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Student-Centered Musical Expertise in Popular Music Pedagogy and Hard Rock Groove

– a Design-Based and Psychodynamic Approach

Kristian Wahlström

DOCTORAL DISSERTATION

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Abstract

This study explores a fresh approach to instrumental popular music pedagogy that aims to integrate the advantages of student-centeredness and pedagogues' musical expertise. To that end, I introduce the *Student-Centered Musical Expertise (SCME)* design. This design emphasizes the pedagogue's role as a musical expert – as in the traditional master-apprentice model – but combines it with empathy by applying the students' favorite music as learning material. In contrast with many student-centered views, where the pedagogue only plays the role of a facilitator, the SCME design thus involves *both* the student and the pedagogue as active participants in the learning process. Within popular music instrumental learning, this study suggests the SCME approach as a solution to a common problem in the field of education, that student-centered pedagogy remains poorly actualized.

For a practical implementation of this design, and as an example of such applied musical expert knowledge, I present a pioneering study on the musical phenomenon called *groove* in the genre hard rock. To deepen the current theoretical understanding of *why* student-centeredness is beneficial in popular music pedagogy, I also explore a good relationship with music from a psychodynamic perspective. From this perspective, a learner has subliminally ascribed emotional meanings to his or her favorite music through prolonged engagement with that music as a listener. I apply, for example, Donald W. Winnicott's theories in order to study the meaning of learning music through *emotion-driven, student-selected repertoire.*

Methodologically, this study is founded on Design-Based Research, however it is also a multi-disciplinary study that combines critical examinations of music analysis, music pedagogy, the learning sciences, and psychodynamic psychology. To pull these different layers together, I employ reflexive methodology as an epistemological core for the overall work. The main research materials are approximately 45 hours of video-documented individual lessons with nine (9) electric guitar students, taken over the course of a single semester. I apply the Video-Stimulated Recall method in order to access the students' subjective views of their learning with the SCME approach.

I explore hard rock groove mainly through spectral analysis of recordings of the band AC/DC. I research the recordings to the millisecond. This illuminates musical aspects that have been previously considered somewhat mysterious. As the central components of groove, I focus on timing, dynamics, phrasing, time-feels, and interplay. My main finding is that an essential characteristic of hard rock groove is a phrasing of eighth notes that is almost imperceptibly swinging – although it appears to be even. I term this effect *Implied Moderate Swing Phrasing*. Moreover, this phrasing is often contrasted with anticipated upbeats. Together, these contrasting micro-rhythmic features induce tension and release, which in turn promotes forward motion musically. Furthermore, Implied Moderate Swing Phrasing creates a loose effect, while even phrasing produces a stiff impression. This analysis offers illumination on the performance of *different* grooves. Consequently, I apply my analysis of groove to musical exercises in instrumental pedagogy and I also develop novel practices. By

applying these exercises to student-selected repertoires, I study *how groove can be taught in a student-centered way*. Additionally, I explore briefly how the SCME approach can be applied to teaching musical fundamentals, improvisation, technical instrument skills, and stylistic versatility.

The results of this study suggest the importance of utilizing certain instrumental exercises that are, on the one hand, exacting and thus effective, and on the other hand applicable to various student-selected repertoires. To employ the SCME approach, a pedagogue needs an extensive ability to analyze and transcribe music, flexibility in pedagogical practices, and empathy towards each individual student. This study showed that the research participants' skills, for example in groove, developed considerably through challenging work, and at the same time the music that they practiced felt personally meaningful. Thus, the integration of student-centeredness and a pedagogue's musical expertise *both* promoted musically ambitious learning outcomes *and* supported the students' good relationships with music – *not one or the other.* The SCME design suggests that a pedagogue's highly advanced musical knowledge does not necessarily impel an authoritarian, teacher-directed pedagogy. Therefore, this study contributes to dismantling the dichotomy between the master-apprentice tradition and student-centered learning.

Tiivistelmä

Väitöskirjassani tutkin tuoretta lähestymistapaa populaarimusiikin instrumenttiopetukseen, joka pyrkii yhdistämään opiskelijalähtöisen pedagogiikan ja opettajan musiikillisen asiantuntijuuden edut. Esittelen kehittämäni pedagogisen mallin, jota kutsun nimellä *Opiskelijalähtöinen musiikillinen asiantuntijuus* (engl. Student-Centered Musical Expertise, lyh. SCME). Tämä malli korostaa pedagogin roolia ammattimuusikkona, joka on musiikillisen sisällön asiantuntija – kuten mestari-kisälli-perinteessä – mutta yhdistää sen empatiaan, jota opettaja osoittaa käyttämällä oppilaan lempimusiikkia oppimateriaalina. Toisin kuin monissa opiskelijalähtöisissä suuntauksissa, joissa opettajan rooli oppimisen mahdollistajana on passiivisempi, SCME-mallissa sekä oppilas että opettaja ovat aktiivisia toimijoita. Yleinen ongelma opetusalalla on edelleen se, että opiskelijalähtöinen pedagogiikka toteutuu heikosti käytännössä. Tutkimukseni esittää SCME-mallia ratkaisuksi tähän ongelmaan populaarimusiikin instrumenttiopetuksen saralla.

Mallin käytännön sovelluksena sekä esimerkkinä musiikillisen asiantuntijuuden pedagogisesta soveltamisesta tutkin, miten musiikillinen ilmiö *groove* (so. svengi, rytminen imu) toteutuu hard rock -musiikkigenressä. Sovellan kriittisen groove -analyysin tuloksia musiikillisesti kunnianhimoisten oppimistavoitteiden asettamiseen. Syventääkseni teoreettista ymmärrystä siitä, *miksi* opiskelijalähtöisyys on tarpeellista erityisesti populaarimusiikin opetuksessa, tutkin psykodynaamisesta näkökulmasta, minkälainen on hyvä musiikkisuhde. Tämä näkökulma korostaa, että jo ennen soitonopiskelua, pitkän kuunteluhistorian kautta, oppija on myös tiedostamattaan antanut tunnepitoisia merkityksiä lempimusiikilleen. Sovellan esimerkiksi Donald W. Winnicottin teorioita tutkiessani, mitä merkityksiä opiskelijan valitsemalla, emotionaalisesti läheisellä ohjelmistolla voi olla soitonopiskelussa.

Metodologisesti työni on paitsi kehittämistutkimus, myös monitieteellinen tutkimus. Siinä yhdistyy kriittinen tarkastelu musiikkianalyysin, musiikkipedagogiikan, kasvatustieteen ja psykodynaamisen psykologian aloilta. Käytän refleksiivistä tulkintaa yhdistääkseni nämä tutkimukselliset kerrokset. Pedagogisena tutkimusaineistona on noin 45 tuntia videoituja sähkökitaransoiton oppitunteja, jotka on kerätty yhden lukukauden aikana yhdeksän (9) oppilaan yksilöllisistä opinnoista. Käytän stimuloitua haastattelumenetelmää (engl. Video-Stimulated Recall) tutkiakseni oppilaiden kokemuksia omasta oppimisestaan SCME-mallin soveltamisen jälkeen.

Tutkin groove-ilmiötä hard rockissa pääasiassa spektrianalyysin avulla. Analysoin AC/DC-yhtyeen levytysten mikrorytmiikkaa millisekunnin tarkkuudella. Tärkein löydökseni on, että keskeinen piirre hard rockin groovessa on fraseeraus, joka onkin hyvin lievästi kolmimuunteista – vaikka se mielletään tasajakoiseksi. Annan tällä ilmiölle nimen *Vihjaus lievästä kolmimuunteisuudesta* (engl. Implied Moderate Swing Phrasing). Tällaista fraseerausta kontrastoidaan usein myös soittamalla etuiskuja (so. synkooppeja) mikrorytmisesti etuaikaisesti. Yhdessä nämä keskinäisessä ristiriidassa olevat mikrorytmiset

vivahteet luovat jännitteen ja purkauksen, mikä lisää eteenpäin vievää vaikutelmaa. Lisäksi vihjaus lievästä kolmimuunteisuudesta luo letkeyttä, toisin kuin tasajakoinen fraseeraus, joka kuulostaa jäykemmältä. Tämä analyysi valaisee sitä, millä keinoilla *erilaisia* grooveja tuotetaan musiikin esittämisessä. Hyödynnän analyysiani instrumenttiopetuksen harjoitteissa ja niiden kehittämisessä. Erityisesti tutkin, miten groovea voidaan opettaa opiskelijalähtöisesti, kun näitä harjoituksia sovelletaan opiskelijoiden valitsemiin ohjelmistoihin. Lisäksi tutkin lyhyesti, miten SCME-lähestymistapaa voidaan käyttää muiden musiikillisten valmiuksien, kuten improvisoinnin, teknisten instrumenttitaitojen ja tyylillisen monipuolisuuden opetuksessa.

Tutkimuksen tulokset osoittavat, että pedagogisesti arvokkaat harjoitteet ovat yhtäältä täsmällisiä ja siten tehokkaita, ja toisaalta niitä on mahdollista soveltaa vaihteleviin opiskelijalähtöisiin ohjelmistoihin. Käyttääkseen SCME -lähestymistapaa musiikkipedagogi tarvitsee laajaa osaamista musiikin analysoimisessa ja transkriptiossa, kykyä soveltaa pedagogisia käytäntöjä joustavasti sekä empatiaa jokaista oppijaa kohtaan. Tutkimus osoitti, että tutkittavien oppilaiden musiikkitaidot, esimerkiksi groovessa, kehittyivät huomattavasti vaativan harjoittelun avulla. Samalla musiikki, jota he harjoittelivat, tuntui heistä henkilökohtaisesti merkitykselliseltä. Täten opiskelijalähtöisyyden ja opettajan musiikillisen asiantuntijuuden integrointi sekä edisti musiikillisesti kunnianhimoisia oppimistuloksia että tuki opiskelijoiden hyviä musiikkisuhteita – ei ainoastaan jompaakumpaa. SCME-malli osoittaa, että soitonopettajan pitkälle erikoistuneen musiikillisen asiantuntijuuden ei tarvitse johtaa autoritääriseen, opettajalähtöiseen pedagogiikkaan. Näin tutkimukseni purkaa vastakkainasettelua mestari-kisälli-perinteen ja opiskelijalähtöisyyden välillä.

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1. Introduction

This doctoral dissertation explores a fresh approach to instrumental popular music pedagogy that aims to integrate the advantages of student-centered learning and pedagogues' musical expertise. I critically examine the strengths and weaknesses of the current understanding of student-centered pedagogies in popular music. Consequently, the endeavor is to design a model for instrumental music education which, on the one hand, is musically exacting and thus effective, and on the other hand supports a good relationship with music in terms of students' self-actualization. In order to explore a practical implementation of this pedagogical design, this research presents an analysis of how the musical phenomenon called "groove" occurs in the genre hard rock.

In this study, the term student-centered refers to learning that "takes into account the student as a person with a unique background" (EUA 2019). In other words, student-centeredness considers the various individual factors and histories of the learner (McCombs 2008: 2). A subject expert is defined as "somebody who obtains results that are vastly superior to those obtained by the majority of the population" (Gobet 2016: 5). By the term musical expertise, therefore, I refer to such musical skills that a music pedagogue possesses as a professional performer. Furthermore, another central concept is groove – which has been defined as rhythmic intensity that induces forward motion (Butterfield 2010), encourages physical involvement (Madison 2006), and involves a sensation of pleasure (Danielsen 2006).

More specifically, this dissertation concentrates on individual, one-on-one instrumental education in popular music. I derived the research material mainly from individual electric guitar instruction in vocational music education. Secondly, since groove is in itself an extensive subject, this study concentrates on hard rock, which is exemplified here by the band AC/DC. Below, I discuss the scope of this study and its main focuses, as well as the reasons for the decisions I made in this research.

1.1 The Research Topic and the Background of the Study

As an electric guitar pedagogue, I have always been inspired by employing student-centered pedagogy, because my aim has then been to promote the musical self-expression of each individual student. As the learning process of every student is different, this has also prevented my work from becoming a tedious routine. However, I have also been convinced that a musical expert pedagogue's advanced instrument skills and insight into a music tradition should never be bypassed in education. Realistically, learning an instrument always requires diligent work. The input of a demanding pedagogue can certainly make learning more effective, and present new influences for a student. My pedagogical ambition is to achieve a fruitful integration of these interests. In contrast, solely authoritarian teachers have, according to my knowledge, caused innumerable students to quit their lessons – or even music altogether. Students have also been frustrated with rather passive educators who claim

that they are student-centered. As this is clearly a challenge, I refer to literature on the subject below.

Student-centered pedagogy has been studied extensively in non-musical contexts, and the literature on the subject is vast (see Weimer 2013: 7). Accounts of student-centered pedagogy are evidently contradictory, which implies that it is a highly debated concept. Both inside and outside music education, student-centered approaches have been acknowledged for being highly motivating (Green 2002; McCombs & Miller 2007: 16; McCombs & Miller 2009: 5). However, student-centeredness has also been criticized for being ineffective due to the teachers' relative passivity, and even for relying on flawed assumptions (Meyer 2009). Traditional, teacher-directed pedagogy that includes a non-personalized curriculum, on the other hand, has been critiqued for not realizing the student's individual potential (see e.g., Kelly 2004: 86; Green 2008: 13; Doyle 2011) while exploiting the pedagogue's subject expertise. Again, this contradiction induces the question of how education could benefit from such conflicting approaches.

Most importantly, this topic needs to be researched because, despite a widespread interest in student-centered pedagogy, thorough research by the European University Association (EUA 2019) shows that a common problem is that it remains poorly implemented in practice. This problem has been identified by several educationalists (e.g., Estes 2004; Hoidn 2017: 23). In this present-day dilemma, furthermore, it has been acknowledged that student-centeredness is a context-sensitive phenomenon (EUA 2019). Consequently, domain-specific classroom research is urgently needed (Hoidn 2017: 25). Therefore, this study takes a detailed view on the practices of popular music instrumental education. A highly specific musical application is needed.

At the same time, the pedagogy of groove has seen little research in popular music studies. According to my experience, groove remains an often mysterious subject among musicians and educators, and during many years as a performer, I have become increasingly curious about one characteristic of hard rock groove in particular. Even in hard rock, where the phrasing of eighth notes is seemingly even, it appears to me that a loose, yet vibrantly forward-propelling feel may be induced by employing a diminutive amount of swing phrasing. Learning materials, the opinions of instructors, and research articles have not satisfied my curiosity, and musicians have not articulated this matter analytically. This has raised my desire to explore critically what it is that constitutes *different grooves*; some grooves are vibrant, some hectic, some heavy, some loose, some stiff, and so on. Moreover, could an analysis of groove even be applied as a pedagogical tool? Therefore, I selected groove as the main musical implementation field of student-centered pedagogy in this research. More specifically, I concentrate on hard rock groove also because it has not been under previous academic scrutiny. Additionally, I explore, albeit briefly, the pedagogy of a selection of other musical topics that appear frequently in popular music guitar education. In summary, my primary aim is to gain an insight into student-centered popular music pedagogy which is here musically detailed in order to access the context-sensitive nature of

student-centeredness. In addition, I also aim for a broad perspective, in order to explore the applicability of student-centeredness in popular music instrumental pedagogy more generally.

The background of this study is my 20 years of experience as a professional performing electric guitarist and 20 years of experience as a pedagogue, mainly at the Helsinki Pop & Jazz Conservatory, which is the leading institution for popular music education in Finland. As a guitarist, I have played over 1000 live performances, and I have appeared on several commercially successful recordings.[1] As a pedagogue, I have taught approximately 500 students of various levels (from beginner to higher education) and ages (6 to approx. 60 years) in three regular teaching affiliations[2] and in two summer camps[3]. In recent years, I have also taught guitar didactics at the Pop and Jazz Music degree program of Helsinki Metropolia University of Applied Sciences. The present study also deepens my previous final project (Wahlström 2008) on student-centered guitar pedagogy in popular music.

The aforementioned reports that student-centeredness remains inadequately actualized have not surprised me. My experience in the field of music education has suggested that there are, at least, two fundamental reasons for the poor actualization of student-centeredness. Firstly, research on student-centeredness has not been applied to everyday teaching practices in sufficient *musical* detail. As I discussed above, I aim to address this issue by exploring the pedagogy of groove. Secondly, I presume that the problem of teachers' lack of empathic understanding for their students has been largely ignored. By this lack of empathy, I mean that teachers seldom express their sincere interest in the music that is meaningful for their students. In other words, teachers rarely make an effort to extensively immerse themselves in the music that their students are driven by. On the other hand, I have witnessed students perform their favorite music, plunging into the music whole-heartedly and exceeding their normal limits. This has made me ponder the remarkable potential of *emotion-driven, student-selected repertoire.* For this reason, I include in this study the perspective of supporting a good relationship with music. As the main theoretical framework, I approach a good relationship with music from a psychodynamic perspective, particularly by applying

[1] In the Finnish music scene, as a member of different bands and with various leading artists. As a freelancer, I have performed live with international artists, e.g., Michael Monroe (ex-Hanoi Rocks) and Perttu Kivilaakso (Apocalyptica), and have also recorded with Darude among others. I have been a member of the bands Mighty 44, Teleks, Megaphone, and The Mama King among others.

[2] Mainly, Helsinki Pop & Jazz Conservatory; additionally, the Pop and Jazz Music degree program of Helsinki Metropolia University of Applied Sciences, and thirdly, the Culture and Music School Sandels [Kultur- och musikskolan Sandels] in Helsinki.

[3] Firstly, the national Pop & Jazz Summer camp near Pori. This pioneering summer program was founded in 1970 and later evolved into the Helsinki Pop & Jazz Conservatory. Besides teaching at the camp, I have worked as the artistic director of the program since 2013. Many students of this summer camp have later become internationally renowned performers, e.g., Ville Valo (ex-HIM), Alexi Laiho (Children of Bodom), Sami Yaffa (ex-Hanoi Rocks), Iiro Rantala etc. The other summer program where I have taught, organized in Lappajärvi in 2009–2018, featured acknowledged metal musicians as instructors, e.g., Timo Kotipelto and Matias Kupiainen (Stratovarius) and Kai Hahto (Nightwish).

concepts that belong to object relations theories. Since this view concerns fundamental emotional attachment, I consider it especially appropriate in popular music learning, where *learners have typically already established an emotionally meaningful relationship with favored music through long-term listening before commencing instrumental studies.* I shall return to this decision later, as I explore the concept of a good relationship with music.

1.2 The Research Questions and Aims of the Study

The main research question of this study is as follows: how can a student-centered approach and pedagogues' musical expertise be integrated into popular music instrumental education in order to constitute a pedagogy that at the same time develops ambitious musical outcomes *and* promotes a good relationship with music? To answer this, I ask three follow-up questions: first, why should student-centered pedagogy be employed, particularly in popular music education? In order to address this, I needed a more profound insight into learners' perspectives, and I also needed to explore the second follow-up question: what is the meaning of employing a student-selected repertoire as a pedagogical tool for a learner's relationship with music? To access the level of domain-specific detail, which is crucially needed as I mentioned above, I also ask the third follow-up question: how can such an integrated approach be employed in teaching hard rock groove? Table 1.1 shows these questions.

- **How can a student-centered approach and pedagogues' musical expertise be integrated into popular music instrumental education in order to constitute a pedagogy that at the same time develops ambitious musical outcomes AND promotes a good relationship with music?**
- **Why** should student-centered pedagogy be employed, particularly in popular music education?
- **What is the meaning** of employing a **student-selected repertoire** as a pedagogical tool for a **learner's relationship with music?**
- **How** can such an integrated approach be employed in teaching **hard rock groove?**

Table 1.1 The research questions of this study.

To explore these questions, I developed, implemented, tested, and analyzed a pedagogical design that I call *Student-Centered Musical Expertise* (henceforth, abbreviated as SCME). This approach started evolving gradually already in the beginning of my career as an electric guitar pedagogue, and in this study I will elaborate and refine it further. This pedagogical

design aims to integrate the rigid effectiveness of teacher-directed studies and the ideal of self-actualization in student-centered learning (for further reading on self-actualization in learning, see Rogers 1983: 169; Rogers 1994: 56–57; Rogers 1994: 327). As I emphasize that the musical expert skills of a pedagogue should not be bypassed in education, I intend to retain certain features of the traditional *master-apprentice model* (see Burwell 2012). On the other hand, my aim to promote a students' self-actualization is opposed to the practice of copying the pedagogue excessively, as in the master-apprentice model (see Burwell 2012). Consequently, my hope is that the SCME approach engages a vivid interaction between pedagogues' musical expert skills and a learners' personal musical ambition. This raises the fundamental question of how the musical expert pedagogue employs his or her expertise. With the SCME pedagogical design, I explore how an instrumental pedagogue can *apply their musical expertise in an empathic way* – as a tool that enables the advanced utilization of student-selected repertoire and thus constitutes personalized yet exacting studies.

I cannot emphasize the practical details too much, as student-centeredness remains poorly actualized (see above; EUA 2019) and practical guidance is thus needed. Therefore, I further elaborate the SCME design into three configurations, each of which applies students' favorite music in different ways. I call these configurations Inductive SCME (bottom-up), Deductive SCME (top-down), and Relative SCME. In Inductive SCME, pedagogues derive an applicable musical concept from students' favorite songs. For example, a student can learn new chords, scales, and techniques as they appear in his or her favorite music. In Deductive SCME, in contrast, pedagogues commence by demonstrating a musical concept from his or her musical expertise, which is only then applied to student-selected repertoire. As an example of Deductive SCME, I shall explore the utilization of exacting groove exercises. In this configuration, students first practice a groovy song presented by the pedagogue, after which the students apply their new skills to songs of their own choice. Thirdly, Relative SCME applies to situations where students want to study other music than their favorite genre. A stylistically versatile music pedagogue can then present an unfamiliar genre by relating it to the student's favorite genre. The pedagogue actualizes this by explicitly demonstrating similarities and differences between the two genres. Thus, a student can move on to discovering new musical influences. In this study, I explore the utilization of all three configurations.

