounting his experience recording a small jazz piano-bass-drum trio in a live situation, Mike Senior remembers how the best result in terms of balance between bass guitar and bass drum was achieved by muting the AKG D112, which was originally positioned in front of the kick to capture its sound. He ended up using the rear sensitivity lobe of the figure-8 polar pattern of the AKG C414 already used to record the bass for capturing the sound of the kick and playing around with the placement to balance the volume between the two sound sources (Senior 2015: 344-348).

In his discussion of the recording aesthetic in relation to performance, William Moylan opposes a 'production transparent recording' to the 'enhanced performance' that leads to the 'perfect performance' of the work released on record (2002: 254-261). Although I find the concept of 'work' when ascribed to the released track a little problematic – but this is a topic I will not discuss here – what is interesting, once again, is the mention of jazz when he speaks about the 'live acoustic recordings' on the 'transparent' side of the spectrum: «while it is common in orchestral and other art music formats, it is equally appropriate for jazz, or any other music recordings where the performers are refined in their sensibility to and control of their relationships to the whole ensemble» (Moylan 2002: 256). What is interesting is the consistency across all these textbooks regarding different moments of the work carried out in the recording studio, all of which document a shared underlying baseline conception of what a 'live' sound is and how to achieve such an effect on record. What is all the more telling in cultural terms is the idea of 'realism' they entail, especially in one specific detail that I find particularly intriguing. A shared concern that all these recommended miking techniques demonstrate is the attention to the kick drum, which requires a special, dedicated microphone to enhance its frequencies at the lower end of the spectrum (the first formant is around 60 Hz). This can be interpreted in the sense of a fundamental simulation of live perception, where the vibrations of the bass drum are more felt by the body than heard; in order to make up for such a lack of physical vibration, a special boost to the typical frequencies of this piece of the drum kit is needed in the recording. The more 'realistic' the music should sound, the more space and breath the bass drum should have in order to sound convincing and to be able to evoke the performative situations associated with this particular kind of music-making. This indication, as for any kind of successful simulation, is the product of a common, shared sense of the listening expectations of the audience, for whom these cultural connotations are significant.

Another example of a similar connection between sound and genre regards EDM music and the delay effect: in this case too, the genre label and a particular way of treating the sound are linked in different sources (with none quoting the others) across the technical and instructional literature I surveyed. Mike Senior, for example, wrote in his *Mixing Secrets for the Small Studio*: «Polyrhythmic delays are the stock in trade of many dance styles, because they allow you to blow the average raver's chemically added mind with lots of trippy-sounding audible delay repeats while safeguarding the essential rhythmic clarity of the groove» (2011: 258).¹⁹ The electronic generation of different flows of temporal marking is thus characteristic of tracks that try to evoke fantastic landscapes but, at the same time, maintain a fundamental rhythmic

18 «Nel jazz normalmente la microfonazione si effettua ai minimi termini, per evidenziare e lasciare invariata la naturalezza dell'esecuzione». My translation.

19 He defines 'polyrhythmic delays' as delays that 'are tempo related but don't correspond to simple note lengths. Common examples are three-eighth-note and three-sixteenth-note delays' (Senior 2011: 258).

clarity at their deepest core. The same concept is elaborated by Roey Izhaki in his manual *Mixing Audio*, which has a specific paragraph under the ‘Delay’ chapter called ‘As a key tool in dance music’ that reads:

Delays are one of the most common tools in dance music production. They are used with virtually any combination of settings to enhance many aspects of the production and for a few good reasons. For one, dance music has a profound rhythmical backbone, and tempo-sync delays can easily enhance rhythmical elements – no other tool has such a strong timing link as delays. Then, sequenced dance productions call for little or no natural sound stage, so delays can easily replace the role of the more natural-sounding reverbs. [...] delays can be applied on nearly every track, and it takes a while before things start to sound too weird (Izhaki 2012: 392).

Again, the evocation through sound of unrealistic spaces, as well as the groove-based quality of the music, is highlighted here as part and parcel of the aesthetics of the genre and of the features of such sound objects.