As I scrutinize the utilization of the SCME approach, my hypothesis is that *music analysis and rapid transcription skills are essential tools in actualizing student-centered music pedagogy efficiently*. If this hypothesis can be confirmed, and if the SCME approach is successful in integrating the advantages of student-centeredness and musical expertise, this study can achieve the following four aims. Firstly, this study can then present SCME as a utilizable pedagogical tool for popular music instrumental education. This tool will then contribute to the second and wider aim of this study, to suggest a solution to the problem of student-centered pedagogy not being actualized within popular music instrumental education. Thirdly, this study aims to increase knowledge of groove in music research. By

applying this knowledge, the study can achieve its fourth aim, to develop pedagogical practices for learning groove.

1.3 Methods and Materials of the Study

As I discuss below, this is a qualitative study, meaning that it "relies primarily on human perception and understanding" (Stake 2010: 11). However, as I make micro-rhythmical measurements in studying groove, it also includes features of quantitative research that, according to Robert Stake (2010: 11), emphasize "linear attributes, measurements, and statistical analysis".

My main research approach follows Design-Based Research (DBR), which is a frequently employed methodology in the learning sciences (see e.g., Barab 2014). DBR has a dual agenda of developing both theory and practices in pedagogy (Barab 2014: 151), which corresponds to the aims of this study as described above. The fundamental idea of DBR is that informed experts develop, test, and refine pedagogical models or practices, which are called interventions (van den Akker 1999; Barab & Squire 2004: 6, 8; Plomp 2013: 11, 15, 16; Christensen & West 2018; Armstrong et al. 2020). In this study, the Student-Centered Musical Expertise (SCME) approach is a pedagogical intervention, the utilization of which I explore as my main focus. DBR places researchers as agents of change (Armstrong et al. 2020) and considers students who participate in the study as collaborators (e.g., Barab & Squire 2004).

For the empirical pedagogical material, I analyzed video-documented individual guitar lessons with nine of my students at the Helsinki Pop & Jazz Conservatory for a semester of three months. Eight of the participants were vocational students who had already played guitar actively for 5–10 years, and who aimed for a career as a professionally performing guitarist. One participant was a student with a hobby approach, who was at the earlier stages of his learning. Five of these participants studied groove during the sessions, and they represent various stages of learning that subject matter. With the four other participants, we concentrated on other musical focuses that included improvisation, technical instrumental skills, expanding stylistic versatility, and musical fundamentals (transcription, chords, basic technique). We essentially implemented a student-selected repertoire with the students who participated in this research. To explore the pedagogical practices of the components of groove, which essentially involve interplay within a band, I additionally video-documented lessons of a groove band workshop. In total, I documented 65 lessons, which comprise 44 hours and 23 minutes of video-material.

To explore the research participants' experiences of their learning, I employed the Video-Stimulated Recall (VSR) interviewing methodology. VSR is a highly popular methodology in pedagogical research, as well as various other fields (see Lyle 2003; Rowe 2009). Music education researcher Victoria C. Rowe describes VSR as involving "video-recording an

activity and then replaying the recording to the participants so that they can comment on matters of interest". By doing so, the students who participated in this study engaged in an analysis of their own learning. I made audio recordings of the semi-structured interviews (see e.g., Robson 2002 [1993]: 278) with all of the nine guitar students individually. In total, I recorded 9 hours and 7 minutes of VSR interview material.

I analyzed the video-documented guitar lessons and their corresponding VSR interviews by applying the theoretical framework of this study. This theoretical framework comprises, firstly, a review of literature from various fields of pedagogy that are considered student-centered. These include, for example, constructivist pedagogy, social constructivism, and humanistic education. I then review learning practices in popular music that are considered informal (e.g., Green 2002, 2008; Folkestad 2006). To outline the features of a good relationship with music, I study literature on psychodynamic research on music learning. I take a closer look at these sources in the discussion on previous studies, which appears further below.

As the primary musical source material, I mainly explored recordings of the band AC/DC, because it is widely acknowledged as a groovy example of classic hard rock. I analyzed the recordings to the millisecond by employing spectral analysis in the software Sonic Visualiser. I also employed standard notation when it was most appropriate for analyzing a particular musical phenomenon. I also referred to, for example, Black Sabbath, Led Zeppelin, Deep Purple, the Police, as well as the funk group The Meters, to vary the musical source material. I have also made all of the transcriptions and their notations in this thesis. As secondary source material for exploring groove, I referred to literature on groove studies in jazz and funk and I applied them to hard rock. This application was due to the lack of previous research on hard rock groove, and even academic rock groove studies. I present these musical secondary source materials in the following section on previous studies. In my analysis, I focus on timing, dynamics, phrasing, time-feels, and interplay as the central components of groove.

As an application of the results of my groove analysis, I matched the different components of groove with specific exercises for guitar pedagogy. In the video-documented lessons, I applied these exercises to the SCME approach. In addition to practicing the same pieces that I researched with spectral analysis, then, I also applied these exercises to repertoire chosen by the students who participated in this research. As I mentioned above, the video-documented guitar lessons feature a selection of other musical focuses that appear frequently in guitar education (i.e., chords, basics of transcription, improvisation, technical instrumental skills, and expanding stylistic versatility). They offer variety in the research material, and thus contribute significantly to exploring the applicability of the SCME approach.

1.3.1 Connecting the Layers: Reflexive Methodology

Looking at the entirety of this study, it involves several methods and multiple layers. My epistemological framework, meaning how I construct knowledge, is versatile. Popular music learning, pedagogical design, music analysis, psychodynamic psychology – these may appear a disparate selection of topics at first glance. However, there is an essential interplay between these different perspectives. To pull them together, I refer to reflexive methodology, which is a multi-layered, comprehensive "metamethodology" elaborated by Mats Alvesson and Kaj Sköldberg (2018 [2000]) for qualitative research in the social sciences (Alvesson & Sköldberg 2018 [2000]: 396). In music education research, this approach has been employed by Tuulikki Laes (2017). In essence, reflexive methodology, or reflexive interpretation, involves more than the researcher's reflection. Importantly, reflexivity here means that different modes of thought are confronted with each other (Alvesson & Sköldberg 2018 [2000]: 328), and that these levels are "reflected in one another" (Alvesson & Sköldberg: 329). Thus, reflexive methodology encourages multi-layered studies and functions as a metatheory that forms "pipelines" or "liaisons" between different paradigms (Ibid.: 376). According to Alvesson and Sköldberg (2018 [2000]: 339), "it is the reflection and challenging of different levels or themes of interpretation that is central for research with potential for developing innovative knowledge contributions". In other words, reflexive methodology strives for creativity in seeing various aspects (Ibid.: 331) and new connections (Ibid.: 389), instead of becoming "locked into a particular philosophical position" (Ibid.: 328). As their main example of a "reflexivity-stimulating framework" (Ibid.: 339) in their book *Reflexive Methodology*, Alvesson and Sköldberg (2018 [2000]) suggest a combination of four traditions of generating knowledge. These four interpretive perspectives are: 1) empiricism (data-driven), 2) hermeneutics (insight-driven), 3) critical theory (critical-emancipatory), and 4) postmodernism (e.g., polyphony-driven). Since reflexive methodology avoids being merely a "recipe-book" approach to research (Ibid.: 329–330, 395), Alvesson & Sköldberg encourage scholars to realize it in various ways (Ibid.: 339, see also 344–345). In this study, I implement the four above paradigms as follows.

Firstly, empiricist, data-driven methodologies "work in close proximity with data" and "seek to imitate the technical approach, rigour and codification of quantitative methodology" (Alvesson & Sköldberg 2018 [2000]: 110). This approach is present in this study in how I research popular music pedagogy by video-documenting the lessons, and in how I study hard rock groove through spectral analysis and transcriptions of recordings.

Secondly, the hermeneutic, insight-driven orientation emphasizes the making of interpretations (Alvesson & Sköldberg 2018 [2000]: 172), as it focuses on "the understanding of underlying meaning, not the explanation of causal connections" (Ibid.: 116). In the analysis of the video-documented lessons in this study, I employ this paradigm when I make interpretations of what meaning the Student-Centered Musical Expertise (SCME) approach has for the students' learning. Importantly, the hermeneutic paradigm is

represented as I search for the underlying meanings of a good relationship with music by studying the psychodynamic literature.

The third paradigm, critical theory, involves confirming or impugning existing conditions, for example critical reflection on institutions and "emancipation from frozen social and ideational patterns" (Alvesson & Sköldberg 2018 [2000]: 218). In this study, I challenge previous views of student-centered pedagogy as well as teacher-driven forms of learning. By integrating the advantages of these contrasting approaches, I implement critical theory as I design the SCME pedagogical approach for popular music instrumental pedagogy.

The fourth paradigm, post-modernism, is a broad concept that involves, for example, a receptiveness to pluralism, which means employing multiple voices in interpretation (Alvesson & Sköldberg 2018 [2000]: 272). I actualize this by engaging the research participants as informants when I employ the Video-Stimulated Recall method. In other words, the students' subjective interpretations of the pedagogical episodes, in which they have participated and then viewed as a video-document, is an essential source of information. This approach challenges the view that a researcher is an authority in terms of being the sole source of information (Ibid.: 262, 264). Moreover, the post-modern, pluralist view of emphasizing "alternative presentations of phenomena" (Ibid.: 273) additionally contributes to the research of groove. Namely, much of the pedagogical documentation reveals how the groove-related exercises, which rely on the empiricist exploration of recordings, affect the students' groove skills and their own interpretations thereof. Therefore, this study goes beyond researching groove through spectral analysis, as the students' performances are used to test the results of my groove analysis in practice. In other words, the post-modern, polyphony-driven paradigm also overlaps with the empiricist, data-driven approach.

At this point, the close connections between the different levels of epistemology unfolds. In summary, the SCME pedagogical design actualizes the level of critical theory. It is built on my hermeneutic interpretations of music learning and the meaning of a good relationship with music. The main musical application of this design, the pedagogy of groove, relies on my empiricist study of recordings. On the empiricist level, I scrutinize the SCME approach by collecting video-data from the guitar lessons. I aim to explore what meaning the utilization of the SCME approach has for the students' learning and their relationship with music, which is a hermeneutic interpretation. The inclusion of the students' analysis of the pedagogical events belongs to the post-modern, polyphony-driven paradigm.

In accordance with Alvesson & Sköldberg (2018 [2000]: 326), none of the four above aspects dominate in this study: all levels are important (although Alvesson & Sköldberg also present different configurations, see Ibid.: 344–345). Working this way, each of the four paradigms contribute to the analysis of my research results and the conclusions of this study. Below, Figure 1.1 depicts the relationships between the different levels of constructing knowledge in this study.

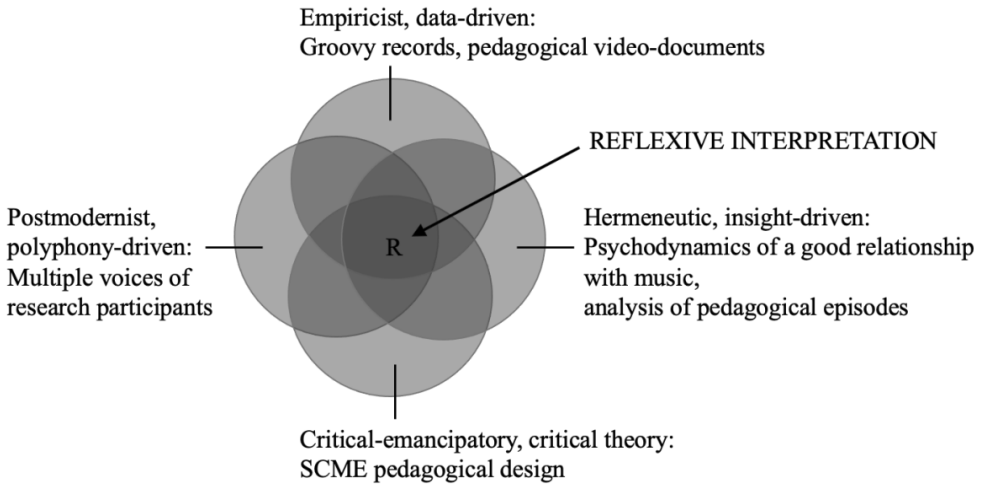

Figure 1.1. Reflexivity: the relationships between the different epistemological paradigms in this study. This figure is based on Tuulikki Laes's (2017: 59) illustration.

Ultimately, the core of my epistemological stance is in the overlap of these levels (see "R" in Figure 1.1). According to Alvesson and Sköldberg (2018 [2000]: 374), good qualitative research is "highly reflexive"; it "encourages dialogue between various viewpoints" by entering an "interparadigmatic field" (Ibid.: 375). As discussed, the endeavor to achieve such synergy is the methodological essence of this study. It should clarify and justify the multi-layered nature of this work.

1.4 Previous Research

Most literature on student-centered pedagogy belongs to classroom teaching in non-musical contexts. This myriad is certainly discrepant. Student-centeredness is addressed through a variety of similar terms, such as learner-centered education (LCE), personalized learning, and many others. In this study, I employ the term student-centered pedagogy for the sake of consistence. Furthermore, even a commonly agreed upon definition of student-centered pedagogy does not exist, as other music education scholars have also noticed in their research (Mesiä 2019: 39). However, Finnish educationalist Juhani Hytönen (1998 [1992]) has collected a historical overview of student-centered pedagogy, which he equates with child-centered parenting. Despite the divergence in this literature, there are commonly cited backgrounds for different variants of student-centered pedagogy. Essentially, philosopher and pedagogue John Dewey (1859–1952) emphasizes the learner's own experiences (Dewey 1988 [1938]: 11–30). Based on this view, constructivist pedagogy involves learners constructing new knowledge based on their prior knowledge (e.g., Hoidn 2017: 21). Psychologist Lev Vygotsky's (1896–1934) social constructivism emphasizes that learning is a shared experience of knowledge construction between individuals (see Vygotsky 1978: 57). These views are, in turn, influenced by philosopher Jean-Jacques Rousseau's (1712–

1778) thinking (see e.g., Hytönen 1998 [1992]: 15), which stresses a learner's personal experience (Rousseau 1921 [1762]: 31) and views a child's natural interest as a premise of learning (Rousseau 1921 [1762]: 54). Therefore, Rousseau dismisses the idea of adult-dictated education, which has consequently influenced student-centered music education as well (Campbell 2008: 24). In contemporary learning sciences, similar ideas have been applied by, for example, educationalists Maryellen Weimer (2002, 2013), Barbara L. McCombs and Lynda Miller (2007, 2009), and Michele Schweisfurth (2013a, 2013b). A frequent theme in the current literature on student-centered learning is a "paradigm shift from teaching to learning" (e.g., EUA 2019: 4; see also Young & Paterson 2007: 6). For example, Weimer (2013: 60) suggests a transition from viewing the teacher as "a sage on the stage" to considering them as "a guide by the side". However, this paradigm shift is a debated concept, and it has been criticized, for example, by educationalist Gert J.J. Biesta (e.g., 2012). This study's perspective bears resemblance to Biesta's (2012) critique against the "disappearance of the teacher". I apply a similar view to a musical context, and I delimit my application of Biesta 's work to this critical viewpoint on student-centeredness.

As discussed, student-centered pedagogy has provoked fierce opinions, both supporting and dismissing it. Research results are inconsistent. Weimer (2013) reports research evidence according to which student-centered learning promotes deep learning (i.e., long-lasting and better understanding of the content). Educationalist Sabine Hoidn (2017: 554), however, presents a somewhat contrasting view on deep learning, and suggests that teacher-directed practices should also be retained. Furthermore, the proponents of student-centered pedagogy argue that it is the most motivating form of learning, because students then work towards the goals that they set for themselves (e.g., Pedersen & Min Liu 2003; McCombs & Miller 2009). In alignment, psychologist Carl Rogers' (1969, 1983, 1994) humanistic education has importantly contributed to student-centered pedagogy by emphasizing learners' self-actualization. This relates to psychologist Edward L. Deci's (1975) fundamental theory of *intrinsic motivation*. According to Deci (1975: 23), an intrinsically motivated learner is driven by the activity as such, instead of the potential extrinsic rewards. Advocates of student-centeredness criticize teacher-directed education for relying on external motivation that involves extrinsic rewards, such as grades or degrees (e.g., Pedersen & Liu 2003). In contrast, critiques of student-centered pedagogy, for example, Michael J. Hannafin and Kathleen Hannafin (2010), argue that students simply have too little prior knowledge to be built upon. Interestingly, even Dewey stated already in 1902 that "nothing can be developed from nothing" (Dewey 1902: 24).

Consequently, contemporary learning scientists, as well as music education researchers, have suggested integrating student-centered and teacher-directed approaches (see Mesiä 2019: 46; Björk 2016: 184). For example, Sursock and Smidt (2010: 32) emphasize "a mix of various methods involving both student- and teacher-centered approaches". Similarly, Hoidn (2017: 554) discusses "guided discovery" instead of "minimally guided discovery" that involves a passive teacher. In this study, I essentially aim to construct such an integrative approach for popular music instrumental education.

In the context of popular music education, student-centered pedagogy relates closely to the discourse on how to introduce *informal learning practices* to formal teaching. This has been a lively discussion for the last two decades or so (see e.g., Karlsen and Väkevä 2012; Wright 2016), and Lucy Green's (2002, 2008) pioneering work is still frequently cited (see Wright 2016). In this discussion, informal learning refers to practices that have traditionally occurred outside institutions and formal education (see e.g., Green 2002, 2008; Folkestad 2006). These practices include imitating records by ear, exchanges with peers in a self-directed band setting, and so-called implicit learning through enculturation in the surrounding sonic environment (see Green 2002, 2008). Consequently, Green (2008) is among the pioneers who have researched the inclusion of these learning practices in the music classroom, which is commonly referred to as non-formal teaching. As this discourse has evolved, Green's (2002, 2008) research has been elaborated – and criticized. For example, Randall Allsup and Nathaniel J. Olson (2012: 13; see also Allsup 2008) have criticized Green's (2008) studies for involving an excessively passive teacher. As I implied above, this discourse is a central point of departure of the present study. Moreover, informal learning and non-formal teaching have been studied, for example, by Göran Folkestad (2006), Heidi Westerlund (2006), Lauri Väkevä (2006, 2012), Randall Allsup (2008), Abigail D'Amore (2008), Joseph Abramo (2010), Sidsel Karlsen and Heidi Westerlund (2010), Cecilia Björck (2011), Don Lebler (2012), Philip Alperson (2015), Ruth Wright (2016), Cecilia Wallerstedt and Monica Lindgren (2016), Martina Vasil, Lindsay Weiss and Bryan Powell (2019), Julia Brook, Robbie MacKay and Chris Trimmer (2019), and Warren Gramm (2021). These researchers, among others, have approached informal learning and non-formal teaching in popular music education from different perspectives, and I will discuss this literature later in this study.

Informal learning practices are fundamental in jazz, and therefore I refer to jazz studies as well. Paul F. Berliner's (1994) research on jazz also explores musicians' informal learning practices. Eitan Y. Wilf (2014) discusses the saliency of informal learning for jazz education. In the informal learning practices in both popular music and jazz, learning by ear relates closely to *audiation* (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351; see also Gordon 2007 [1980]: 3–26). Audiation is a central concept in this study; it means the internal hearing of music, in other words imagining what the music sounds like when it is not audibly present (see Gordon 1985: 34; Elliott 1995: 228; Elliott & Silverman 2015: 350–351).

An important connection between the discourse on informal learning practices in popular music and this study is that informal learning typically involves learning through personally favored music. This corresponds to student-centered pedagogy, and Green (2008: 13) argues that due to the absence of student-centeredness in formal music education some students have mistakenly been labeled as untalented. According to Green (2008: 13), the problem is that non-student-centered curricula have prevented learners from demonstrating, or even discovering, their musical abilities.

However, there are also significant differences between this research and the above music pedagogical studies. Firstly, previous research on nonformal music teaching has largely concentrated on group learning in a school classroom, social learning in a band setting, and jazz pedagogy. Research on student-centered instrumental popular music education with an individual student (i.e., a one-on-one setting) is extremely limited (see Mesiä 2019: 47). Music pedagogue Susanna Mesiä (2019) has researched student-centered pedagogy in individual jazz vocal education. Although her musical context is obviously different than the present research, I refer to Mesiä's (2019) study to the extent that is relevant. Secondly, my pedagogical design in this study, the Student-Centered Musical Expertise (SCME) approach, importantly conceives *both the student and the pedagogue as active participants.* This is in stark contrast to, for example, Green's (2008: 34) study which often involves the teacher as a more passive observer who is "standing back", as I mentioned above. Thirdly, with this study's practical application in the pedagogy of groove, I aim for more detailed musical content than in the previous studies, for example by Green (2002, 2008). As I thus emphasize the pedagogue's role as a musical expert and apply the traditional master-apprentice model, as I mentioned above (see Burwell 2012), my stance also contrasts with most student-centered views.

On the other hand, my perspective aligns with many aspects of the praxial philosophy of music education that David J. Elliott (1995) presented in the first edition of *Music Matters,* and which Elliott and Marissa Silverman (2015) elaborated upon in the second edition of the book. Apparent correspondences include that Elliott and Silverman (e.g., 2015: 49, 52, 217) position the learner as an active doer, and that musical activity is perceived in relation to a musical tradition or praxis which is learned. Most importantly, however, Elliott and Silverman (e.g., 2015: 48, 52, 231) stress that music and music learning involve crucial, multidimensional meanings that extend beyond sound and techniques. Elliott and Silverman (2015) discuss, for example, social, cultural, and ethical meanings of music learning. Similarly, Elliott and Silverman's (2015: 158–164) perspective on a student is holistic, meaning that it views a learner as a whole person with multiple dimensions (see also Rogers 1983: 167). With a similar premise, I study music pedagogy by emphasizing the psychological meanings of personally favored music. However, I apply an approach that Elliott and Silverman (2015) do not explore, as I concentrate on psychodynamic theories.

In terms of this study's psychological perspective, Kari Kurkela's (1993) and Cecilia Björk's (2016) studies concern a psychodynamic view on a good relationship with music and personally meaningful music learning. In practice, student-centered learning and a good relationship with music have been mentioned in parallel in the curricula of Finnish music institutions since the mid-1990s (Björk 2016: 57), and in the legally obligatory national curriculum since 2002 (Björk 2016: 58). As a perspective on what a good relationship with music is, Kurkela's (1993) and Björk's (2016) psychodynamic research on music pedagogy apply concepts of, for example, Donald W. Winnicott and Wilfred Bion, which belong to object-relation theories. For a few brief examples of the key concepts, Kurkela's (1993) musical application of Winnicott's (1965 [1960], 2016 [1964]) true self/false self theory

explores how music education can, favorably, promote self-expression and become profoundly meaningful for a learner's integrity. Furthermore, by applying Winnicott's (2005 [1971]) theory of a transitional object and Wilfred Bion's (1959, 2004 [1962], 1984 [1965]) container, Kurkela (1993) and Björk (2016) have explored how personally meaningful music may subliminally obtain a soothing and protective psychic function. However, these music pedagogical studies have not concentrated particularly on popular music. In this study, I apply this psychodynamic perspective to deepen the understanding of how emotion-driven, student-selected repertoire may constitute meaningful learning in popular music that typically involves a learner's prolonged engagement with personally favored music.

Furthermore, Rogers' (1969, 1983, 1994) humanistic education relates to this psychodynamic approach. Importantly, Rogers (e.g., 1994: 157–158) emphasizes a pedagogue's *empathy* towards the student. As I discuss the empathic role of a music pedagogue, I also refer to Karin S. Hendricks' (2018) book *Compassionate Music Teaching*. Furthermore, this relates to educational views that set self-growth as a pedagogical goal. For example, Elliott and Silverman's (2015) praxial philosophy addresses this with the concept of *eudaimonia*. The concept of eudaimonia derives from ancient Greece, and is often translated as human flourishing (Smith & Silverman 2020: 2). Recent research on eudaimonia in music pedagogy include the book *Eudaimonia: Perspectives for Music Learning,* which is edited by music educationalists Gareth Dylan Smith and Marissa Silverman (2020). I aim to contribute to this discourse by exploring psychodynamic phenomena that may further illuminate human flourishing in music learning.

Regarding the musical focuses of this study, most of the previous research on groove concerns jazz, where the phenomenon is often referred to as swing (see e.g., Keil 1966; Schuller 1968: 6–7; Benadon 2006; Butterfield 2010, 2011). Early jazz groove studies include those by André Hodeir (1956) and Charles Keil (1966), while Fernando Benadon (2006) and Matthew Butterfield (2010, 2011) represent more recent research. Although groove in other genres has been studied less, music researcher Anne Danielsen (2006) has studied funk groove extensively. Individual studies have focused on, for example, contemporary R&B (Carlsen & Witek 2010), Latin-American clave-based music (Chor 2010) and Scandinavian folk music (Johansson 2010). As mentioned, however, academic studies on hard rock groove are non-existent. Therefore, to explore the characteristics of hard rock groove, I need to present a few novel terms, which I will explicate in the following.

In jazz and funk, phrasing which is in between even and swing (i.e., a triplet-feel) is a commonly recognized phenomenon. For example, Danielsen (2006: 77, 80, 83) mentions that "slightly swung sixteenth notes" are a ubiquitous feature in funk. In jazz studies, Benadon (2006) and Butterfield (2010), for example, research how jazz soloists vary the amount of swing of their eighth notes. For lack of a consistent terminology, I call such phrasing, which is in between even and swing, Moderate Swing Phrasing. As I discussed above, I presume that an essential component of groove, even in hard rock, for example AC/DC, is the phrasing of eighth notes, which is minutely swinging although it appears to

be even. This appears to occur on an even smaller scale than in funk and jazz. As I researched this through spectral analysis, I termed this phenomenon *Implied Moderate Swing Phrasing*. For the most accessible presentation of my analysis, I introduce the measure Swing Percentage Split (SPS). However, I employ it in conjunction with the term Beat-Upbeat Ratio (BUR) in order to align with previous groove studies in jazz (e.g., Friberg & Sundström 2002; Benadon 2006; Butterfield 2010, 2011).

Due to the lack of previous academic studies on the pedagogy of groove, I refer to non-academic documents on musicians' practicing methods. Of learning material for drums and bass, Ed Friedland's (1999) article in *Bass Player* magazine summarizes groove-related exercises that other instrumentalists have also applied, according to my knowledge. Firstly, Friedland (1999) presents commonly utilized metronome exercises for improving timing (i.e., temporal accuracy and implying the continuous beat). Secondly, he recommends mimicking grooves by singing to access control over phrasing. Thirdly, he describes time-feels (e.g., performing behind the beat, ahead of the beat) verbally and by referring to recordings. Although these practice methods are efficient and somewhat well-known, it appears that a solid tradition of teaching groove has not been documented. This might be due to my experience that groove has been largely mystified among musicians and educators. In this study, I apply the timing exercises that Friedland (1999) has collected, and I also design pedagogical practices for Moderate Swing Phrasing and time-feels. Ultimately, I apply all these exercises to a student-selected repertoire in the video-documented pedagogical research material of this study.

There is clearly more literature on the other musical focuses that appear in the video-documented lessons in my research materials. Improvisation pedagogy has been researched by, for example, David Ake (2003), Kenneth E. Prouty (2008), Eitan Y. Wilf (2014), Ed Sarath (2018), Guro Gravem Johansen, Kari Holdhus, Christina Larsson and Una MacGlone (eds 2019), and Eeva Siljamäki and Panagiotis A. Kanellopoulos 2020 [2019]. In contrast with this study, however, they have concentrated mainly on jazz improvisation. When academic material is not available, even here I refer to non-academic sources. Concerning music theoretical terminology especially related to improvisation, I refer to Mark Levine's landmark books *Jazz Theory Book* (1995) and *Jazz Piano Book* (1989). In teaching improvisation, I employ a common practicing method that jazz musicians refer to as *imitation – assimilation – innovation*. This practice is commonly credited to Clark Terry (see O'Donnell 2011). In this study, I also apply it pedagogically to student-selected repertoire in other genres, such as heavy metal. Furthermore, regarding instrumental skills, I refer to Mick Goodrick's (1987) book *The Advancing Guitarist* for approaches to improving knowledge of the guitar fretboard. For guitar playing technique, I apply Paul Gilbert's instructional videos *Intense Rock* (1988) and *Intense Rock II* (1991). All the above sources are widely acknowledged and, according to my pedagogical experience, still relevant learning materials in their respective fields. For example, Gilbert's technical exercises are still prevalent material for guitarists' picking and legato techniques, which we studied with some of the students who participated in this research. For other learning practices of rock

guitarists, I refer to interviews with acknowledged musicians in non-academic publications such as Guitar World magazine, for example.

1.5 The Structure of the Study

Below, Table 1.2 illustrates the structure of this study. This presentation also summarizes the central focuses of this research, which I have introduced above. To explain the function of each main chapter, Table 1.2 indicates the questions that the corresponding chapters explore. Piece by piece, these chapter-specific questions work towards the aim of finally answering both the main research question and its follow-up questions as I presented above.

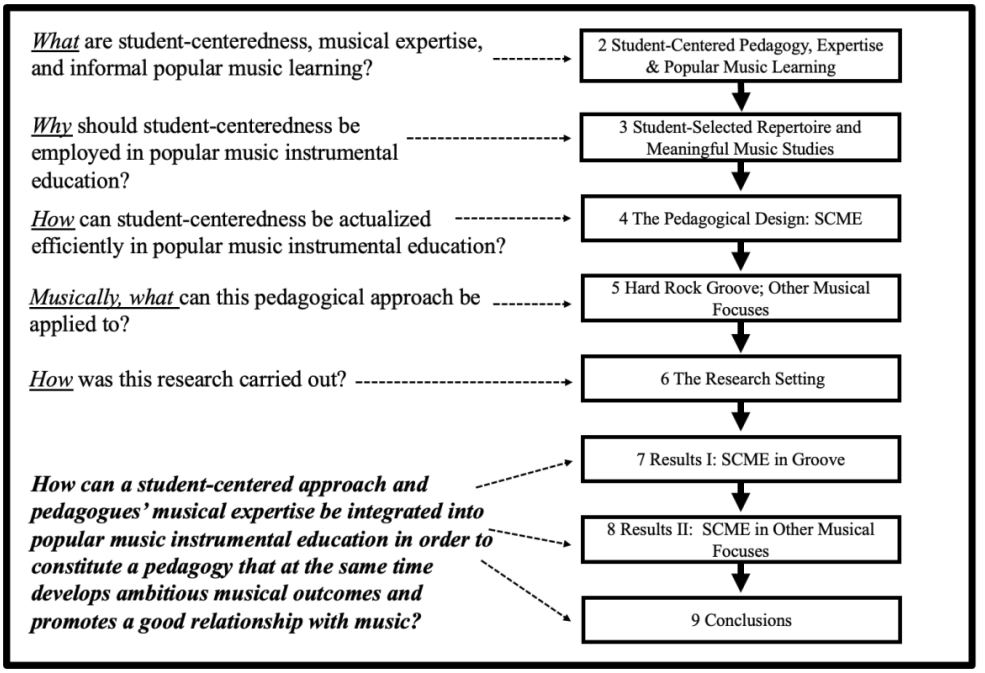

Table 1.2. The structure of the study. The functions of the main chapters are summarized by their fundamental questions (on the left), concluding with the main research question of this study.

Chapters 2 through 5 constitute the theoretical framework of the study. Chapters 2, 3 and 4 set the pedagogical frame while Chapter 5 concentrates on the musical focuses.

Subchapter 2.1 is a literature review of studies on student-centered pedagogy (e.g., Dewey 1902, 1988 [1938]; Rogers 1969, 1983, 1994; Weimer 2013; Hoidn 2017) and expertise (e.g., Gobet 2015). In Subchapter 2.2, I briefly map out the main informal practices in popular music learning (e.g., Green 2002, 2008; see also Berliner 1994) and reflect on how student-centered pedagogy relates to this music tradition. In its entirety, in Chapter 2 I

essentially aim to answer the question of what student-centered popular music pedagogy and subject expertise are (see Table 1.2 above).

In Chapter 3, I explore why student-centeredness should particularly be employed in popular music education. In this chapter I apply a psychodynamic perspective on learning music (e.g., Kurkela 1993; Björk 2016; cf. Winnicott 1965 [1960]; cf. Winnicott 2005 [1971]; cf. Bion 2004 [1962]), as I aim for a deeper understanding of what meaning the pedagogical utilization of student-selected repertoire can have for a learner's relationship with music.

By building on the conclusions of Chapter 2 and Chapter 3, in Chapter 4 I outline how student-centered pedagogy can be actualized efficiently in individual instrumental popular music education. In doing so, I introduce the pedagogical design of this study, the Student-Centered Musical Expertise (SCME) approach.

In Chapter 5, I explore the musical focuses to which I later apply the SCME approach in this research. In Subchapter 5.1, I study hard rock groove, as exemplified by AC/DC (cf. Danielsen 2006; cf. Butterfield 2010, 2011). In Subchapter 5.2, I briefly delineate the other musical focuses that appear in the video-documented guitar lessons. These focuses include learning musical fundamentals (chords, basics of transcription), improvisation, technical instrumental skills, and stylistic versatility.

In Chapter 6, I explicate the research setting and the methodological decisions I have made in the research process. In Subchapter 6.1 I review Design-Based Research (see e.g., Barab 2014), and in 6.2 I discuss the Video-Stimulated Recall (see e.g., Lyle 2003; Rowe 2009) method. In Subchapter 6.3 I explain the conduct of the study, and in Subchapter 6.4 I discuss the reliability of this research design.

In Chapters 7 and 8, I analyze the research results of utilizing the SCME approach in practice. I explore selected pedagogical episodes from the video-documented lessons and their corresponding video-stimulated recall-interviews with the research participants. In Chapter 7 I analyze teaching groove, and in Chapter 8 I explore teaching the other musical focuses. As mentioned, I apply the theoretical framework that I constructed in Chapters 2 through 5 as an analytical lens.

In Chapter 9, I summarize the research results and draw the conclusions of this study as an answer to my research questions. Then, I make critical remarks on this study. Finally, I discuss the contributions of this study for its various fields, and I reflect on future prospects to expand the research.

2 Student-Centered Pedagogy, Expertise, and Popular Music Learning

2.1 Overview of Student-Centered Pedagogy and Expertise

As mentioned in the previous chapter, there is more research on student-centeredness in non-musical classroom teaching than in instrumental popular music education. Therefore, in this subchapter I mainly discuss general educational literature, to the extent that it is purposeful to outline student-centeredness. I also review literature on expertise in order to delineate musical expertise, which is another key concept in this study. Thus, I aim to form a broader view on the research topic before I concentrate on the specific field of popular music learning in Subchapter 2.2.

2.1.1 Definitions of Student-Centered Pedagogy

Student-centered pedagogy has been studied extensively and my review aligns with educationalist Maryellen Weimer's (2013: 7) notion that the literature on the subject is vast. However, no commonly agreed definition of student-centeredness exists, and this has been the object of disagreements.[4] Descriptively, many similar terms appear frequently in literature, for example student-centered learning, personalized learning (see e.g., Education Reform Glossary 2015), as well as student-focused teaching, learner-centered education (LCE), experiential learning, adaptive learning, and progressive education. Despite the obvious similarities, different writers also represent somewhat different views. The common trait within the myriad of sources is, simply, that the central focus is on the student instead of the pedagogue. This is typically referred to as "a widely accepted paradigm shift from teaching to learning" (EUA 2019: 4; see also Young & Paterson 2007: 6), which I discuss further below. As Susan Pedersen and Min Liu (2003: 58) note, student-centered pedagogy is often described by contrasting it to teacher-directed approaches. Teacher-directed pedagogy is commonly characterized by the pedagogue setting the learning objectives and, in a school environment, utilizing lecturing and frontal teaching where the pedagogue imparts their knowledge in front of the class (see e.g., Pedersen & Liu 2003: 58). Typically, proponents of student-centered pedagogy criticize teacher-directed education (see e.g., Pedersen & Liu 2003: 58). Lynne Young and Barbara L. Paterson (2007: 5), for example, accuse teacher-driven methods for perceiving the students merely as "'empty vessels' to fill or 'blank slates' upon which the teacher writes his or her knowledge". In summary, there appears to be more common ground on what student-centered pedagogy is *not*, than what it is. Despite these ambiguities, I present a review on common definitions below. I employ the term student-centered consistently even if the original sources utilize different but interchangeable terms (e.g., learner-centered).

[4] This has also been noted by other music education scholars (e.g., Mesiä 2019: 39).

To commence with a perspective that will persist throughout this study, according to the European University Association (EUA, 2019), student-centered pedagogy "takes into account the student as a person with a unique background". In alignment, Barbara McCombs (2008: 2) argues that a student-centered teacher takes into consideration the various individual factors and histories of the learner. Relating to my explorations in Subchapter 2.2 and Chapter 3, I suggest that this view on student-centered education appears especially suitable for the present study. This is because emphasizing a student's unique background corresponds to popular music learning, where favored music has typically become personally meaningful for a learner through their *long-term history as a music listener.* As the EUA's (2019) report further states, student-centered pedagogy is implemented in decision making processes (see also Sursock 2015: 88). This viewpoint applies well to my practical implementation in this study, which emphasizes the choice of pedagogical repertoire.

Furthermore, Michele Schweisfurth's (2013a: 20; 2013b; 2019) definition of student-centered pedagogy, which UNICEF utilizes in their online Think Piece Series, suggests that student-centered pedagogy "gives learners, and demands from them, a relatively high level of active control over the contents and processes of learning. What is learnt, and how, are therefore shaped by learners' needs, capacities and interests". In a similar way, Julie K. Brown (2008) argues that "student-centered instruction is a form of active learning where students are engaged and involved in what they are doing".

As I mentioned above, most previous research on student-centered pedagogy has concerned classroom teaching. Jazz vocal pedagogue Susanna Mesiä (2019: 47) speculates that the reason for this may be a conception according to which all individual music education is, as such, student-centered. Such a perspective would imply that a setting where the entire focus is on the only student in the classroom constitutes student-centered pedagogy. In alignment with Mesiä (2019: 47), I suggest that it is impossible to agree with such a view of student-centeredness. I argue that individual instrumental education, where the pedagogue selects the studied repertoire based on his or her expertise, is teacher-directed. According to Mesiä (2019: 47), such a setting resembles a master–apprentice model which has long traditions in instrumental tuition and may not be considered student-centered. I shall return to the master-apprentice model several times in this study.

Finally, I suggest this definition of student-centeredness for music education: *student-centered music pedagogy means that the musical material that is studied in the lessons stems from, or is explicitly related to, the student's favorite music.* I will also employ the term student-selected repertoire, meaning that the students suggest their favorite pieces to be studied in the lessons. Throughout the present study, I shall explore how this can be actualized in practice and what meanings this may have for students' learning as well as their relationships with music.

2.1.2 A Historical Perspective on Student-Centered Approaches

In his historical review of student-centeredness, educationalist Juhani Hytönen (1998 [1992]: 14) equates student-centered pedagogy with child-centered upbringing. Fundamentally, this view relies on the ideals of respect for individuality and the equality of individuals, and the rejection of forcing a child into any predestined standard model (Hytönen 1998 [1992]: 14). From this perspective, student-centered approaches are not entirely new in Western culture, but rather the opposite. As I discuss below, the view that an individual possesses internal knowledge that should be utilized in learning has earlier origins, but it was also long disregarded. In the following, my object is not to present a comprehensive history of this line of thought but rather to outline its main development briefly.

Philosopher Jean-Jacques Rousseau (1712–1778) is commonly cited as a pioneering force of student-centered thought (see e.g., Hytönen 1998 [1992]: 15). Rousseau (1921 [1762]: 54) resists the idea of forcing children to acquire anything without their own natural interest. Rousseau (1921 [1762]: 54) argues that imposing adults' ways of thinking on children in an untimely way is against nature's order, as it produces "a forced fruit immature and flavourless, fruit which will be rotten before it's ripe". Consequently, music educationalist Patricia Campbell (2008: 24) states that one aspect of Rousseau's impact on music pedagogy, and education in general, is the view that a curriculum should be child-centered rather than adult-dictated. In the same line, Rousseau's (1921 [1762]: 31) thinking emphasizes the importance of a learner's personal experience, as he argues that a child's "sense experiences are the raw material of thought". From this perspective, true learning is essentially empirical, instead of passively received second-hand information passed on from an authority. Fundamentally, Rousseau (1921 [1762]: 56) relies on a child's natural innate goodness. Rousseau (Ibid.) wants to "lay it down as an incontrovertible rule that the first impulses of nature are always right", as he states that "there is no original sin in the human heart". This point of departure bears resemblance to Socrates' (c.470–399 BC) view that an individual possesses an internal awareness, which should be brought out by asking the correct questions (see Skirbekk & Gilje 1995 [1987]: 58, 750; Hytönen 1998 [1992]: 19; for further reading see Peters 2015 [1981]: 15–31). This is commonly referred to as Socrates' maieutic approach and interrogative midwifery (see Skirbekk & Gilje 1995 [1987]: 58, 750; Hytönen 1998 [1992]: 19; for further reading see Peters 2015 [1981]: 15–31).

However, such ideals were in decline between the eras of Socrates' approach in ancient Greece and Rousseau's 18th century statements. In 529, Justinian closed the Academy founded by Plato, which had functioned for over 900 years (Skirbekk & Gilje 1995 [1987]: 64). As this coincided with the fall of the Roman empire in the west and the rise of the first Christian monasteries, education in the Middle Ages in Europe was provided by monastic schools (Skirbekk & Gilje 1995 [1987]: 64). According to educator Malcolm Knowles (1980: 40), these are the origins of strictly teacher-directed instruction. Considering Knowles' (1980: 40) account, the supremacy of teacher-directedness appears to stem from

rather vague pedagogical assumptions. Knowles (1980: 49) argues that these assumptions rely on observations that monks made when they taught children mostly reading and writing. Subsequently, universities emerged in Europe in the 12th century, first in Paris and Bologna (Knowles 1980: 40; Skirbekk & Gilje 1995 [1987]: 64, 207). According to Knowles (1980: 40), the influence of the uniquely teacher-driven instruction in the medieval monastic schools continued to dominate the ensuing secular education, as it was adopted to the university tradition and the entire Western school system in the Modern Age.

In summary, this interpretation of history suggests that in the Western world education that contains student-centered elements first flourished in antiquity prominently through the work of Socrates, then declined in the Middle Ages, and was later awakened by Rousseau in the Enlightenment.

These fundamentals of student-centeredness were succeeded by the work of philosopher and pedagogue John Dewey (1859–1952). One emphasis in Dewey's philosophy of education is the learner's own experiences (Dewey 1988 [1938]: 11–30). For example, according to Dewey (1988 [1938]: 11), "amid all uncertainties there is one permanent frame of reference: namely, the organic connection between education and personal experience". A closely related term is *constructivist learning*, which appears frequently even in the current discourse on student-centered pedagogy. According to educationalist Sabine Hoidn's (2017: 21) definition, constructivism involves learners constructing new knowledge based on their prior knowledge. Learning scientist Päivi Tynjälä (1999: 365) adds that this does not mean the "transmitting of knowledge but helping students to actively construct knowledge by assigning them tasks that enhance this process". I suggest that since the constructivist approach builds upon a person's prior knowledge, it is well-fitting with the psychodynamic perspective on music learning (see Chapter 3) which emphasizes an individual's personal history as a determinant of the meanings that he or she subliminally prescribes to favored music.

2.1.3 Contemporary Views on the Student-Centered Pedagogue and the Classroom Setting

Moving on to the contemporary discourse on student-centered pedagogy, several literary works describe the aforementioned "paradigm shift" from teacher-directedness to student-centeredness (see e.g., Weimer 2002, 2013; Pedersen & Liu 2003; McCombs & Miller 2007; Jones, Noyd et al. 2014). As mentioned, this view has also received strong critique (e.g., Biesta 2012) which I explore further below. Nevertheless, in her frequently cited work, *Learner-Centered Teaching: Five Key Changes to Practice*, Weimer (2013: 57–196; see also the book's first edition from 2002) articulates how this paradigm shift should be carried out. Weimer's (2013) five changes comprise the role of the teacher, the balance of power, the function of content, the responsibility for learning, and the purpose and process of evaluation.