According to the same principles, Gibson in *The Art of Mixing* advises against the use of delays and the overlapping of many sounds in the mix that ‘leaves no space unfilled between the speakers’ with keywords such as ‘fun, creativity, catharsis, intrigue, perspective apparent’ (Gibson 1997: 122). Elsewhere, although he does not specifically mention electronic dance music – perhaps because these styles had not acquired such vast currency at the end of the 1990s, as far as what is covered by audio production manuals –, he associates the use of a long delay time with a ‘dreamy’ result in terms of mix (*ivi*: 111). In wider cultural terms, the effect affects the listener’s attention because it implies an integration between the human and the mechanical element within the recording studio, as:

it stems from the integration between mechanical time and musical time. [...] The machine-made replica calls forth a metaphoric aura encompassing such images as mirror, memory, shadow, doppelganger, color, mask, ghost, projection, hallucination, hiccup, ricochet, quiver, and pulse. Using an echo as a compositional resource represents a willing invitation held out by recordists to their machines to join the creative process (Zak 2001: 76).

The echo, in other words, allows the machine to gain a proper (though simulated) agency as far as the listener’s perception is concerned. In this way, it calls into action strongly established conventions that have developed throughout the history of listening to recorded sounds and gives rise to particular mental pictures of the virtual performance presented on record.

The idea of an ethnography of the recording studio recurs a number of times in the recent edited collection *Mixing Music* (Hepworth-Sawyer-Hodgson 2017). Not a straightforward manual, the book opens the Focal Press *Perspectives on Music Production* series, an editorial endeavour that aims at fostering dialogue between musicians, academics, and professionals working in the creative industries so as to promote renewed approaches to these topics, both from the point of view of teaching and of critical thinking.²⁰ The idea is that from such a dialogue a common ground might flourish with the potential to: «draw successful artists directly into the academic discussions about their work» (Krotz-Hodgson 2017: 141) and, at the same time, provide academics with relevant examples of the field they are studying. The case regarding the delay effect mentioned in the above paragraph highlights the extent to which the practices of mixing are specific to a particular genre (or market, as Krotz himself would say) (*ivi*: 140). In the virtual roundtable on EDM production, Rick Bull mentions how the mix is aimed at: «allowing the listener to best inhabit the desired sonic imagination of the author» (Devine-Hodgson 2017: 154),²¹ while Ryan Chynces further emphasises the pervasive use of tools for audio processing as part of the peculiarities of the genre:

20 For an overall presentation of the titles in the series and to access detailed information about each volume, see <https://www.routledge.com/Perspectives-on-Music-Production/book-series/POMP>, last access December 28th, 2023.

21 Later in the text, Bull defines dance music as ‘so highly artificial’, a comment perfectly aligned with the points raised in the above paragraph regarding the intricate result of multi-layered delays in tracks in the genre (Devine-Hodgson 2017: 161).

I'd also say that "producing" is part of the composition process in electronic dance music, since new sounds, combinations etc., emerge during the production process depending on how heavily (and creatively) various effects are applied. While rock artists may "go lighter" on processing effects during the production process (to maintain that "live performance believability"), electronic music artists are under no such constraints (*ivi*: 166).

We see here once again that there is a fair degree of agreement among practitioners about the acceptable or unacceptable features of a mix, according to what they think the audience expectations and conventions related to a specific category of musical artefacts might be. This widespread and shared – though often unspoken – knowledge is what constitutes the level of the 'common practice' I would propose as one of the possible targets for an ethnography of the recording studio, because of its potential to offer interpretative keys regarding some recurrent features of the globalised, artefact-based music culture we inhabit. As seen in the examples of jazz and EDM, the characteristics of particular genres are inextricably connected to a specific sound, which in turn leads to broader assumptions regarding their cultural value and their association with a particular 'ecological' understanding of the kind of music-making practice (real, virtual, hyper-real etc.) that the phonographic artefact seeks to present to its listeners.

Conclusions: The Studio as a Set of Practices

The focus on the studio as a place for ethnographic inquiry in popular music leaves open a series of crucial issues, which I would briefly like to summarise at the end of this article as an agenda for future research and further reflection. First of all, an ethnography of the recording studio can be of help in the disentanglement of sound as a communicative device from the production of meaning, as this is the place where final decisions are made regarding the spatial configuration of the performative space implied in the recorded artefact (including the position of the listener), with all the relevant consequences on the final understanding of the resulting sonic utterance. As an act of representation, recorded music shares this broad topic with another performative recording art such as cinema, even though the former lacks the referential dimension offered by the images of the latter. Nevertheless, the recorded artefact implies a kind of staging, a term that: «refers to aspects of the 'event' that are external to the performances and yet contribute to the meaning we perceive» (Zagorski-Thomas 2014: 73). From this point of view, the studio becomes the place where discursive configurations acquire a material form, for both immediate consumption and future preservation, and where the 'problem' of representing a story, a feeling, a situation through sound is faced and (hopefully) solved.