According to Weimer (2013: 59), the role of the teacher is essentially being a "facilitator" of learning. The "sage on the stage" (Weimer 2013: 60) is a popular expression in the critique of the traditional, exceedingly active teacher who does the work for the students. Instead, Weimer (2013) advocates the student-centered pedagogues' function as the "guide on the side". In popular music education research, Lucy Green (2008) has suggested a similar approach. Weimer (2013: 61–62) also employs a metaphor that illustrates the teacher as a midwife. She writes (Ibid.: 62):

> I think of the teacher-midwife as being there at the birth of learning. The midwife isn't giving birth. It is up to the learner to master and deliver this material, but the midwife is such a resource. She brings much previous experience, expertise, assurance, and calmness. She's been alongside many other students as they've struggled with this material. She knows when it gets really hard and has strategies she can suggest that help learners break through to understanding. And when that understanding is finally born, she is there to celebrate all that moment means to the learner. It's a beautiful metaphor.

Regarding the other key changes, Weimer (2013) suggests that the power in the classroom is to be shared between the teacher and the students. It is not transferred to the students "wholesale" but "redistributed in amounts proportional to students' abilities to handle it" (Weimer 2013: 94). Even this approach is a matter of disagreement (e.g., Schweisfurth (2013a: 12), as I discuss below. The considerable heterogeneity in students' autonomous learning skills, in other words the students being on various levels as responsible learners, is a challenge that Weimer (2013: 94) also discusses. Furthermore, according to Weimer (2013: 117; 114–142), the function of content in student-centered pedagogy undergoes the transition from focusing on the amount of material that can be covered during a course to emphasizing sense-making of the acquired knowledge base. Weimer (2013: 117; 114–142) suggests that this develops individual learning skills. Moreover, Weimer (2013: 143–167) argues that the pedagogue ought to employ practices that can help the students become increasingly responsible for their own learning. As a starting point, this requires that pedagogues "recognize those instructional practices that make students dependent learners and contrasting these with practices that create classroom climate conducive to learning" (Weimer 2013: 144). Weimer's final key change is that evaluation in student-centered education involves the inclusion of students in the process. However, this does not mean that the students would acquire full responsibility and the pedagogue would forfeit overseeing the grades. Instead, Weimer (2013) suggests self- and peer-assessment as a part of evaluation in order to develop self-monitoring skills and learning ability more broadly (Weimer 2013: 168–169, see also 168–195). Additionally, Weimer (2002: 49–50) stresses the importance of students acquiring lifelong learning skills, which is common in student-centered pedagogy (see also e.g., Doyle 2008: 10).

The frequently appearing expression that the teacher is a facilitator for a student's learning exposes a social dimension that needs further inspection. For example, in the US, The Essential Schools Coalition outlines the collaborative student – teacher relationship as "teacher as coach, student as worker" (Richmond 2014). EUA's educationalists Hanne Sursock and Andrée Smidt (2010: 31) formulates that "the responsibility for learning is shared" between teacher and learner, and psychologist Carl Rogers (1983: 25; see also 1994: 20–21, 44) discusses mutual learning. Even this line of thought has earlier origins. A fundamental view is psychologist Lev Vygotsky's (1896–1934) social constructivism, which essentially focuses on learning as a social activity of knowledge construction. According to Vygotsky (1978: 57): "[e]very function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, *between* people (*interpsychological*), and then *inside* the child (*intrapsychological*)". A central concept in Vygotsky's (1978: 86) approach is the "zone of proximal development" (ZPD). In essence, ZPD denotes the level of tasks that a learner is not yet capable of independently, but which he or she is able to perform "under adult guidance or in collaboration with more capable peers" (Vygotsky 1978: 86). According to Vygotsky (1978: 86), the functions that are in a learner's ZPD "have not yet matured but are in the process of maturation"; he describes them as "the 'buds' or 'flowers' rather than the 'fruits' of development". In subsequent pedagogical discourse this concept has been frequently linked to the term scaffolding, which was coined circa 40 years after Vygotsky, in 1976 by David Wood, Jerome S. Bruner, and Gail Ross. Scaffolding means the instructional support provided by an adult so that a learner can perform tasks beyond his or her unassisted efforts and gradually increase ability (Wood, Bruner & Ross 1976: 90). Scaffolding is a central concept even in the contemporary pedagogical literature, and, for example, according to Hoidn (2017: 72) "this support fades as the learner gains more competence ('scaffold')". Nevertheless, how much guidance is needed is still a subject of disagreement (Hoidn 2017: 554). This issue relates closely to the core of this study, as I examine and revise the role of a student-centered pedagogue further below (for a discussion of scaffolding in a musical context, see Elliott & Silverman 2015: 434).

Finally, I will make a brief comment on a few related directions in contemporary education that essentially employ a non-traditional classroom setting. Competency-based education thrives particularly in higher education and involves recognizing the students' current skills at the commencement of studies (Richmond 2014). Proficiency-based instruction allows learners to proceed at their own pace once their skill-level is recognized (Richmond 2014). Furthermore, novel pedagogical installations in more elementary stages of education include the concepts of flipped classroom and phenomenon-based learning. A flipped classroom involves the students independently revising new content at home and only thereafter applying it at school, as opposed to the traditional order of the teacher introducing the new material and successively assigning homework (see TeachThought s.a.). In popular music instrumental education, this may be applied by utilizing transcription or instructional videos as preliminary homework. This could provide more lesson time for applying the material to jamming and improvising with the pedagogue, for example. I explore jamming as a

pedagogically guided practice in Chapters 7 and 8. Lastly, phenomenon-based learning crosses boundaries between school subjects and phenomena are studied in a holistic manner, in contrast to the traditional division into smaller subjects (Silander s.a.).

2.1.4 Reported Advantages of Student-Centered Pedagogy

According to psychologist Edward L. Deci's (1975: 23) classic concept of intrinsic and extrinsic motivation, "intrinsically motivated activities are ones for which there is no apparent reward except the activity itself." Deci (1975: 23) states that when fueled by intrinsic motivation, "people seem to engage in the activities for their own sake and not because they lead to an extrinsic reward" which, in contrast, defines extrinsic motivation. Pedersen and Liu (2003), and innumerable other writers, have acknowledged student-centered pedagogy for engaging intrinsic motivation and dismissed teacher-directed education as inducing extrinsic motivation. As Pedersen and Liu (2003) report, teacher-directed approaches often depend on grades or degrees, for instance, whereas student-centered approaches stimulate the students to be driven by the goals that they set for themselves.

In alignment with this view, McCombs and Miller (2007: 16; 2009: 5) have argued that student-centered pedagogy is the most motivating form of learning because it allows the learners themselves to have control over what, how, and when they want to learn, and also what they want to achieve. Emily Richmond (2014) writes that in a student-centered learning environment students are given these choices "based on the theory that students thrive when they can see a direct connection between the instructional material on the one hand and their own interests and real-world experiences on the other". In popular music pedagogy, this is supported by Lucy Green (2002: 175), whose research showed better learning results when students "identified with the music and the instruments being played".

As a pinnacle of intrinsic motivation, the popular term "flow" was introduced by Mihaly Csikszentmihalyi to denote the ultimately pleasureful experience defined as "the holistic sensation that people feel when they act with total involvement" (see Csikszentmihalyi & Csikszentmihalyi 1988: 36). According to another description, in such action a surge of creativity causes the sense of time becoming disrupted (Csikszentmihalyi 1997 [1996]: 113). This especially satisfying state of consciousness reportedly involves, among other factors, the optimal balance between the individual's level of proficiency and the challenge of the endeavor. If the task is not demanding enough then the person responds with boredom, and if it is totally beyond their current abilities then they experience anxiety (Csikszentmihalyi 2008 [1990]: 74–75). Therefore, flow and Vygotsky's (1978: 86) concept of ZPD (see above) may be related and strived for in education when a pedagogue balances tasks so that they are within the reach of a learner's current ability.

Furthermore, J. Scott Armstrong (2011) addresses the purported failure of traditional pedagogy caused by its reliance on external motivation. He blames teacher-directed methods in higher education for misplacing the responsibility of learning on teachers instead of students. This, according to Armstrong (2011), contrasts what he calls "natural learning", and he reports that it has caused a decline in the effectiveness of universities since 1960. Teacher-directed pedagogy has also been accused of being ineffective by Terry Doyle (2011: 7; for further reading, see also Doyle 2008), who advocates student-centeredness by stating that "the one who does the work does the learning". Doyle's (2011:7) argument cannot be dismissed lightly, as it relies on the results of extensive research within neuroscience, biology, and cognitive psychology. In a similar way, excessive focus on the teacher at the expense of students' activity has spurred Rogers' (1994: 151) statement that teaching "is a vastly overrated function".

As an argument for student-centered pedagogy, teacher-directed pedagogy has been criticized for not realizing students' individual potential. According to Richmond's (2014) report, teacher-directed pedagogy is "too rigid to meet the needs of a diverse population of students who inevitably are at varying levels of ability, learn best in different ways, and have different interests". As expressed by A.V. Kelly (2004: 86, 206), a curriculum that is the same for everyone leads unavoidably to some students being alienated and disaffected, and thus causes failure and increased inequality. As a key reference to the exploration on popular music pedagogy below, Green (2008: 13) importantly argues that for this reason certain students have mistakenly been labeled as untalented, although the problem has been that non-student-centered curricula have prevented them from demonstrating or even discovering their musical abilities.

Moreover, Weimer (2013) reports research evidence that student-centeredness promotes deeper learning as opposed to surface learning. This means that the learning results last longer instead of being simply memorized without much, or any, understanding of the content (Weimer 2013: 32–33). However, somewhat contrasting research results are presented by Hoidn (2017: 554), who states that deep learning and optimal results are acquired by methods that combine elements of student-centered pedagogy with teacher-directed features. I discuss this further below and it relates closely to the approach that I have designed in this study. Nevertheless, the conflict in these views may possibly, at least to some extent, be due to the common ambiguity in defining student-centeredness and divergent terminology, which I mentioned above.

Student-centered pedagogy has been acknowledged for its personal benefits for learners on even a more profound level. This corresponds with the work of Carl Rogers (1902–1987), the widely recognized American psychologist, who was among the founders of the humanistic approach in psychology. Rogers was also a pioneer of student-centered pedagogy and the author of the influential book *Freedom to Learn*, which has been released in three editions (1969, 1983 and posthumously in 1994 by Rogers & Freiberg). Alternatively referred to as person-centered education (e.g., Rogers 1994: 8), Rogers' humanistic approach

(Rogers 1994: 134, 341–343) emphasizes self-discovery (Rogers 1994: 56–57), self-expansion (Rogers 1983: 169), and personal growth (Rogers 1994: 327). Rogers suggests that personal meaning is to be discovered within, which differs moderately from constructivism, where personal meaning-making is rendered by individual knowledge construction (see Hughes 2003). Such an internal process, which is mobilized by self-actualization (Rogers 1983: 52), is closely related to intrinsic motivation (e.g., Rogers 1994: 186), which I discussed above. Concerning personal development, Rogers (1969: 268) has expressed his belief that the "experience of freedom to choose is one of the deepest elements underlying change". This relates closely to this study; I applied this view to student-centered music education by encouraging students to suggest their personally favored songs as study material. Furthermore, a fundamental element in Rogers' (1994: 161; 1983: 125–126) concept is the importance of the pedagogue's empathic understanding towards the student. In more recent studies, Sue Tangney (2013: 273) notes in correspondence that student-centered education perceives the student holistically and strengthens their self-confidence.

2.1.5 Common Critiques of Student-Centered Pedagogy

Student-centered pedagogy has been criticized starkly. According to educationalist Gert J.J. Biesta (2012), the paradigm shift from teaching to learning is a mistake and seeing a teacher as a mere facilitator is erroneous. Biesta (2012) argues for "bringing back the teachers" and "allowing teachers to teach", although he does not suggest oppressive teacher-directedness as an alternative. I shall return to this view of Biesta (2012) as I outline my pedagogical design. Furthermore, Derek Meyer (2009) even describes student-centeredness as being "flawed". According to Richmond's (2014) report, teachers have, through mistrust and reluctance, dismissed student-centeredness as "fad pedagogy". Michael J. Hannafin and Kathleen M. Hannafin (2010) analyze that the problem with student-centeredness is that the students simply have too little prior knowledge to be built upon. This is similar to Dewey's (1902: 24) statement that "nothing can be developed from nothing". The students need impulses, Dewey stressed, as he strongly criticized passive teachers (see Dewey 1988 [1938]: xiv; see also Hytönen 1998 [1992]: 21).

Moreover, Schweisfurth (2013a: 12) argues that sharing the power in the classroom with the students can have a poor outcome; it may result in chaos in the classroom, and it requires notable pedagogical skills and experience. The debated role of the pedagogue, furthermore, raises a discussion on authority. According to Schweisfurth's (2013a: 13), a common problem is that "authoritarian" and "authoritative" have mistakenly been confused with each other. Schweisfurth (2013a: 13) states that an authoritative educator is knowledgeable and possesses reliable information. This does not necessarily impel them to be the sole authority in decisions concerning the studies (Schweifurth 2013a: 13), which would describe an authoritarian teacher. In similar opposition to authoritarian manners, Dewey (1988 [1938]: 7) argues that "to imposition from above is opposed expression and cultivation of individuality". Following Schweisfurth's (2013a) perspective, however, this statement does

not suggest that the pedagogue should be passive and refrain from teaching their subject expertise.

In the following, I discuss another potential reason for the critique of student-centeredness. This involves historical approaches that applied student-centeredness in its most extreme forms, which are according to my view perversely distorted. These include the open education movement in the UK in the 1960s–70s, as well as the free school movement in the USA in the 1920s–30s, and again in the 1960s–70s (Hytönen 1998 [1992]: 45, 65). The following summary relies on Hytönen's (1998 [1992]: 39–91) review. These movements abandoned all boundaries, structures, authorities, demands, and mandatory classes, and instead provided total freedom for children to be raised and students to be educated (Ibid.: 40–43, 72, 74–75). A leading figure of this ideology was pedagogue A.S. Neill, who conducted the school Summerhill, a self-proclaimed "radical movement to child rearing" (Ibid.: 39–40). A similar installation was the Plowden Committee (Ibid.: 46), which suggested that an ideal teacher is essentially passive, and merely arranges the learning environment so that the students proceed independently by coming to realizations at their own natural pace (Ibid.: 56).

This view, which was strongly criticized by Peters (Ibid.: 56) and Dearden (Ibid.: 57), among many others, purportedly relied on psychologist Jean Piaget's fundamental theory of developmental stages (Ibid.: 59). The Plowden Committee received rigorous critique, even from an entire anti-movement known as "black papers" (Ibid.: 50–54). Therein, Brian Cox and Anthony Dyson firstly expressed their support for the creativity, personal enlightenment, and individuality that open education advocated (Ibid.: 51–52). Nevertheless, they stated that the passive teachers in open education forfeit these values completely. They argued that a pedagogue is an educated expert, whereas a child cannot discover independently all that needs to be learned (Ibid.: 51–52; for further reading, see Skirbekk & Gilje 1995 [1987]: 750). Correspondingly, Peters maintained in his critique that initial studies are required before the learners can acquire self-government (Hytönen 1998 [1992]: 55). A corresponding movement preceded this in the USA during the 1920s and the1930s, and was based on misinterpretations of the theories of Dewey, who actually criticized the ways in which his theories were implemented (Ibid.: 65; see also Dewey 1988 [1938]: xiv).

2.1.6 Integrative Views on Student-Centered and Teacher-Directed Pedagogies

Hoidn (2017: 24) reports that several pedagogical approaches that are not commonly attributed to constructivism nevertheless utilize student-centered features (i.e., prior knowledge, social negotiation, self-regulation, and meaningful tasks). According to Sursock and Smidt (2010: 32), "a mix of various methods involving both student- and teacher-centered approaches to learning and teaching is common and successful in providing high quality education". This agrees with Hoidn's (2017: 554) argument that such a combination,

which she refers to as "guided discovery", enhances deeper learning. In contrast, "unguided" or "minimally guided discovery", which involves less input from a pedagogue, has been shown to produce remote rather than meaningful learning, according to Hoidn (2017: 24).

Therefore, Hoidn (2017: 563) argues that student-centeredness does not result in "a reduction of the instructor's responsibilities and tasks, but in a revision of their nature". As Hoidn (2017: 554) suggests, the proportions of how much student-centeredness and teacher-directedness are desirable remains undefined in generalizable terms. This calls for pedagogy that is "tailored to the individual learning methodology", as described by Sursock and Smidt (2010: 32). In music education studies, the view that student-centered and teacher-directed approaches should not be considered dichotomous is becoming increasingly popular (e.g., Mesiä 2019: 46; Björk 2016: 184). This is an ongoing discussion in popular music education, as I explore in Subchapter 2.2 (see Folkestad 2006, Green 2008, Wright 2016).

2.1.7 Implementing Student-Centered Pedagogy

Student-centered pedagogy has been established in a multitude of curricula. As an idea, it is increasingly thriving in several countries. However, among a myriad of scholars, Cheryl Estes (2004) argues that the main problem with student-centered pedagogy is that it is not properly realized in practice. Accordingly, Hoidn (2017: 23) argues that student-centered pedagogy is "halfheartedly implemented" due to it being "barely understood". Below, I discuss the current situation and reported problems.

In the United States, student-centered pedagogy has received nationwide support and recognition over the last two decades (Richmond 2014). According to Richmond (2014), there is, consequently, a demand for special pedagogical training in the US. In European higher education, since 1999 the Bologna Process[5] has been an important driver for intergovernmental pedagogical reforms (Hoidn 2017: 22). In implementing the Bologna Process, the European University Association (EUA)[6] is the representative organization of universities in 48 European countries. According to the EUA's (2019) research, "there is widespread will across European higher education to focus more on the student learning experience and to back this up with the necessary changes in policy and practice" (EUA 2019: 4). Nevertheless, a universal problem is, according to the EUA (2019: 18), that student-centered pedagogy remains poorly implemented in practice.

The reason for the weak actualization of student-centeredness is a subject for speculation. The EUA (2019: 4) associates this problem with the "lack of common understanding of the

[5] Representing the Bologna Process, the European Higher Education Area (EHEA) states that student-centeredness is implemented through new pedagogical approaches and mentions "effective support and guidance structures and a curriculum focused more clearly on the learner" (EHEA 2009: 3; EUA 2019: 6).

[6] This organization has influence on EU policies on higher education, research, and innovation (EUA 2019: 22).

concept", which I have also discussed above. This relates to the "broad nature" of student-centeredness and the "variety of aspects" which it spans (EUA 2019: 4). Additionally, in their study which underlies the EUA's (2019) research, Anna Gover and Tia Loukkola (2018: 34–35) argue that there may be difficulties in communication between quality assurance agents, who utilize the terminology of institutions, and student representatives. This implies a discrepancy between theory and practice. However, the EUA (2019: 4) states that this problem prevails even despite clear pedagogical guidelines, which they have given to universities. These guidelines[7] are almost identical to the definitions of student-centeredness that I discussed above. On the other hand, according to the EUA (2019: 8), an exceedingly precise definition of student-centeredness could also have an adverse effect on its implementation; it could stifle pedagogues' creativity if they followed such a definition too rigidly. This implies that a pedagogue's free imagination is more important than a commonly agreed upon definition.

Most interestingly, the EUA (2019: 5) mentions that student-centered pedagogy is a "context-sensitive concept that may be applied differently" in various disciplines. I presume that this notion points towards understanding the weak actualization of student-centeredness: more domain specific studies are needed. Along the same lines, Hoidn (2017: 25) argues that more classroom research is required, and that such operationalizing must be carried out, specifically, in different educational contexts (Hoidn 2017: 593). My everyday experience of music education supports this notion. An advantageous application of research results would be more practical, as would contextual guidelines for pedagogues. For this reason, in the present study I aim for intricate detail both pedagogically and musically. Therefore, I design a detailed pedagogical model for popular music instrumental education in Chapter 4 and conduct a profound study on hard rock groove in Subchapter 5.1.

2.1.8 Definitions of Expertise

Although the term "expert" appears to be intuitively clear, expertise has become a debated and extensively researched subject. According to cognitive scientist and cognitive psychologist Fernand Gobet's (2016: 2) account, a common contention is that experts have devoted a considerable amount of time to master their domain. Gobet (Ibid.: 2–3) criticizes this claim by stating that it is not uncommon to pursue, for example, sports or musical leisure-time activities on the long-term without ever becoming an expert. Furthermore, education researchers Carl Bereiter's and Marlene Scardamalia's definition emphasizes the intentionality of the long-term practice, meaning that the expert has worked towards the

[7] According to the EUA's (2019) guidelines, student-centered pedagogy "plays an important role in stimulating students' motivation, self-reflection and engagement in the learning process". The implementation of student-centeredness, for example, "respects and attends to the diversity of students and their needs, enabling flexible learning paths". Furthermore, student-centered learning "flexibly uses a variety of pedagogical methods" and "encourages a sense of autonomy in the learner, while ensuring adequate guidance and support from the teacher" (EUA 2019: 19).

proficiency with a clear goal in mind (Gobet 2016: 4; for further reading, see Bereiter & Scardamalia 1993). However, Gobet (2016: 4) dismisses this, and argues that a definition should not rely upon how the expertise is obtained. Moreover, the renowned model by applied mathematician Stuart E. Dreyfus and philosopher Hubert L. Dreyfus (Gobet 2016: 4; for further reading, see Dreyfus & Dreyfus 1980) suggests that an expert can perform a task intuitively, without conscious effort, as opposed to those with less proficient levels of competency. While I reckon that this is often true with highly experienced musicians, Gobet (2016: 4) points out that researchers have argued the exact opposite. For example, according to Bereiter & Scardamalia (1993), non-experts are less aware of their performances, whereas experts address difficult problems through conscious processes. Furthermore, formal competence such as diplomas have been perceived as a sign of expertise (Ibid.: 3). While this may be correct to a degree, I reckon that it is problematic especially in popular music where many performers have become experts through a more informal process. Additionally, Gobet (Ibid.: 5) presents a radical view from the social sciences, that expertise does not actually exist as such. According to this view, expertise does not reside in the so-called expert but is rather a label given by society to some individuals, sometimes even irrespective of their actual competence (Ibid.: 5).

Cognitive and learning science researcher Michelene T.H. Chi (2006: 22–23) presents two alternative perspectives on expertise: a retrospective approach, and a relative approach. The retrospective approach emphasizes the reception of a product, for example through ratings and indexes. Gobet (2016: 3–4) argues that while such objective measures are relatively easy to utilize in sports, even this definition is insufficient. I suggest that it is also problematic in music. Commercial success (record sales, concert ticket sales etc.) is easy to measure, but whether it consistently correlates with the level of expertise appears debatable.

Chi's (2006) relative approach involves comparing the performance of a potential expert to that of others. As exemplified by the following views, I reckon that this perspective appears sustainable with expert musicians. According to Gobet's (2016: 5) own definition, an expert is "somebody who obtains results that are vastly superior to those obtained by the majority of the population". Psychologist K. Anders Ericsson's (2006) view is similar to this definition. In cognitive psychology, Robert J. Sternberg, Karin Sternberg and Jeffrey Scott Mio (2012 [2009]: 468) have defined expertise as "superior skills or achievement reflecting a well-developed and well-organized knowledge base". Although Gobet (2016) dismisses the inclusion of the practice process in the definition, as mentioned above, psychologists Peter A. Frensch's and Robert J. Sternberg's (1989: 158) definition also appears suitable for music, as they state that expertise is "the ability, acquired by practice and experience, to perform qualitatively well in a particular task domain". Such emphasis on experience applies to all professional performers who have evidently devoted a remarkable amount of time to their instruments, whether they have perceived it as deliberate practice or just playing. Finally, as stated by K. Anders Ericsson and music psychologist Andreas C. Lehmann (1996), expertise is evident in the ability to perform on a high level consistently and "upon demand". According to this thought, reproducibility and consistency distinguish experts

from less competent performers who succeed only randomly. This definition applies to professional musicians, who must perform on a consistent level both live and in studio work. Additionally, repeated demonstrations of instrumental skills are constantly demanded of a music instrumental pedagogue.

A consistent definition of musical expertise, in particular, does not exist, according to Jennifer Mishra's (2019: 574, 576) review. Therefore, Mishra (2019: 578) proposes a preliminary hierarchy, wherein an expert musician is one who "publicly performs concert repertoire and can prepare this repertoire with little or no supervision from a teacher". Furthermore, Mishra (2019: 578) distinguishes an *influential expert* as the highest rank, meaning a "high-achieving musical expert who sets the standard for the field and influences other experts". However, Mishra (2019: 578–579) notes that it is erroneous to assume that musical expertise equals musical performance, because musical expertise can be displayed in several other ways (e.g., by composing, arranging, conducting etc.). Nevertheless, Mishra (2019: 578–579) states that it is also understandable that research has focused almost exclusively on performers, because "performance generally underlies the Western conservatory tradition". Furthermore, Mishra (2019: 578–579) argues that the expertise of a performing instrumentalist can often be a foundation for other musical skills, such as composing and arranging. In alignment with Mishra (2019: 578), I suggest that an expert music instrumentalist is a person who *performs or has performed regularly as a profession instead of as a hobby*. I argue that in this study, the emphasis on performing as a criterion of musical expertise is sustainable, because I concentrate on teaching instrumental skills.

Proceeding to the pedagogue, Nur Atiqah Raduan and Seung-Il Na (2020) have conducted a review of research on teacher expertise. The distinct qualities of an expert pedagogue include several years' experience of teaching, competence, and qualification (e.g., having a master's degree), acknowledgement by their community (e.g., by colleagues, by winning awards, even by student achievements), and that they are often assigned as mentors for new teachers (Raduan & Na 2020: 4). In terms of practical skills, an expert teacher is characterized by higher-ranking capability in pedagogical situations that involve problem solving, decision making, classroom climate, perception of classroom events, monitoring of learning, and providing feedback (Raduan & Na 2020: 3). According to Raduan's and Na's (2020: 3) account, teacher experts have excellent knowledge of their subject matter, as well as of general pedagogy (i.e., knowledge of learners and learning, instruction and curriculum, assessment, and educational goals). While all of these characteristics are of paramount importance, in this study I concentrate on how a pedagogue applies expert-level knowledge of their subject matter – in this context, their *musical expertise*.

Learning instrumental skills from a musical expert such as I outlined above relates to the master-apprentice model of learning. This model has traditionally dominated the view of the musical expert teacher. A historical overview of the master-apprentice model has been collected by Kim Burwell (2012). As Burwell (2012) notes, the master-apprentice model is as old as the notion of education itself (Burwell 2012: 277), and the history of the tradition

is by no means cohesive (Burwell 2012: 278). According to Burwell (2012: 278), the roots of instrumental music teaching and learning lie within this approach. In short, in this tradition the master is positioned as a representative of his or her practice with a high level of expertise (Burwell 2012: 280). Typically, the fostering and acquisition of the master's experiential knowledge (Burwell 2012: 279) happens so that the master demonstrates his or her musical performance skills and the apprentice imitates them (Burwell 2012: 279–281). As I shall discuss in Chapter 4, I aim to retain certain aspects of the master-apprentice model and combine them with student-centeredness.

2.1.9 Discussion

In this subchapter, I have outlined student-centered pedagogy and musical expertise through a literature review. Student-centered pedagogy, in essence, takes into consideration each student's unique background, which prompts the pedagogue to utilize this awareness in designing the studies. Both student-centered and teacher-directed approaches have received acknowledgements as well as critique. When carried out successfully, student-centeredness engages intrinsic motivation, enhances self-actualization, and even strengthens the learners' self-esteem. Such self-discovery implies the humanistic tradition represented by Carl Rogers (1969, 1983, 1994). This perspective appears especially suitable for music education, where self-expression is an essential aim of learning (see Elliott & Silverman 2015). The limitation of excessive student-centeredness, however, is that the learner is unlikely to independently discover everything that is needed to learn. Therefore, guidance from an expert pedagogue is desired. I have reviewed definitions of expertise above and I conclude that a musical expert can, at least, perform on a professional level consistently and upon demand. On the other hand, teacher-directedness, or relying excessively on the pedagogue, can fail to discover the potential of individual learners, which may lead to inequality and alienation of some students. Exactly what comprises an advantageous amount of guidance, or scaffolding, is a subject of disagreement. Currently, student-centered and teacher-directed approaches are, however, not perceived as dichotomous by all scholars. Instead, they increasingly complement each other in novel pedagogical approaches.

Evidently, the central problem with student-centered pedagogy is that it is unimplemented in practical terms, despite the widespread interest in utilizing it. According to my review, a potential reason for this shortcoming is the context sensitive nature of student-centered learning and the lack of domain specific research. For a better understanding of this specific context, in the following subchapter I will explore popular music learning.

2.2 Informal Popular Music Learning and Pedagogical Considerations

In this subchapter, I will move on to popular music learning and map out the foundations for student-centeredness in this context. My purpose is to review informal practices through which popular musicians[8] have traditionally learned. As described by, for example, Lucy Green (2002, 2008), Göran Folkestad (2006), and Heidi Westerlund (2006), they are significantly different from those of classically trained performers. Although my view of pedagogical implementation is in some ways different than Green's (2002, 2008), I consider her account of popular musicians' typical learning practices that occur outside institutional settings as a viable source. Therefore, I employ it as a central reference. In terms of pedagogical implementation, I also review the more recent discourse. Considering the entirety of this research, my main endeavor with this subchapter is to outline how instrumental pedagogy in particular can be developed in a direction that is most appropriate for the popular music tradition. With this delimitation, I do not intend this to be a comprehensive account of the vast topic of informal learning.

2.2.1 Fundamentals of Informal Learning and Non-Formal Teaching in Popular Music

Informal learning and non-formal teaching have been discussed extensively in popular music education (see e.g., Wright 2016). Lucy Green's (2002, 2008) pioneering research on popular musicians' informal learning practices and their pedagogical applications is frequently cited in this discourse (Väkevä 2012; Wright 2016). Naturally, the views on informal learning have also evolved after Green in this discussion.[9] In the following, I review the more frequently appearing themes in this vast literature, and highlight some of the main interests in contemporary research.[10]

As a starting point, Göran Folkestad's (2006) distinction between informal and formal learning includes four criteria. The first criterion is the learning situation (i.e., whether the learning take place in school or not). The second criterion is the learning style (i.e., whether the learning happens by ear or from notation). The third criterion is ownership (i.e., who

[8] In this study, I also refer to sources that belong to jazz. It could well be debated that jazz is not a part of popular music, but literature on learning practices in jazz serves the purpose of the present research.

[9] For a review of informal learning, see Wright (2016).

[10] During the last decade, books that gather views on informal learning pedagogy and elaborate fresh suggestions for developing music education include, for example, *21st Century Music Education: Informal Learning and Non-Formal Teaching in School and Community Contexts* (Wright et al. 2016) and *Future Prospects for Music Education: Corroborating Informal Learning Pedagogy* (Karlsen & Väkevä 2012). Related comprehensive books also include *The Routledge Research Companion to Popular Music Education* (edited by Smith et al. 2017) and *The Routledge Handbook to Sociology of Music Education* (edited by Wright et al. 2021).

makes the decisions: the students or the pedagogue). Lastly, Folkestad's (2006) fourth criterion is intentionality (i.e., is the activity thought of as learning or playing).

Green's (2002) book *How Popular Musicians Learn: A Way Ahead for Music Learning* explores such informal learning in popular music. These practices include, in essence, learning by ear, peer-directed learning in a band, the students' bands choosing their repertoire themselves, and writing their own songs. In her book *Music, Informal Learning and the School: A New Classroom Pedagogy*, Green (2008) studies applying such informal music learning to a formal environment. As formulated by Cecilia Wallerstedt and Monica Lindgren (2016) in this ongoing discussion, a central challenge in developing music education during the last decades, and to date, is to transfer the learners' musical experience from outside school to inside school. The benefits are widely acknowledged; according to Joseph Abramo (2010: 26), popular music then "becomes more than a way to grab students; it offers a unique, valuable interaction with the musical worlds they inhabit everyday".

In marked contrast to formal music education, Green's (2008) pedagogical application of informal popular music learning conceives the role of the teacher as a facilitator who is standing back or stepping aside. In other words, this idea is the same as in student-centered pedagogy outside music, which I explored in Subchapter 2.1 (e.g., Weimer 2013: 59). For an example of other music education scholars with a similar view, Abigail D'Amore (2008: 45) advocates "teachers shedding the mantle of 'expert'". This rather passive view of the music teacher's role has also received criticism; Randall Allsup (2008), for example, opposes the disappearance of the teacher in informal learning pedagogy, as in Green's (2002, 2008) studies (see also Allsup & Olson 2012). On the other hand, several scholars suggest that there should not be a dichotomy between informal and formal teaching in popular music. Again, this is in alignment with educational studies outside music (see Hoidn 2017: 554; see Subchapter 2.1). As expressed by Göran Folkestad (2006), as well as Green (2002, 2008) herself, formal and informal are, rather, two poles of a continuum. In a similar way, Ruth Wright (2016) formulates this view so that they are like "slides of a mixer" that can shift many times during a lesson or even within a learning activity.

In recent years, the discourse in popular music education has seen several suggestions for practical actualizations of informal learning in formal teaching environments. For a few examples of this extensive literature, Eeva Siljamäki and Panagiotis A. Kanellopoulos (2020 [2019]), as well as Wright and Kanellopoulos (2010), explore improvisation studies as an application of informal music learning processes. Martina Vasil, Lindsay Weiss, and Bryan Powell (2019) discuss a student and a pedagogue learning alongside one another, and they encourage pedagogues to "take risks" in teaching songs that the students choose and create. Julia Brook, Robbie MacKay, and Chris Trimmer (2019) examine how a self-taught rock musician-educator integrates informal and formal structures. An aim for such an integration appears also in Warren Gramm's (2021) study of peer mentoring in band education. Lars Brinck (2017) discusses situated learning by suggesting "jamming and learning" and the students "sitting in", meaning that teachers play alongside the students, which implements

"musicians' interactive learning processes". This relates to the perspective of musical agency discussed by, for example, David J. Elliott (1995), Christopher Small (1998), Sidsel Karlsen (2011), Tia DeNora (2013), and David J. Elliott and Marissa Silverman (2015). All of the aforementioned studies have interests similar to the present study. For a few examples of somewhat different implementations, Don Lebler (2012) emphasizes the utilization of students' comfort with technology as an important means in contemporary informal ways of learning music. Cecilia Björck's (2011) research concerns informal learning in popular music and gender issues. Randall Everett Allsup and Eric Shieh (2012), as well as Sidsel Karlsen and Heidi Westerlund (2010), approach informal learning in music from the viewpoint of social justice and democracy, which relates to Paulo Freire's (1968) classic *Pedagogy of the Oppressed*. The studies of Sidsel Karlsen (2012), and Karlsen and Heidi Westerlund (2015) focus on music teachers' repertoire choices as a way of actualizing democracy, which aligns with my perspective. In line with the present study, Philip Alperson (2015: 18) discusses musical empathy in informal learning.

Of the characteristics of informal learning in popular music which scholars commonly agree on (see above; Folkestad 2006), I examine more closely the following topics, which relate to the present research. First, I explore learning by ear (i.e., auditory learning practices) and its extensive benefits, which I aim to retain in a formal learning environment. Thereafter, I briefly discuss informal learning in a band setting. Here, the absence of an undisputed authority figure in a peer-based band, and on the other hand mentorships in the exchange between performers, provide insight for revising the role of the pedagogue in popular music education. These aspects are also closely connected to rehearsing personally favored songs, which is typical for informal learning in popular music. This, in turn, points towards implementing student-centered pedagogy in popular music education.

2.2.2 Auditory Learning Practices

In this account of learning by ear, I first refer to Green's (2002: 23–24) distinction between different types of listening. It is based on their various purposes and levels of concentration. "Purposive listening" is employed, for example, when learning a song or transcribing. "Attentive listening" may be as focused but does not have the aim of studying, and occurs, for example, when a music fan intensely concentrates on favored music. "Distracted listening" denotes erratic attending to audible music, and simply labeled as "hearing" is the awareness of music being played without paying further attention to it. All of these types of listening form a central part in the development of a popular musician (Green 2002: 23–24).

Throughout the entire learning process, which encompasses all of the above types of music hearing, occurs the fundamental phenomenon known as *enculturation* (see e.g., Green 2002: 96; Ahonen 2004: 24). Green (2008: 5) applies this extensive concept to music as "immersion in the music and musical practices of one's environment", which is "a fundamental factor that is common to all aspects of music learning, whether formal or

informal". According to Green (2008: 5–6), enculturation has a more central function in certain learning practices than others, and it is particularly prominent in popular music. In a similar way, Paul F. Berliner (1994: 22, see also 21) describes in his jazz research the importance of the infant's domestic soundscapes as the source of developing musical sensitivity and absorbing the culture's definition of music. Another utilized term is the constant process of *implicit learning*, which occurs subliminally, without deliberate intention. This emerges, for example, when a person becomes familiarized with the aesthetical qualities of music through listening (Ahonen 2004: 14–15, 82). Several writers attest that such a learning process, meaning exposure to surrounding sound and interaction with the environment, is like children's acquirement of linguistic skills through listening and imitating (Green 2008: 5; see also Green 2002: 189 and Berliner 1994: 95–97, 120–121). I discuss this comparison below. In any case, a popular musician's learning process has typically commenced long before their systematic practice of instrumental skills. From the perspective of this study, this points towards teaching through student-selected repertoire, with which a learner has an extensive history as a listener.

Overall, the popular music tradition is, in contrast to European classical music, preserved and passed on mainly through recordings instead of notation (Green 2008: 7–8). Consciously goal-directed auditory learning by imitating records is informally referred to as "copying recordings by ear" (Green 2008: 10) among other similar formulations, or transcription (Berliner 1994: 97; Wilf 2014: 140). As a form of auditory learning, this is the main practice of informally acquiring skills in popular music (Green 2008: 6, 10). In agreement, Berliner (1994: 95–99, 101–105) explores this in his study on jazz musicians' learning. The efficiency of copying by ear is also supported by my personal experience, both as a learner and as a pedagogue. Its great importance is agreed upon a ceaseless number of non-academic sources, as renowned popular musicians describe their learning processes.

For example, neoclassical heavy rock guitar virtuoso Yngwie J. Malmsteen recalls studying Ritchie Blackmore's solos in his early years. After acquiring the Deep Purple albums *Machine Head* (1972) and *Made in Japan* (1972) as a child, Malmsteen "learned every Blackmore solo inside and out" (Lalaina 1992: 65). Similarly, jazz fusion guitarist Mike Stern (Charupakorn 2010: 9) cites Joe Pass as the first jazz guitarist he transcribed, and also mentions playing along with Herbie Hancock's album *Maiden Voyage* (1965) by ear in the early stages of his development. Even now, as an internationally acknowledged artist for several decades, Stern reports continuously extending his expertise by transcribing (Charupakorn 2010: 9). Transcription thus relates to the value of lifelong learning, which is commonly adhered to in student-centered pedagogy, as I mentioned in Subchapter 2.1 (see Weimer 2002: 49–50; Doyle 2008: 10). Below, I will discuss the frequently mentioned benefits of copying records by ear.

Firstly, the transcription process is essential to learning improvisation. This learning process is often characterized by employing the above comparison with learning a language. For example, Berliner (1994: 95) writes:

> Just as children learn to speak their native language by imitating older competent speakers, so young musicians learn to speak jazz by imitating seasoned improvisers. In part, this involves acquiring a complex vocabulary of conventional phrases and phrase components, which improvisers draw upon in formulating the melody of a jazz solo.

Similarly, Stern (in Charupakorn 2010: 9) describes this development when articulating the outcome of learning musical vocabulary by transcribing solos of other musicians:

> It's like when you read a book or short story – you don't memorize every word; you just take certain things away from it and then enough of the remaining information goes unconsciously into your brain, or in the case of music, into your ear.

This method for learning improvisation offers fruitful possibilities for student-centered applications, which I explore in Chapter 8.

In addition to learning musically idiomatic vocabulary for improvisation, copying by ear develops musical skills that are commonly referred to as ear training (see e.g., Wilf 2014: 44). This corresponds with several methods in formal music education. Solfège, or alternatively called solfeggio (see Jander 2001) or sol-fa (see Rainbow 2001a: "Sol-fa"; also Rainbow 2001b: "Tonic Sol-fa"), includes a corresponding practice that advances aural perception through sight-singing and transcribing (see also solmization, e.g., Hughes & Gerson-Kiwi 2001). This develops relative pitch, a musically fundamental skill defined as "sensitivity to relations between pitches" that "allows us to perceive, appreciate and remember melodies" (Russo & Thompson 2005). Outside popular music, pedagogies that emphasize this endeavor have been developed by Zoltán Kodály (1882–1967) and Shinichi Suzuki (1898–1998), for example. Kodály emphasized *inner hearing*, meaning that students learn to imagine the sound of the music mentally by practicing singing from notation (Campbell 2008: 29). Similarly, Suzuki's acknowledged method aims to further musical ability primarily through aural skills, although without written music initially (Campbell 2008: 30). Since these methods emphasize inner hearing, they relate to copying by ear in informal popular music learning practices (see Green 2002: 189).

Inner hearing has been called *audiation* by music pedagogue and researcher Edwin E. Gordon (1985; 2007 [1980]). According to Gordon's (1985) definition, "a person audiates when he can hear and comprehend music for which the sound is not physically present". Gordon has further described audiation as "the ability to recall or create a mental image of the sound in the mind's ear" (Trusheim 2010 [1991]). Research on such mental imagery originate from the earliest psychological investigations of Galton in 1880 (Trusheim 2010 [1991]). In more recent music studies, Ahonen (2004: 12, 136–140) has referred to the term "auditory imagery". However, Gordon rejected the title "aural imagery", as it would suggest a process of seeing instead of hearing, which is not the case in this phenomenon (Trusheim

2010 [1991]). Furthermore, audiation is also an essential concept in music educationalists David J. Elliott and Marissa Silverman's (2015; see also Elliott 1995) praxial philosophy of music education, which I discuss later in this study. Elliott and Silverman (2015: 351) also mention the term audiation, and they employ the terms inner hearing (Elliott & Silverman 2015: 351; Elliott 1995: 228) and the "mind's ear" of a learner (Elliott & Silverman 2015: 350). They discuss the phenomenon as "musical imagining" (Elliott & Silverman 2015: 350; Elliott 1995: 228). However, Gordon's (1985) perspective on music learning is fundamentally different from Elliott and Silverman's (2015; see also Elliott: 1995) praxial philosophy of music education. Nevertheless, focusing on audiation as a foundation of musical ability is a similarity between these two perspectives. Within the limitations of the present context, I refer to Gordon's (1985) view only to the extent of its emphasis on audiation.

Importantly, audiation has widely been considered *crucial to achieving a high standard of music skills*. For example, according to Elliott (1995: 228) as well as Elliott and Silverman (2015: 350–351), inner hearing is an integral part of musicianship. Performers from various music traditions and genres share this view. For example, jazz improvisers commonly emphasize aural practice by vocalizing musical structures (Berliner 1994: 175), and report singing in their minds when improvising (Berliner 1994: 180–181). Berliner (1994: 181, 248) quotes early New Orleans jazz musicians stating that "[i]f you can't sing it, you can't play it". Correspondingly, hard rock guitarist Slash (most notably of Guns N' Roses) regards audiation as the most essential skill in performing a guitar solo: "The most important thing is to be able to hear it in your head and apply it through your fingers in a split second. That's what people miss out on. Instead of playing patterns, hear the melody you're going for. You need enough experience to know where it is on the neck" (Widders-Ellis 1991: 40–41). Clearly, the utilization of audiation is not restricted to improvising, nor does it dismiss notated music (for further reading, see Barry Green & W. Timothy Gallwey's book *The Inner Game of Music*, 1987 [1986]). For example, internationally renowned Finnish classical pianist Ralf Gothóni (1998: 24) advocates performance skills wherein a musician reads the notation and consequently hears the music internally before playing it, as opposed to merely executing the tones mechanically according to the score. Gothóni (1998: 25) describes employing audiation as performing "from the inside", and the lack of audiation as playing "from the outside". Gothóni (1998: 25–30) states that performing from the inside (i.e., employing audiation) is a crucial requirement for wholehearted musicianship.