A second key issue is the definition of the studio, a task which, more often than not, is taken for granted and not overtly articulated. My attempt to provide a working definition for an ethnography of the studio for popular music studies goes in the direction of a definition of these 'non places' and 'non spaces' as a relational set of practices, steering the main attention away from the technological components of the environment to the activities of the people involved in the process. The studio, therefore, is not where the recording and prototyping of a master take is realised; rather, it is interesting as a set of relationships between people, machines, software and sounds, with the common aim of building a material object into «coherent, bounded and affective forms» (Farías-Wilkie: ch. 1). In this regard, Anne Marie Mol, when talking about the best method to understand medical practice, advocates what she calls a 'praxiographic approach'. This requires us to acknowledge the multiplicity of objects, practices and techniques related to a given field, instead of separating them according to predefined categories and/or academic disciplines (Mol 2002: 157). Such an attitude holds even truer when dealing with a recursive trial-and-error, problem-solving process such as the realisation of recorded artefacts as 'forms of crafted presence' (Law 2004: 146), in which *assemblages* of tools, techniques, and individual and collective skills give rise to *allegories* of the performer and of the performance/audience relationship.

A final open issue I would only briefly mention in concluding this overview of the ethnographies of studio production in popular music-related practices is related to another

level of representation, that of social roles and conventions. In terms of power relationships, the act of creative innovation so eagerly sought after in such places comes about in environments organised around professionals who are, for the most part, male and white. The issues related to gender imbalance and to the control of the means of production can be traced back to well-known historical reasons in the US, for example:

For the first century of sound recording, the field of audio engineering and recording studios in particular comprised a profoundly white male-centered culture that reflected corporate culture at large and technical professions in particular. It has its origins in the mechanical engineering background of many of those who were the first operators of recording machines, like the brothers Raymond and Harry Sooy of Victor Talking Machine, and it continued with the radio engineers of the 1920s and 1930s and the generation of World War II veterans who had trained in the signal corps and went on to build the recording studio of the postwar period (Schmidt-Horning 2013: 9).

The idea that different social groups can express different ‘sounding cultures’ and that a different background in terms of social groups and identities can result in a different use of technology, with the relevant consequences in terms of the final sounding outcome, is not completely new but, on the whole, still remains overlooked in the current literature on popular music.²² In this respect the avenues for change are cultural rather than specific to the music industry; from this point of view the fact that the current rise in the number of women producers can be linked to the increasing possibilities for the studio to be ‘brought home’ thanks to digital technologies is more a demonstration of a persisting condition than a sign of any real progress (Wolfe 2012). Even though gender has been investigated from a number of points of view since the end of the 1990s, other aspects of such an imbalance still require further investigation, such as race- and class-related forms of inequality in the control of studio technology and record production. Some general observations on such a topic emerge in Ray Hitchins’ ethnographic account of Jamaican popular music, noting that a strict ‘door policy’ has been exerted in regard to access to studio facilities as a means to undermine any possible form of competition between similar products on the market: «the general assumption that the existence of a recording studio or a recording session indicates legitimate public access is erroneous» (Hitchins 2014: 45). The studio is a private space where goods for public consumption are realised, therefore policing access has consequences on the cultural context in which the products themselves circulate. As making a record is an operation related to representation – of meaning, of performance, and of social relationships –, research into studio ethnographies continues to be relevant as long as it considers the studio as a site where key issues in culture, aesthetics, technology, materiality, and power relationships can be investigated as part of a broader socio-technical environment.

22 The marginalisation of women producers, engineers and musician within the Liverpool scene reported by Sarah Cohen in the collection *Sexing the Groove* (1997) has been since then investigated in different musical communities and genres of popular music (cfr. Leonard 2007, 51-60; Farruggia 2012: 115-140). For some pertinent observation in this regard and the reference to the activities of a female sound engineer such as Boden Sandstrom, see also Facci (2003: 806-7).

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