Moreover, it appears that the intense and repeated listening that occurs during copying by ear enhances attention to musical detail. This is acknowledged by Green (2002: 214–215), who describes aural copying as an "ear-opener" to the musical qualities that transcend notation, including timbre (Green 2002: 214–215) and pitch inflection (Green 2008: 8). Most interestingly, as concerns this study, Green (2008: 8) recognizes that the aural copying of recordings expands attention to groove, rhythmic flexibility, swing, and "feel" as idiosyncratic features of music. Therefore, in the pedagogical practices of groove, I emphasize learning the repertoire by ear instead of employing notation. Furthermore, this

notion implies the strength of student-selected repertoire; the students may absorb the finetuning of groove most successfully through songs that they have listened to extensively. For these reasons, I apply copying recordings by ear extensively in the pedagogical research material that I analyze in Chapters 7 and 8.

2.2.3 Informal Learning in a Band Setting

Apart from practicing their instruments individually by imitating records, it is typical for popular musicians to learn informally in band contexts (Green 2002: 83; Green 2008: 7). Along the same lines, Westerlund (2006) acknowledges garage rock bands as "knowledge-building communities". Bands constitute learning environments that develop such collective expertise that is distinguished from the abilities of individuals (Westerlund 2006; see also Bereiter & Scardamalia 1993: 118). Firstly, social learning occurs as peer-directed learning, when band members explicitly demonstrate musical parts to each other in rehearsal situations (Green 2008: 7; 2002: 76; see also Gramm 2021). Conceptually, this kind of imitation bears resemblance to psychologist Albert Bandura's (1971) theory of social learning. Secondly, it emerges as group learning, where no deliberate instruction is made, but implicit learning takes place in the interaction during ensemble playing and verbal communication (Green 2002: 76; Green 2008: 7). In other words, aspiring popular musicians learn from each other and from the practical process itself, which bears resemblance to the social constructivist learning theory of Vygotsky (1978) and the pragmatist learning philosophy of Dewey (1988 [1938]: 11–30; see Subchapter 2.1). This form of learning has also been described as situated learning (Westerlund 2006) and situated cognition (for further reading, see Ahonen 2004: 24). As Green (2008: 7) accounts, it is common for aspiring musicians to form bands at early stages of their instrumental development, and for their individual skills to evolve gradually through joint practices such as jamming and improvising, rehearsing cover versions of mutually favored songs, and composing their own music.

As popular musicians develop their musical skills in a band setting, even the values of camaraderie and commitment influence the music (Green 2008: 9). In consistence, Gramm's (2021: xi) study suggests that peer mentoring in band education is beneficial both musically and socially. Going into further detail, Green (2008: 9) argues that the ability to co-operate and the willingness to bear joint responsibility "affect the precise nature and 'feel' of the music being produced, in ways that relate to musical communication in performance". Relating this notion to the present study, I presume that groove is most likely such a sensitive feature. In my experience, it is not a far-fetched idea that groove would thrive within bands that have not only performed together extensively but have also developed a cohesive union. In terms of pedagogy, this would imply that instrumental lessons that focus on groove would benefit from promoting a collaborative and encouraging atmosphere.

Furthermore, according to Green (2008: 9), "playing popular music in a band tends to raise the self-esteem" of the participants. Playing music that feels like their own to the band members relates to consolidating personal identity, and it provides experiences of profound enjoyment (Green 2008: 9). As an important connection to the pedagogical focus of the present study, this highlights the topic of choosing repertoire. Green (2008: 9) notes that learning in such a favorable band setting is significantly different from traditional and formal education, where a teacher selects the repertoire with the intention of introducing students to music that was previously unfamiliar to them. On the contrary, Green (see 2008: 10) emphasizes that in informal popular music learning the aspiring musicians select their repertoire themselves. This, in turn, suggests that the utilization of student-selected repertoire is desirable particularly in popular music education. In correspondence, Gramm (2021: xi) discusses careful repertoire decision-making in band education, as he emphasizes the importance of finding balance between traditional and nonformal pedagogical methods. As student-selected repertoire is a central theme of this study, I shall return to exploring its meanings in the following chapter.

From the perspective of my ambition to revise the pedagogue's role in this study, an interesting feature of informal learning in a popular music band is that *it does not involve an authority figure* (see Green 2008: 6–7; see also Westerlund 2006). As I discussed above, in a typical pop band setting, likeminded individuals on roughly similar skill levels develop through teamwork (Green 2002: 76–83; Green 2008: 7). From this point of view, authoritarian, strictly teacher-directed pedagogy certainly appears alien in popular music learning. This implies that student-centered pedagogy, at least, is natural to be included in popular music education. Therefore, simulating a garage rock band setting has been a trend in the discourse of informal learning and non-formal teaching that I discussed above. In her pioneering study, Green (2008: 30–31) has positioned the pedagogue more in the background, initially observing, then suggesting, and lastly demonstrating. Westerlund (2006) agrees with the abandoning of teacher-directed predominance, as she states that the heritage of the master-apprentice tradition has prevailed in classical music training and "burdens music educators perhaps more than any other tradition" (see Subchapter 2.1.6). In this context, the reference to the master-apprentice model emphasizes that the master teacher's function is to impart his or her wisdom in instructing apprentices how to perform correctly.

However, informal music learning practices unfold even more versatility than I have discussed so far. The band setting in Western popular music may have unique features, but it also has similarities with other music traditions that are essentially learned through enculturation and imitation (see Green 2008: 6–7). In these traditions, there are practices that importantly include apprenticeships and learning from more experienced musicians. In varieties of folk music and, for example, the Indian classical music culture, young musicians may enter a community of seasoned individuals and join a group, or they may be introduced to a mentor or a guru, and thus acquire experience of performing with those who have greater skills and possibly receive direct guidance (Green 2008: 6).

As Green (2008: 6) mentions, and as documented by Berliner (1994: 41, 42), similar processes occur in jazz. A prominent feature in jazz is the jam session, which functions as informal musical get-togethers where musicians may develop improvisatory and communicative musical skills through spontaneous ensemble performance. Eitan Y. Wilf (2014: 45) cites the jam session culture as one of the most important forms of learning jazz. Jams may involve younger players observing more experienced ones, and some variations of the tradition have featured more organized sessions (Berliner 1994: 42), although this way of learning through participation does not typically include a superior guide or formal features. Furthermore, another practice in the jazz tradition is known as "sitting in", meaning that upcoming musicians join accomplished artists' performances as guests during selected pieces (Berliner 1994: 43; see also Green 2008: 6). This has contributed to the evolvement of aspiring players by providing them performance experience and promotional opportunities (Wilf 2014: 45). Conversely, veteran performers sometimes also sit in with younger players, and thus contribute their vast experience to the benefit of their successors (Wilf 2014: 45). Overall, these forms of apprenticeship in jazz range from temporary connections with transient performers to sustained cooperation (Berliner 1994: 38), even allowing younger musicians to join established bands permanently and thus acquire regular guidance (Berliner 1994: 49–50). As Green (2008: 6) notes, such mentorships bear a resemblance to master-apprentice relationships, which has a long history that I will discuss below.

Consequently, the above notions suggest that *an instrumental musical expert who actively shares his or her experience with younger musicians is not a foreign feature in music that is learned informally.* Therefore, this may also apply to popular music. This then implies that the inclusion of informal learning practices in popular music education does not necessarily entail adopting the role of a passive pedagogue who is "standing back", as several previous studies have done (see e.g., Green 2008; D'Amore 2008; Westerlund 2006). In summary, student-centered pedagogy, and on the other hand a view that emphasizes a pedagogue's musical expertise, *both* appear to agree with the popular music tradition. In other words, instead of a dichotomy between student-centeredness and teacher-directedness, an integration of the two would appear well-suited to popular music. Therefore, I need to further explore the master-apprentice model, which I briefly discussed in Subchapter 2.1.6. I shall come back to this in Chapter 4, as I revise the role of the pedagogue to present a fresh pedagogical design.

2.2.4 Towards Passion in Popular Music Learning

A topic that stands out in informal learning practices is the meaning of learning through one's favorite music. As described by Green (2008: 10), it is typical for popular musicians who learn informally to identify with the music, as they essentially rehearse songs that they choose, or even create, themselves. Advantageously, they thus develop a passion for music

(Green 2008: 9). Such passion is described by guitar virtuoso Malmsteen as a "relentless drive" that urged him to practice "at least eight hours" daily between the ages of 13 and 18, without an instructor choosing repertoire (Lalaina 1992: 65). Consequently, passion has been the interest of several music pedagogy scholars. For example, David J. Elliott and Marissa Silverman (2015: 197) discuss passionate obsession as a strong devotion that a person directs towards self-fulfilling, intrinsically motivating activities. However, Elliott (2020: 112) make a further distinction between passionate obsession and harmonious passion. In essence, passionate obsession can also involve "an uncontrollable urge to continuously engage in [the activity one loves doing] in a self-destructive, impulsive, or addictive way, which overwhelms [the person]" (Elliott 2020: 113). By contrast, harmonious passion lacks this compulsive element, although the activity occupies a significant space in a person's life (Elliott 2020: 113). As such, harmonious passion relates to increasing psychological well-being more comprehensively (Elliott 2020: 113). In other words, a harmonious passion in particular can contribute to making one's life meaningful and significant (Elliott 2020: 113). This meaningfulness, in turn, relates closely to the more extensive concept of *eudaimonia*.

Music education studies on eudaimonia include the book *Eudaimonia: Perspectives for Music Learning* (2020), which is edited by Gareth Dylan Smith and Marissa Silverman, and the 2nd edition of *Music Matters: A Philosophy of Music Education* (2015) by Elliott and Silverman. In essence, eudaimonia is most often defined as human flourishing, although it also has further significances (Smith & Silverman 2020: 2) that I discuss briefly in the following. The term eudaimonia originates from ancient Greece,[11] where Aristotle considered it as the ultimate goal of a good and meaningful life (Smith & Silverman 2020: 2). In other words, eudaimonia is an end in itself because it is regarded as fulfilling the purpose of one's life (Boyce-Tillman 2020: 72; see also Haroutunian-Gordon & Laverty 2020: 91; Smith & Silverman 2020: 10). According to June Boyce-Tillman (2020: 72–73), in an Aristotelian view, happiness "is seen as a temporary emotion and eudaimonia as an ongoing state of being". Furthermore, Smith and Silverman (2020: 2) emphasize the social aspect of eudaimonia; as opposed to being self-centered satisfaction, eudaimonic well-being also involves actions that are good for one's community. As described by Silverman (2020: 31), through such thriving, a person can become "the 'best' version of themselves for the good of self, community, and the world around them". Historically, after the time of ancient Greece, the concept of eudaimonia has reappeared in the medieval theology of Thomas Aquinas as well as in 20th and 21st century studies in positive psychology (Boyce-Tillman 2020: 71–73). Along the same line, contemporary music education studies that focus on promoting students' self-growth set eudaimonia as a pedagogical goal (see e.g., Elliott & Silverman 2015; Smith & Silverman 2020). A central approach in this discourse is Elliott and Silverman's (2015) praxial philosophy of music education, which I will discuss later.

[11] According to Smith and Silverman (2020: 2), the Greek term eudaimonia "derives from 'eu', meaning 'good' or 'well', and 'daimon' meaning 'a spirit', or 'one's personal fortune'".

Promoting music students' self-actualization, passion, and eudaimonic flourishing are closely related to the pedagogical approach that I explore in this study. In the following chapter, I employ psychodynamic theories in order to study meaningful music learning through one's favorite songs. With a pedagogical goal, I thus aim to shed light on subliminal and emotional significances of student-selected repertoire. I return to reflecting on eudaimonia in the conclusion of Chapter 4, where I finally relate it to the psychodynamic emphasis of my theoretical framework.

3 Student-Selected Repertoire and Meaningful Music Learning: a Psychodynamic View

With this chapter, I aim for a deeper understanding of why student-centered pedagogy should be employed in instrumental popular music education in particular. Throughout this entire study I actualize student-centeredness by applying the students' favorite music as a pedagogical tool. Therefore, the main question of this chapter may be reformulated as: what is the meaning of utilizing student-selected repertoire for the learners' relationships with music, and consequently their learning and performances? To clarify how this chapter contributes to generating knowledge that is applicable to this entire study, I refer to reflexive methodology (Alvesson & Sköldberg 2018 [2000]), which I discussed in Subchapter 1.3.1. Since meanings are the central epistemological concern of this chapter, or in other words it has an interpretive interest, this layer of this study represents the hermeneutic, insight-driven paradigm (see Alvesson & Sköldberg 2018 [2000]: 115–116; see Subchapter 1.3.1, Figure 1.1).

Within the conceptual starting points outlined in Subchapter 2.1, Carl Rogers' (1969, 1983, 1994) humanist approach serves as a basis for understanding a student's meaningful learning experiences in this study. According to Rogers (1983: 169), pedagogues' empathy[12] is "the single best predictor of achievement in school". In more recent pedagogical research, Judith V. Jordan and Harriet L. Schwartz (2018), for example, recognize that empathy is still intermittently difficult for teachers. My observations of everyday music education support this statement. This relates to Karin S. Hendricks' (2018: 2, 55) view of music pedagogy according to which empathy crucially needs to lead to action. Hendricks (2018) argues that a music pedagogue's empathy is ideally only one component of advantageous music pedagogy alongside trust, patience, inclusion, community, and authentic connection[13]. This forms a broader whole that Hendricks (2018) calls compassionate music teaching. Empathy is, nevertheless, at the core of compassionate music teaching that distinguishes the most outstanding educators, according to Hendricks (2018: 63). Moreover, Hendricks (2018: 59) suggests that aesthetic experience, as in music and the arts, is "parallel in many ways" to empathy and understanding emotional states. In any case, I presume that one way to strive for more successful implementation of student-centered pedagogy would be paying attention to pedagogues' empathy. Therefore, in music education, I suggest that a purposeful aim

[12] Empathy is defined as "understanding a person from his or her frame of reference rather than one's own, or vicariously experiencing that person's feelings, perceptions, and thoughts" (APA s.a.; "Empathy"). For further reading on a pedagogue's empathy, see Karin S. Hendricks (2018: 55–74). Hendricks' (2018: 55–57) account includes cognitive and affective empathy, compassionate empathy, and mature empathy.

[13] Hendricks (2018: 67) also points out briefly that *excessive* empathy on the part of a pedagogue runs the risk of becoming a negative feature. For example, overcontrolling or "overfunctioning" pedagogues may get so focused on students' needs that they neglect their own needs and demonstrate a lack of trust in the students themselves (Hendricks 2018: 67).

would be to increase pedagogues' awareness of what their students' favorite music may mean for them. Overall, as a pedagogue's empathy is an extensive subject, in terms of delimitation I will concentrate on exploring the subjective meanings of student-selected repertoire in this chapter.

While the constructivist framework (see e.g., Hoidn 2017: 21), for example, provides a student-centered approach to music education, it appears to me that the scope of sources needs to be extended in order to illuminate the profound significance of student-selected repertoire in supporting learners' good relationships with music. Rogers' (1969, 1983, 1994) views on learning that involves personal growth have also been associated with pediatrician and developmental psychologist Donald W. Winnicott's psychodynamic concepts (see DeRobertis 2008: 209). The psychodynamic approach essentially focuses on subliminal meaning and emotion. It aims for a particularly deep understanding of psychic phenomena, as it is concerned with the *origins* (i.e., the etiology, the primordial development) of an individual's foundational mental processes. Consequently, a psychodynamic view can offer this study a profound understanding of the emotional significances of a person's relationship with music, and it is for this reason that I selected it as the framework for this exploration. Central concepts here are Winnicott's *transitional object* and *true self/false self* and Wilfred Bion's *container*, which have previously been applied to music research and to the study of music learning by music therapist and music education researcher Kimmo Lehtonen (1986), psychoanalyst, music education researcher and musician Kari Kurkela (1993), and music education researcher Cecilia Björk (2016), among others. Herein, I shall elaborate and apply them to instrumental popular music learning.

Applying a psychodynamic view is especially suitable in popular music for the following reasons. As I discussed in Subchapter 2.2, for a typical popular music fan, processes of enculturation and implicit learning have already commenced as a listener (see e.g., Green 2008: 5–6). Embedded in those processes, an *affective attachment* to favored music has been constituted even before practicing an instrument, as I shall explore below. Advantageously, a musician's passionate urge to learn their craft expresses their affectionate attitude to music (see Subchapter 2.2.4; see Lalaina 1992: 65). From this perspective, an educators' lack of empathic understanding of what drives their students towards music is unsustainable. Therefore, the *emotional* component of a music's role as a motivational force for the instrumental learner needs further inspection in popular music pedagogy.

As I mentioned in Subchapter 1.1, I have as a pedagogue observed students exceed themselves when they have studied and performed repertoire that they "identify with" (see Green 2002: 175) and that "feels personal" to them (see Kurkela 1993: 353; Björk 2016: 59), compared to their performances with other material. With this background as my inspiration, in this chapter I aim to illuminate the meaning of *student-selected, emotion-driven repertoire* and its potential to fuel fruitful music learning.

3.1 A Good Relationship with Music

> "My guitar didn't say 'no'…it was always there for me. … [The guitar] took me away from the pain in my life."
> (Megadeth's Dave Mustaine in Guitar World; see Steinblatt 1992: 67)

A "good relationship with music" has been featured as a goal of studies in many Finnish music schools locally since the mid-1990s (Björk 2016: 57), before entering the legally binding national curriculum in 2002 (Björk 2016: 58). As Björk (2016: 58) argues in her study of good relationships with music, there has been a variety of ideas of what this goodness is. Officially, in the fundamentals of the curriculum of Basic Education in the Arts, the Finnish National Agency for Education (2017a: 47, see also 47–51; 2017b: 41, see also 41–45) states that the mission of basic music education is to facilitate a good relationship with music. To begin with, I will thus review what The Finnish National Agency for Education mentions in association with this mission. The endeavors that the Finnish National Agency for Education (2017a & 2017b) list include supporting a student's self-imposed musical activity (Ibid.: 2017b: 41), and that a student learns to recognize their own musical strengths, finds their own ways of musical engagement (Ibid.: 2017b: 41), and their own ways of musical self-expression (Ibid.: 2017a: 47). Furthermore, among the pedagogical goals are that a student develops a positive self-image, a healthy sense of self-esteem and communication skills, and moreover that a student is encouraged to engage in aesthetic and creative thinking (Ibid.: 2017b: 41). Moreover, a central aim is to facilitate life-long musical engagement (Ibid.: 2017b: 41). Similarly, music education researcher Heidi Westerlund (e.g., 2008: 85) is among the writers who emphasize life-long learning, and Björk (2016: 65, see also 63) states that a good relationship with music is often recognized as sustained engagement in musical activity. This relates closely to some of the branches of music pedagogy that I discussed above; for example, David J. Elliott and Marissa Silverman's (2015: 377, 380) praxial philosophy which considers self-growth, self-esteem, self-knowledge – or more precisely, eudaimonia – as the goal of learning music (see Subchapter 2.2.4). Within this approach, furthermore, Elliott (1995: 145) emphasizes that music arouses personal memories and associations. I aim to contribute to this perspective on music learning with the study below.

In the following, I further explore the idea of a good relationship with music by applying psychodynamic literature. Kurkela's landmark 1993 book on the psychodynamics of music performing and learning, the title of which may be translated "The Landscapes of the Mind and Music: On Musical Performance and the Psychodynamics of a Creative Position",[14] serves as a fundamental source, along with Björk's (2016) pedagogical study as well as other psychodynamic music research, for example by musicologist Susanna Välimäki (2005).

[14] This book is in Finnish and has not been translated to date. The original title is: "Mielen maisemat ja musiikki. Musiikin esittäminen ja luovan asenteen psykodynamiikka". The above translation has been suggested by Björk (2016: 59).

Björk (2016: 60–61, 67) reports on basis of her personal communication with Kurkela (2012) that a good relationship with music holds different meanings for different people, and that they may also vary over time. From a practical point of view, Kurkela argues that it is essentially a pedagogue's task to find out what this goodness is for each individual student (Björk 2016: 61). Nevertheless, Kurkela (1993: 464–466) gives certain general guidelines for what goodness is in the context of music learning. They include a sense of meaningfulness that enriches life by comprising intrinsic motivation (see Subchapter 2.1), pleasure, security, creativity, satisfaction, and freedom from, for example, coercion. Kurkela (1993: 353) and Björk (2016: 59) emphasize rewarding musical activity that feels personal for the learner, which is aligned with Green's (2002: 175) notion of the importance of the learners identifying with the repertoire that they study.

In further detail, the psychodynamic[15] perspective emphasizes personal meanings that the individual subconsciously ascribes to music (see Välimäki 2005: 30). Kurkela's (e.g., 1993: 466) view suggests that musical activity can be understood from the following premise, which represents the object relations theory:[16] the relationship that a person forms with music is similar to relationships between human beings. More specifically, it is the internalizations of human relationships in a person's mind, the so-called object relations, that shape his or her relationship with music (see also Stein 2004; Björk 2016: 59; Salmon s.a.). For example, Kurkela (1993: 461, 466–467) argues that music can have the function of a comforting friend, or it may constitute a soothing sentiment resembling the presence of a valued other. Acknowledging the therapeutic potential of music, Välimäki (2005: 35) correspondingly points out that "music is flexible and permissive, admitting many projections of meanings and content". In such intimate relations with music, according to Björk (2016: 59), "many complex and perhaps difficult emotions, fantasies, and experiences from nonmusical reality can be lived through symbolically in musical form". Exemplifying the saliency of this approach for music learning, Kurkela (1993: 314), and consequently Björk (2016: 69), have applied this view by analyzing how good music pedagogy supports

[15] Examining music from a psychodynamic perspective has a history of over a century, which has been surveyed by, for example, Välimäki (2005: 25–52), Feder et al. (1990) and, concerning the earlier history until the 1960s, by psychoanalyst Pinchas Noy (1966, 1967a–d). The terms "psychodynamic" and "psychoanalytic" are often utilized interchangeably, which may appear confusing. McLeod (2017) writes that psychoanalytic refers to Sigmund Freud's theories, whereas psychodynamic also includes later concepts. Therefore, I employ the term psychodynamic, as my approach relies mainly on later theories.

[16] For further reading on the object relations theory, see Kernberg 1979 [1976]; Ryle 1985; Kurkela 2013. Beyond psychoanalysis, it bears resemblance to the concept of schemas in cognitive psychology (Kurkela 2013; see also Ryle 1985). Schemas are cognitive structures based on a person's prior knowledge (APA s.a.; "Schemas"; in music, see Leman 1995: 40 and Bregman 1990), thus associated with constructivist learning (see Subchapter 2.1). Outside of the emotion-laden relationships with music, which is the perspective of the present study, Lilja (2009: 152–194; 2013a–d) has applied common musical structures familiar to the learners as schemas in popular music pedagogy.

the development of a merciful superego[17] and refrains from allying with a cruel and rejecting superego, thus subliminally representing either an encouraging or a punishing parent, respectively. This interpretation offers illumination on how, for example, performing live can become a source of joy for one learner and an arena of painful striving for excellence for another (see also Kurkela 1993: 464–466, 138–191; Björk 2016: 59). Kurkela (1993: 353) argues that even if pedagogical processes may not entirely cause such conditions, they can certainly contribute to supporting either of these developments.

I suggest that this perspective on subjectivity is especially crucial to student-centered pedagogy, as it implies that a learner's favorite music represents something unique for them. Psychoanalyst and theorist of self-psychology Heinz Kohut (1990 [1957]: 29) argues accordingly: "what appears objectively to be the same piece of music will affect different people differently". This relates to the work of psychology researchers Leah Sharman and Genevieve A. Dingle (2015), which refutes the previous notion that extreme music causes anger by showing that, for its fans, extreme metal music instead enhances positive emotions and helps regulate sadness and anger.[18] Therefore, I argue that an empathic pedagogue cannot dismiss a learner's favorite music, regardless of the pedagogue's opinions on that music in itself.

In summary, a learner's favorite music is an important part of their personality and musical self.[19] Therefore, this also relates to research on musical identity outside psychodynamic studies. For example, according to educationalist and psychologist David Hargreaves et al's (2002: 11) account on musical identity, musical taste is an integral part of a person's self-concept, particularly in adolescence. Even from the perspective of research on musical identity, then, the students' favorite bands, records, and songs are important in forming them into who they are and determining what feels true to them.[20] Similarly, sociologist Tia

[17] The superego is defined as: "in psychoanalytic theory, the moral component of the personality that represents parental and societal standards and determines personal standards of right and wrong, or conscience, as well as aims and aspirations" (APA s.a.; "Superego").

[18] Music psychologist Suvi Saarikallio's (2007) research on music as mood regulation, for example, shows that affective experiences of music play an important role in mood regulation and wellbeing in everyday life. In psychodynamics, this may be associated with the theory of Kohut and Levarie (1990 [1950]: 19–20), according to which music – in any form – is fundamentally organized sound that renders unnecessary the fear of dread and destruction, and furthermore, the view that music provides sensations of tension and release that may resonate with the listener (see Kohut & Levarie 1990: 22–23 [1950] and Rose 1993: 73–74, 79).

[19] APA dictionary defines "self" as follows: "the totality of the individual, consisting of all characteristic attributes, conscious and unconscious, mental and physical. Apart from its basic reference to personal identity, being, and experience, the term's use in psychology is wide-ranging. […] Austrian-born U.S. psychoanalyst Heinz Kohut (1913–1981) used the term to denote the sense of a coherent, stable (yet dynamic) experience of one's individuality, continuity in time and space, autonomy, efficacy, motivation, values, and desires […]" (APA s.a.; "Self").

[20] Hargreaves et al. (2002: 12–15) distinguish between identities in music (IIM) and music in identities (MII). Firstly, identities in music (IIM) are, in essence, constructed in relation to other people and different situations, and they are based on social categories and cultural musical practices (Hargreaves et al. 2002: 13–14). For example, a person's identity in music can be based on a generic role or activity in music (e.g., a performer, a

DeNora argues that music consolidates identity (DeNora 2013: 3; 2004 [2000]), as it can remind a person of "who they were at a certain time" (DeNora 2004 [2000]: 65).

Below, I explore personally meaningful relationships with music in further detail by employing psychodynamic theories under the umbrella concept of object relations. Gilbert J. Rose (1993: 79) describes such psychic mechanisms as "adding depth and intensity of emotional experience to the response to music and art".[21] However, they represent only one perspective on emotional musical experience as argued by Feder (1993: 12). This delimitation appears realistic when considering the extensive nature of the matter, which is apparent in Kohut's (1990: 22; [1957]) statement that music involves the whole personality of its practitioner.

3.2 Music as a Container

> "Blues is the healer. It healed me, it can heal you".
> (Blues artist John Lee Hooker in the song "The Healer"; *The Healer,* 1989.)

Relating to the citation above, research and music therapeutic practices have recognized that music indeed has the potential to importantly ease unbearable emotions and traumatic experiences (e.g., Salmon s.a.). In doing so, music may be interpreted as functioning as a *container* (see Bion 1955, 2004 [1962], 1984 [1965]), meaning that troublesome emotions are subliminally and symbolically stored in the music, thus rendering life easier (Salmon s.a.). This thought originates from psychoanalyst Wilfred Bion's (1897–1979) theory concerning the early psychic development that occurs through the interaction between the infant and the caretaker.

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composer etc.), as well as specifically based on their own instrument and their preferred music genre (Hargreaves et al. 2002: 12–14). The second concept, music in identities (MII), involves music as a resource for developing other aspects of personal identities, for example gender identity, national identity, and youth identity (Hargreaves et al. 2002: 14). This applies to the present study in the sense that I suggest that learning through the students' favorite music fuels the studies with personal meanings. For further reading on musician's identity, see Susan O' Neill (2002).

[21] The intimate connection between music and emotion is a philosophical and psychological matter which has been studied extensively in several fields of music research. For further reading on the most relevant views for my approach, see the sources of the following references. Kurkela (1993: 460–461) notes how music can comfort, it may cheer up or it may serve as an outlet for aggression. According to Langer (1953: 27), "music is a tonal analogue of emotive life" and Pratt (1952: 26) states that "music sounds the way emotions feel". Furthermore, McDonald 1990: 90; [1970]) attests that music can bring back memories of events, times, and people. More precisely, Hindemith (1952: 49) states that emotional reactions on music are, "images of emotions that have been experienced before" and in agreement, Rose (1993: 79) discusses "conscious and unconscious feeling-memories". According to Noy (1993: 137), music has the ability to reach "preverbal levels of human memory and to evoke the earliest forms of experience" which he argues that emotion is essentially a part of.

As summarized by Ruth Riesenberg-Malcolm (2001), Bion's fundamental theory of the container essentially suggests that the child has sensations that they cannot cope with and must therefore expel. This results in a subconscious mechanism where the child projects those intolerable sensations into the caretaker (often the mother), who functions as a container by preserving them, consequently modifying them, and optimally returning them in a form that the child may tolerate later. Ideally, this constitutes the basis for further development. This process is unconsciously repeated in other contexts later in life (Riesenberg-Malcolm 2001). According to Deborah Salmon (Voices, s.a.), it is of central importance to a person's relationship with music.

An application of this theory to music can be accessed via Bion's view that the container mechanism is essential in psychotherapy. There, the therapist functions as a container for the patient's undesired traits or, for example, anxiety, which he or she is urged to get rid of by projecting them onto the therapist, who consequently preserves and processes them until the patient is ready to receive them again and handle them in a more tolerable form (Tähkä 2001 [1993]: 459). Subsequently, music has been considered a similar container, for example by Salmon (s.a.), who states that "like psychotherapy, music can function as a container for intense feeling", and that the practitioner of music "may sense relief, solace or greater freedom as the feelings are expressed, projected, contained, and survived". In music pedagogical studies, Ari Poutiainen and Esa Lilja (2012) have applied this thought, albeit briefly, in their article on utilizing heavy metal music as instructional material. They consider this mechanism to provide personal growth for a learner. This process is illustrated in Figure 3.1 below.

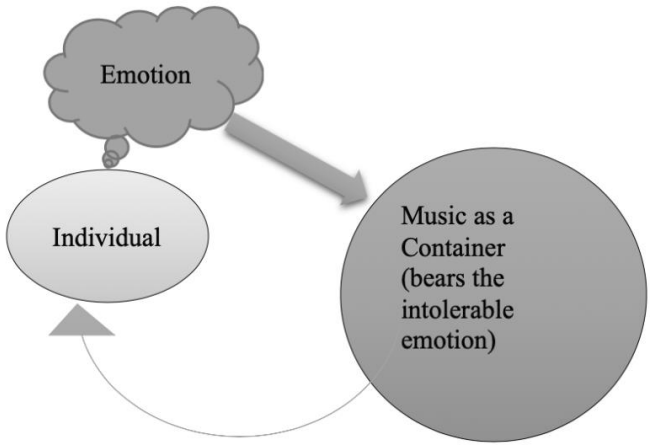

Figure 3.1. Music as a container. A troublesome emotion of the individual is, via projection, subliminally stored in the music, thus rendering life easier. It may then be received again in a more processed and tolerable form at a later time (see Bion 2004 [1962], see also Salmon s.a.).

When conceiving student-centered popular music education through this concept, it does not appear far-fetched to assume that learning to perform a song that has, for example, provided the student consolation or an outlet for aggression through listening would be deeply rewarding (see Poutiainen & Lilja 2012). I make this presumption not only based on psychodynamic music research and music therapy research, but also relying on my informal observations of the hundreds of teenagers whom I have instructed in playing heavy metal songs of their choice. Music brought to the lessons by the students includes speed/thrash metal, for example Slayer's "Angel of Death" (*Reign in Blood,* 1986), or death metal, for example Death's "Zombie Ritual" (*Scream Bloody Gore,* 1987), or even black metal, for example Dimmu Borgir's "The Chosen Legacy" (*In Sorte Diaboli,* 2007), to name a very few. From my perspective as the pedagogue, performing these pieces appeared to be meaningful for the students, as they plunged into the music whole-heartedly.

3.3 Music as a Transitional Object

As depicted in the title of jazz artist Gary Bartz's album "Music is my Sanctuary" (1977), music can provide its practitioner an experience of protection. In psychodynamic music therapy, Salmon (s.a.) observes that as lullabies "may help to create the feeling of infant-mother oneness and serve to form lasting imprints of safety", music can even more generally constitute an affection of being held, understood, and consoled. Similarly, psychoanalyst and musician Alexander Stein (2004: 807) argues that "music listening […] is a creative internalization of the properly attuned and regulated self–other interaction". Relating in an interesting way to the present study's focus on emotion-driven, student-selected repertoire, Stein (2004: 807) continues by arguing that "the 'right' piece of music listened to at the right moment can only be 'just right'".

As I shall explore below, it has been suggested that these phenomena share the same roots with creativity and music's ability to offer its practitioner an opportunity to let the imagination fly free; as expressed by the Red Hot Chili Peppers, "music is my aeroplane" ("Aeroplane", *One Hot Minute,* 1995). In the following, I explore how such experiences with music have been viewed as stemming from fundamental psychic mechanisms that the groundbreaking psychoanalyst, psychiatrist, and pediatrician Donald W. Winnicott (1896–1971) theorized with his paramount concept of the *transitional object* and, more broadly, the *transitional phenomenon*.

According to Winnicott, in the earliest stages (i.e., during the first year; Winnicott 2005 [1971]: 6) of an infant's transition from being merged with the caretaker (often the mother) towards a state of independence (Winnicott 2005 [1971]: 19–20), the infant creates and utilizes what Winnicott entitles a transitional object (Ibid.: 5). Primarily to cope with anxiety that emerges during separation (Ibid.: 5), the infant finds unique importance in an object such as a toy, doll (Ibid.: 19), a corner of a blanket or – especially interesting for the present study – a tune (Ibid.: 5). The special significance of the item that is to become a transitional

object is that the infant experiences it as maintaining an illusory connection with the caretaker, who is absent in reality (Ibid.: 16–17). Paradoxically, the transitional object (e.g., toy, teddy bear, doll, tune etc.) is not an internal mental object, as it is not only a fantasy – nor is it entirely an external object, because for the child it has the crucial significance of the illusory presence of the mothering person (Ibid.: 12–13). As expressed by Björk (2016: 62), it "exists partly in reality and partly in the child's imagination". According to Winnicott (2005 [1971]: 15, see also 55, 51), this phenomenon thus occurs between the internal and external realities, at a mental area that he terms *potential space* (see Fig. 3.2 below).[22] In addition to acquiring a capacity for tolerating separation, in this potential space the infant plays and develops the ability to utilize symbols (Ibid.: 146). Importantly, in Winnicott's (Ibid.: 19, see also 54, 69, 144) view, this is the foundation of creativity, and throughout life it enables cultural experience, for example in the arts or scientific discovery. Therefore, the capability to employ the potential space underlies all musical activity, and music can acquire the function of a transitional object (see Kurkela 1993: 459–460). I shall discuss this meaning of music subsequently. This basic idea is depicted below in Figure 3.2, which illustrates the transitional phenomenon.

[22] Synonymously, intermediate area and area of play.

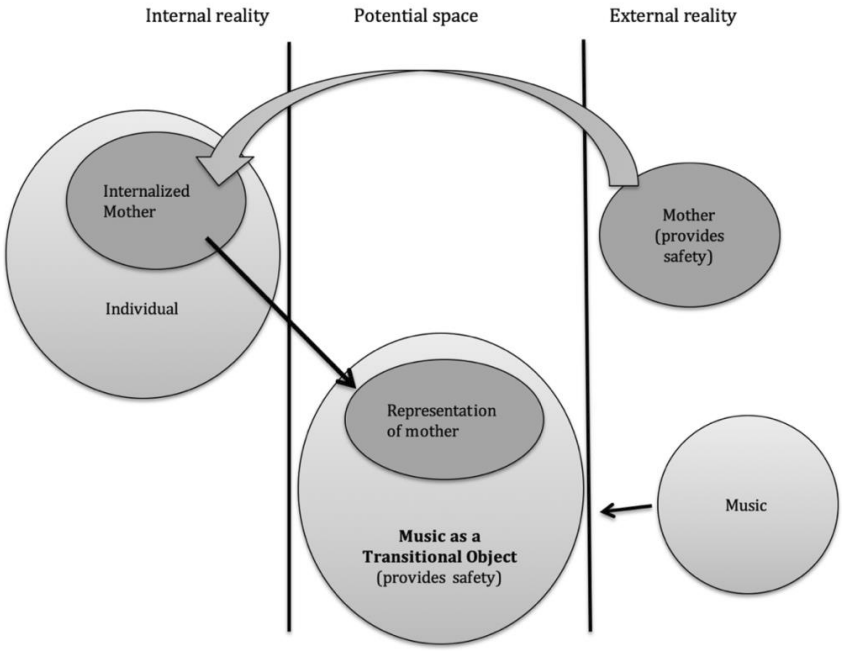

Figure 3.2. The transitional phenomenon (Winnicott 2005 [1971]) as applied to music. This figure is based on Kari Kurkela's (2004) illustration, see also Winnicott (2005 [1971]: 16). Through this process, the infant (here: Individual) creates an internalization of the currently absent mother and projects it on an object (here: Music), which acquires the function of a transitional object. This mechanism maintains an illusory connection with the mother (see Representation), and the transitional object thus provides safety. As discussed above, this object can originally be, e.g., a toy. As explored below, music can become such an object, thus explaining a crucial psychic function of music.

Winnicott (Ibid.: 3) notes that infants' babbling and children's singing of tunes belong to the realm of transitional phenomena. In musicological applications that rely on this notion, psychiatrist Marjorie McDonald (1990 [1970]: 85) employs the term *transitional tune*. This denotes a piece of music that a child selects from among the repertoire they have been exposed to as especially important, just as they select a special transitional toy. McDonald (1990 [1970]: 89–90) argues that it must be a familiar tune that provides a comforting experience and that may be shared with the caretaker, and that an infant probably experiences the tune as being a part of themselves initially. According to McDonald (1990 [1970]: 89), when a child learns to perform the tune themselves, they gradually become able to reproduce the musical comfort independently. As a fundamental example, a child's "own lullaby" may have this function (McDonald 1990 [1970]: 92). [23] Similarly, Kurkela (1993: 460) argues

[23] McDonald (1990 [1970]: 90–91, 95) argues that the word "lullaby" depicts this function by being composed of the words "lull" and "bye" and thus serving as a transitional tune that soothes the infant by providing a lulling comfort at the time of a separation when withdrawing into sleep. McDonald (1990 [1970]: 95) reports

that sound, vocalizations (e.g., casual humming), and music in general can enforce a feeling of safety by functioning as transitional objects, for example in managing loneliness.

Forming an interesting connection with this study's focus on student-centered popular music pedagogy, McDonald (1990 [1970]: 89) stresses that *the particular transitional tune is essentially a child's individual choice.* This is similar to my observation that utilization of student-selected repertoire induces vividness in music learning. In essence, personal favorite songs are clearly invested with primordial meanings, and a potential significance therein is the experience of a presence that soothes in solitude.

Furthermore, of utmost importance in Winnicott's (e.g., 2005 [1971]: 15) theory is that the potential space continues being a crucial element of psychic health throughout life.[24] As transitional tunes (see McDonald 1990 [1970]) are a musical phenomenon rooted in the potential space, it can consequently be argued that favorite songs with personal meanings promote wellbeing at all ages, and not only in childhood. Therefore, from the perspective of Winnicott's (e.g., 2005 [1971]: 15) theory, applying an emotion-driven, student-selected repertoire as a pedagogical practice can even be considered to have wellbeing benefits for music learners of all levels. This illuminates the saliency of learning to reproduce music which feels like one's own in early childhood and advanced music studies alike. In addition to musical pieces, furthermore, an instrument may acquire the function of a transitional object, and can thus serve as a source of a safe state of mind even in adulthood. This is portrayed by an interpretation made by Lehtonen (s.a.) of blues artist Albert King's song "(I Love) Lucy" (1968), which seemingly depicts affection for a beloved woman until the last verse reveals that Lucy is, in fact, King's guitar.

Relating to the potential space as the primary source of creativity and play, a good relationship with music has been associated in many accounts with an ability to *play* (i.e., in the sense that children play). McDonald (1990 [1970]: 93) argues that in a favorable development from childhood to being a professional musician, the "achievement of pleasure

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that direct observation of children as well as biographical and autobiographical accounts of musicians' early lives confirm the concept of a transitional tune.

[24] The following aims to illuminate how the ability to enjoy cultural experience, according to Winnicott's (2005 [1971]) theory on the transitional phenomenon, is fundamentally derived from the capability to employ the potential space, and thus related to psychic well-being. Winnicott (2005 [1971]: 130) states that it is essential not to challenge an infant by questioning whether they have created the transitional object or not, in other words whether it is fantasy or fact. This is connected to the notion that one does not ask, for example, whether a theater play is true or not, or one does not pose this question while enjoying a movie or a novel (Kurkela 2004; see also Kurkela 1993: 40, 41). Still, when empathizing with what one knows to be fiction, it feels true. Accordingly, Noy (1993: 125) discusses how individuals enjoy a fictive story by identifying with one or several of its characters. Without this psychic ability, fiction and fantasy would not feel exciting but meaningless. Consequently, the same mechanism is active when wholeheartedly plunging into the realms of musical self-expression and, as I suggest, when music learning engages creativity and feels personally meaningful. Furthermore, Winnicott (2005 [1971]: 15) attests that in adulthood, and especially in troubled times, the utilization of transitional objects may reappear (e.g., safety-objects, good luck charms).

in ‘play’ at music evolves into an ability to achieve pleasure through ‘work’ at music”. McDonald (1990 [1970]: 94) associates this with the Suzuki method (see Subchapter 2.2.2), where children are encouraged to “play” with their instruments and think of the musical activity as fun. As formulated by Suzuki: “A game to begin with, the spirit of fun leads them on” (see McDonald 1990 [1970]: 94; for further reading, see Suzuki 2013 [1969]). In addition, the ability of *shared playing* is also developed through the transitional phenomenon (Winnicott 2005 [1971]: 69). Winnicott (Ibid.: 51) conceives this as an overlapping of multiple persons’ potential spaces that leads to essential applications. In addition to forming the basis for cultural experience, the ability of shared playing is active in psychotherapy as the therapist and the patient symbolically “play together” (Ibid.: 51). According to Salmon (s.a.), this importantly applies to musicians’ interplay in a band. In popular music education, the inspiring effect of employing jamming as a pedagogical practice during a lesson may be interpreted accordingly. It may involve a non-verbal, intuitive understanding between the student and the pedagogue, and a shared understanding of the music being played. This can be related to cultural musicologist Christopher Small’s concept of *musicking*, according to which “music’s primary meanings are not individual at all but social” (Small 1998: 8). I shall return to this concept in the following chapter. In Subchapters 7.5, 8.2, 8.3, and 8.4 I analyze observations of jamming when we studied groove and improvisation with the students, for example. In addition to inducing creativity by engaging with the overlap of the student’s and the pedagogue’s potential spaces, this practice also corresponds to the jazz tradition where the jam session culture is an essential form of learning (see Subchapter 2.2).

Similarly, it is descriptive that Steven Tyler, lead singer of hard rock band Aerosmith, verbalizes the ability to creative freedom in the music making process as “letting the kid out” (*Making of Pump,* 1990 at [33:53], see also [01:51:07]). Exemplifying the aforementioned views of musical activity as a form of shared play, Tyler describes Aerosmith’s songwriting and record making as follows: “It’s like, you get these ten kids, and they’re all playing in the same sand, and when they’re finished, they’ve got this castle built” (Ibid.: [08:05]). Portraying the permissive role that his band has regarding his creativity, Tyler goes on to saying that “Aerosmith is like the vehicle that allows me to be all that I can be. […] Whatever I want to be, Aerosmith allows me to be it. […] I have a good time doing this” (Ibid.: [07:20]). Applying this thought to education, this type of fruitful collaboration that involves musical self-actualization may be described as a goal of pedagogy that promotes a good relationship with music.

Drawing together the above perspectives on the transitional phenomenon, it appears that Winnicott’s (2005 [1971]) theory offers considerable insight into my observation that a learner can blossom with musical inspiration when performing a personally selected piece and, in drastic contrast, even struggle when assigned to perform similar skills in other contexts. I associate Winnicott’s (2005 [1971]) potential space with my experience that learners often express a sense of spontaneous vividness in their playing when we have utilized their favorite songs as learning material. Winnicott’s (2005 [1971]) view provides significant illumination on the emotion-driven power of student-selected repertoire, and as

it derives from psychiatry, even its potential health benefits. Finally, the transitional phenomenon is closely related to Winnicott's (1965 [1960]) concept of true self and false self, which I explore in the following.

3.4 True Self and False Self in Music Learning

"Let me be who I am and let me kick out the jams!", says proto-punk band MC5's anthem "Kick Out the Jams" (*Kick Out the Jams*, 1969). Similarly, music education research has recognized that music can strengthen identity (Green 2008: 122) and allow self-realization (Kurkela 1993: 352; Campbell 2008: 19). According to Kurkela (1993: 316), a creative attitude and self-fulfillment do not solely rely on a student's mindset, but are also affected by the environment, and therefore an instrumental lesson can essentially contribute to either supporting or suffocating the creativity of an aspiring musician. Kurkela (1993: 316, 351–358) and Björk (2016: 59) have analyzed this aspect of music education by employing the terms *true self* and *false self*, which Winnicott introduced in 1960. These terms denote internal psychic structures that exist in both healthy and disorderly conditions (Winnicott 1965 [1960]: 142–143; 2016 [1964]). Below, I review this concept briefly in order to explore its music pedagogical application.

According to Winnicott (1965 [1960]: 148), the true self is the structure within the personality that enables spontaneity and involves an "experience of aliveness". Only the true self can feel real and be creative (Winnicott 1965 [1960]: 148). In Winnicott's (1965 [1960]: 143, see also 142) view, however, the true self can never suffice alone for living in a society, and it needs to be protected by a defensive construct, a compliant structure that he entitles false self [25]. In a healthy condition, the false self facilitates social adaptation to the environment and enables compromising, which Winnicott (1965 [1960]: 149–150) considers an achievement. This healthy equivalent to the false self is manifested, for example, in a polite and mannered attitude (Winnicott 1965 [1960]: 143). In good health, the true self is able to override compliancy when needed (Winnicott 1965 [1960]: 150). In a state of emotional disorder, by contrast, the false self dominates over the true self, which the individual *is estranged from* (Winnicott 1965 [1960]: 142–143). As a result of such excessive conforming to environmental demands, spontaneity and creativity are deprived (Winnicott 1965 [1960]: 147, 148). Instead, the person then suffers from feeling pretend, unreal, and futile (Winnicott 1965 [1960]: 148), even if the false self may attain respectable achievements that are acknowledged by society (Winnicott 1965 [1960]: 144, see also 1965 [1960]: 142; 2016 [1964]: 30). According to Winnicott's (1965 [1960]: 144) report on successful students with a problematic false self, the more success they had, the "phonier" they felt. Therefore, a student's diligence and good results can be deceiving for teachers.

[25] In this context, the term "false" and the idea of protecting the true self may appear confusing, and Winnicott (2016: [1964]: 28) later clarified this by stating that "each person has a polite or socialized self, and also a personal private self that is not available except in intimacy".

In brief, the etiology of the true self and the false self lies in the infant's early interaction with the caretaker who is often the mother (Winnicott 1965 [1960]: 144; see also "good-enough mother", e.g., Winnicott 1965 [1960]: 145–148). The mothering person's success in correctly sensing the infant's needs and responding to them optimally contributes to the development of the true self (Winnicott 1965 [1960]: 145; see also Kurkela 1993: 90-91). Alternatively, the mothering person's failure in this process causes the infant to comply to the mother. Through this earliest installment of the false self (Winnicott 1965 [1960]: 145), the child builds up a pretend façade and repeats a false set of relationships later in life (Winnicott 1965 [1960]: 146; for further reading, see 144–148). Furthermore, the concept of true self and false self is closely related to the transitional phenomenon, which I discussed above. Winnicott (1965 [1960]: 150) argues that as a result of healthy development, the true self is enabled to utilize symbols. Consequently, this enables a person to participate in cultural life and enjoy it, whereas a pathological false self inhibits this ability (see Winnicott (1965 [1960]: 150).

In music education, Kurkela (1993: 353) applies Winnicott's theory by employing the terms "compliant musical self" and "musical false self"[26] to describe musical activity that is centered on fulfilling external conditions, such as the teacher's expectations, at the sacrifice of self-realization. Kurkela (1993: 353) recognizes this as an essential peril of formal music instruction, and argues that it may cause a student's estrangement from their personal values in music. According to Kurkela (1993: 353), the musical performances of excessively compliant students may lack a certain drive of intrinsic power, as they have the appearance of being copies of someone else's playing. This is related to Winnicott's (1965 [1960]: 152) notion that the false self, even if it produces notable achievements, lacks something that supplies a "central element of originality" stemming from the true self. As I mentioned earlier, Kurkela (1993: 353) suggests that music pedagogy may not necessarily produce undesirable psychic development but is, rather, able to enforce it, or alternatively inhibit it from proceeding. Kurkela (1993: 352) continues by arguing that when music is successfully constituted as a manifestation of the true self, it can give profound satisfaction to its practitioner. As a means of self-expression, it provides a source of joy that may be shared with others (Ibid.). In alignment with Kurkela's (e.g., 1993: 355) and Björk's (e.g., 2016: 59, 67–73) research, a central focus of the present study may be rephrased, in these terms, as how music pedagogy can avoid constituting musical false self structures and instead support students' musical true selves while still being efficient.

Considering the perspectives that I have explored above, it appears that authoritarian instruction (see Schweisfurth 2013a: 13; see Subchapter 2.1) can have a profoundly negative effect on students with a tendency towards excessive compliancy. In contrast, a central purpose of applying student-selected repertoire in this study is to encourage students to

[26] Translated from Finnish by the author, Kurkela's terms are as follows: "compliant musical self" [mukautunut musiikillinen minuus] and "musical false self" [musiikillinen valhe-minuus].

practice in accordance with their own ideals and for the sake of the music itself (i.e., intrinsic motivation; see Deci 1975: 23; see Subchapter 2.1). Intrinsic motivation is certainly not a new concept, but the question of *why not all students are able to actualize it* is apparently not self-evident to this day. I suggest that Winnicott's (1965 [1960]) theory of true self and false self appears to be beneficial for this discourse.

3.5 A Perspective on Separation and Narcissism in the Student–Teacher Relationship

The psychodynamic concepts that I have explored in this subchapter suggest the importance of a pedagogue's respect for the subjective experience of each learner and the uniqueness of their musical background. This perspective affects the student–teacher relationship, as I discuss in the following. This applies Kurkela's (1993: 362–369, see also 216) distinction between two contrasting psychological configurations, which he terms a pedagogue's libidinal economy and narcissistic economy.[27] In practice, an individual is driven by both the libidinal and narcissistic economies – the crucial issue is how they are balanced (see Kurkela 1993).

According to Kurkela (1993: 363, see also 68, 216), the libidinal economy is, in short, based on the primary striving towards pleasure. It is characterized, rather simply, by the pedagogue experiencing satisfaction when the student is making progress and, alternatively, a realistic amount of frustration when the student is stagnating or, at worst, regressing (Kurkela 1993: 363). In the narcissistic economy, contrarily, the pedagogue excessively invests in the pedagogical relation with narcissistic implications. Here, Kurkela (1993: 366) applies psychoanalyst Heinz Kohut's concept of the self-object. Kohut's self-object means an object that a person essentially utilizes for the psychic mechanism of projection, and which therefore maintains the person's narcissistic balance (Kurkela 1993: 366, see also e.g., 202). In vernacular speech, this balance refers to self-esteem. According to Kurkela's (1993: 366) application, the student, and particularly the student's performance, can acquire the function of a self-object for the pedagogue. This means, in essence, that the student's performances regulate the pedagogue's narcissistic balance. When the student performs with excellence, the pedagogue takes personal pride in this success, and conversely, when the student does not live up to the pedagogue's expectations, the pedagogue experiences this as a personal failure (see Kurkela 1993: 366).

In the following, I briefly elaborate on Kurkela's (1993: 362–369, see also 216) above-mentioned concepts of libidinal and narcissistic economies. I analyze them through the perspective of separation between individuals, or the lack thereof. Kurkela's (1993: 363) concept of libidinal economy implies a setting in the student–teacher relationship where both parties involved are independent individuals. They do not necessarily share the same musical

[27] In Finnish: "libidinaalinen ekonomia" and "narsistinen ekonomia"

ideals but, nevertheless, collaborate in a mutual effort for the progress of the student. Thus, the pedagogue respects the student's unique musical background and individual preferences in music, regardless of how contrasting they may be from the pedagogue's own likings. A genuinely student-centered music pedagogue makes every effort to aid the student in reaching their own musical goals, even if they differ from the pedagogue's artistic ideals. In other words, *the pedagogue and the student are both autonomous, separate subjects.* I suggest that this is the ideal situation. This setting of two subjects (student and pedagogue) is drastically different from the pedagogue being the subject and the student being merely an object for the pedagogue, which corresponds with Kurkela's (1993: 366) description of an excessively narcissistic economy. In a student–teacher relationship driven by the pedagogue's excessively narcissistic economy, the student's autonomy is deprived, or more figuratively, the personal border between the student and the pedagogue is blurred. As Kurkela (1993: 367) suggests, in such a setting there is no opportunity for the development of a learner's musical creativity. Therefore, when a pedagogue is able to balance a libidinal economy and a narcissistic economy, the student–teacher relationship may contribute to the development of a good relationship with music. Furthermore, a pedagogue's empathy for the students requires that the pedagogue *accepts the separation between student and pedagogue.* In the following chapter, I return to the libidinal and narcissistic economies from a student's perspective.

3.6 Discussion

In conclusion, why is student-centeredness desired in music pedagogy, in the sense of utilizing student-selected repertoire? From the psychodynamic perspective of this chapter, favored music is invested with a person's primordial meanings, which he or she prescribes subconsciously. Music in general evokes emotions and memories, and it releases tensions. Music can console and help through difficult times, as the musicological and music-therapeutical applications of Bion's (2004 [1962]) container theory suggest (see Kurkela 1993). Music can provide safety and ease managing solitude by having a similar function as a transitional object (see Kurkela 1993; cf. Winnicott 2005 [1971]). As a form of culture, music engages a person's potential space. Winnicott (2005 [1971] conceives the potential space as the psychic structure where a person's creativity is formatively developed. Although these functions apply to music in general, this study suggests that these meanings are *especially prevalent in favored music* – for example, songs to which a person has formed a relationship initially through long-term listening. Music that feels one's own can become an important channel for creativity, integrity, self-expression, and joy. By doing so, favored music can be perceived as a manifestation of the true self construct (see Kurkela 1993; cf. Winnicott 1965 [1960]). According to psychodynamic theories, the concepts of container, potential space, transitional object, and true self are primordial elements of a person's mental health, and they remain fundamental aspects throughout life. Therefore, music pieces that have a connection to these mechanisms are profoundly important to an individual. In essence, this contributes to forming a good relationship with music, which can even promote

wellbeing (see Kurkela 1993; cf. Winnicott 2005 [1971]; for a similar perspective[28] outside psychodynamics see e.g., DeNora 2013). This emotional perspective complements the constructivist view according to which efficient music learning occurs by applying prior knowledge that consists of familiar musical structures and schemas (see Lilja 2009: 152–194; Lilja 2013a–d). Ultimately, a psychodynamic view offers explanatory power to the importance of student-centeredness in music education, which may be conceived as utilization of emotion-driven, student-selected repertoire.

In practice, what does this mean for a pedagogue? To avoid misconceptions, I emphasize that a pedagogue should not interfere with a student's psychic affairs. Accordingly, it is not necessary for a music educator to know the psychodynamic theories explored above. Nor does a learner need to be conscious of these meanings. Instead, a pedagogue should have the awareness that music may have considerable personal significance, as the concepts above exemplify. This general understanding should result in a *respect for the student's favorite music* and favorably *increase the pedagogue's empathy towards the student.*

The above psychodynamic exploration relates to several other views that have been employed in music pedagogy. Outside psychodynamics, a corresponding perspective includes the concept of *musical agency,* which appears in sociologically inspired views on music education (see e.g., Karlsen 2011; Väkevä et al. 2012). In her review, Sidsel Karlsen (2011: 110) defines musical agency as "individuals' *capacity for action* in relation to music or in a music-related setting". Among other components, this includes using music for expressing and identifying feelings (Karlsen 2011: 111–114). Therefore, this perspective of employing music as a tool of emotional work aligns with the above psychodynamic study on emotion-driven, student-selected repertoire. Furthermore, Karlsen (2011) also refers to views of musical agency that focus on a student's role as an active doer (e.g., Elliott 1995; Small 1998). In the following chapter I will apply these views, as this study proceeds from

[28] Obviously, music's health benefits correspond with several disciplines outside psychodynamic psychology. For example, sociologist Tia DeNora (2013) observes in her book "Musical Asylums: Wellbeing Through Music in Everyday Life" that music offers an asylum which alleviates distress, a place and time where it is possible to flourish and be creative (DeNora 2013: 1). This statement shows that DeNora's (2013) interests are closely related to the above-mentioned psychodynamic theories (cf. Bion's (2004 [1962]) container and Winnicott's (2005 [1971], 1965 [1960]) potential space and true self). These similarities include, furthermore, that DeNora (2004 [2000]: 46–74) conceives music as a "technology of self", through which experiences can be remembered and emotions can be processed. Therefore, besides psychodynamics, my presumption that working with the learners' favorite music can benefit emotional wellbeing is also in alignment with DeNora's (2013: 4) argument that music has short-term and long-term health benefits both physically and mentally. DeNora (2013: 4–5) also gives a brief historical review of the healing power of music. Moreover, DeNora (2004 [2000]: 75–108) has studied the bodily functions of music. This physical perspective relates to groove, which I explore in Subchapter 5.1.

the perspective of the individual student towards revising the overall pedagogical setting in music instrumental lessons. In essence, a pedagogue is a professional musician whose musical expertise should not be obviated, even if student-centeredness is employed.

4 A Pedagogical Design: Student-Centered Musical Expertise (SCME)

In this chapter I introduce a fresh pedagogical approach to instrumental education in popular music. I have developed the roots of this approach during my career as an electric guitar pedagogue. Elaborating it further, I will explore this design from a theoretical perspective below. Later, in Chapters 7 and 8, I will analyze the practical utilization of this approach in order to research the main question of this study. In essence, this design aims to integrate student-centered pedagogy and a pedagogue's expertise in popular music. By doing so, it aims to promote effective learning and hard work while supporting a good relationship with music. In this epistemological layer of the study, my approach to generating knowledge adheres to critical theory (see Alvesson & Sköldberg 2018 [2000]: 179–221). As I mentioned above, presenting my pedagogical design involves "emancipation from frozen social and ideational patterns" (see Alvesson & Sköldberg 2018 [2000]: 218), since I am critical of both student-centeredness and the master-apprentice tradition but aim to retain certain advantages of both. To do so, I will first draw together the conclusions of Chapters 2 and 3.

In essence, student-centered pedagogy can engage the learners' intrinsic motivation (see Subchapter 2.1.4; Deci 1975: 23). By applying student-selected repertoire in instrumental education, student-centered pedagogy can promote learners' self-actualization (see Chapter 3; Rogers 1969, 1983, 1994; Kurkela 1993). It also aligns with the tradition of popular music wherein aspiring performers have typically learned informally through personally favored pieces (see Subchapter 2.2; Green 2002, 2008). However, student-centeredness has been criticized for suggesting teachers to assume an overly passive role and being generally ineffective (see Subchapter 2.1.5; e.g., Meyer 2009; Biesta 2012; Hoidn 2017: 24). Importantly, I argue that *a musical expert pedagogue has valuable insight into his or her own specialty, as well as the music tradition overall, which should not be bypassed*. Karin S. Hendricks (2018: 41) likewise states that "[n]o matter how kind or emotionally supportive a teacher might be, it is all for naught if that teacher is not helping students achieve musically". Therefore, approaches that combine student-centeredness with the active role of a musical expert pedagogue are needed (see Subchapter 2.1.6; cf. e.g., Sursock & Smidt 2010: 32; Hoidn 2017: 24). Consequently, I will revise the pedagogue's role and the pedagogical setting in popular music education in the following.

4.1 Revising the Pedagogue's Role and the Pedagogical Setting

It is common to conceive the master-apprentice model as the opposite of student-centered pedagogy (see e.g., Mesiä 2019: 47). However, I aim to retain certain features of the master-apprentice model and to integrate them with student-centeredness, as I mentioned in Subchapter 2.1.6. Below, I discuss how I will apply them pedagogically.

4.1.1 Updating the Master-Apprentice Model

Randall Everett Allsup's (2016) book *Remixing the Classroom: Toward an Open Philosophy of Music Education* suggests alternatives for the traditional master-apprentice model of teaching. In a study of jazz improvisation education and creativity, Ed Sarath (2018: 194) agrees with Allsup's (2016) "open philosophy" but adds that positioning it in opposition to a limiting master-apprentice model is "an example of unnecessary polarization of two necessary components that can work wonderfully together". Conceptually, my perspective is similar to Sarath's (2018: 194) in this sense. Instead of dismissing the master-apprentice model altogether, I also recognize the following values in that tradition.

Firstly, I emphasize a master's musical expertise as a self-value in instrumental education. This starting point agrees with, for example, Hendricks (2018: 41), who states that "[i]t goes without saying that music teachers need to have prerequisite skills and knowledge about music to be effective teachers". Secondly, as expressed by Kim Burwell (2012: 283) in his study of the master-apprentice model, the person of the master can be a source of motivation for the student. Thirdly, according to Burwell's (2012: 283) account, a dominant authority is also generally desired by students. Fourthly, the education of aspiring professional musicians in particular can resemble the master-apprentice model. Such advanced students may also bring with them both repertoire and real-life musical problems that they are currently working on (see Burwell 2012: 285).

As I cherish the above qualities, I do not conceive the pedagogue merely as a facilitator of learning. The more active role for the pedagogue that I suggest is aligned with educationalist Gert J.J. Biesta's (2012) view, which I discussed briefly in Subchapter 2.1.5. As mentioned, I delimit my utilization of Biesta's extensive work to this perspective on pedagogy. I find it purposeful in terms of framing the potential problems of student-centeredness. In his article titled "Giving Teaching Back to Education: Responding to the Disappearance of the Teacher", Biesta (2012: 36; cf. Weimer 2013) opposes the frequent student-centered viewpoint where "teaching is replaced with the idea of the facilitation of learning". Biesta (2012: 36) dismisses such a passive role for the teacher and argues, in essence, that "teachers should be allowed to teach". According to Biesta (2012: 41), "to suggest that the teacher adds nothing to the situation […] is a misrepresentation of what teachers do and what teaching is all about". Importantly, as an alternative, Biesta (2012: 35) does not advocate a conservative, authoritarian role for teachers, where they have control over learning and aim for pre-specified learning outcomes. As in several student-centered accounts, Biesta (2012: 38) agrees that learners must also be active, since "nobody can do the learning for others" (for a corresponding view, see Doyle 2011: 7), but he strongly argues that "there are limits to constructivism". In other words, Biesta's (2012) view appears to integrate the advantages of student-centered and teacher-driven approaches. Below, my intention is to apply a similar idea to popular music instrumental pedagogy. Thus, I maintain the active role of the pedagogue as a musical expert, which bears a resemblance to the master-apprentice model

– but I specifically suggest that, instead of being authoritarian, the master should *apply his or her musical expertise to personalized content and student-selected repertoire*.

Therefore, my view of the ideal interaction between the student and the pedagogue is also crucially different from the master-apprentice model. Returning to Burwell's (2012: 280–281) account, the master-apprentice model typically involves the apprentice imitating and copying the master. Imitation and copying may often have a negative connotation (Burwell 2012: 280–281), and I do not advocate it as such. On the other hand, Burwell (2012: 280–281) also raises a broader and more positive view of imitation in music learning, as it may elevate attention to musical detail and involve a student's active participation. In alignment, I argue that while imitating the pedagogue is opposed to student-centeredness as such, imitation is not an unrecommendable starting point if it evolves into a student's creative elaborations. Such individual applications allow for student-centeredness, as I shall outline below. Additionally, imitation is not entirely foreign in popular music, where copying more experienced musicians is a common practice of informal learning (see Subchapter 2.2). Below, I will discuss the interaction between a student and a pedagogue by applying frequently cited views of music education research that emphasize musical agency, which I briefly mentioned above.

4.1.2 Revising the Pedagogical Setting

In the paramount perspectives of David J. Elliott (e.g., 1995) and Christopher Small (e.g., 1987; 1998; 1999), music is treated as a verb, "to music". In Elliott's (1995) frequently cited book, *Music Matters*, and its substantially updated second edition by Elliott and Marissa Silverman (2015), this word is transformed into "musicing". In contrast, Small spells it "musicking", as in his book *Musicking: The Meanings of Performing and Listening* (1998). Moreover, musicing and musicking also have conceptual differences. In the subsequent discourse, Odendaal, Väkevä et al. (2013) compare Elliott and Small. They state that Elliott's focus is on "listenable results of musical praxis", whereas Small emphasizes "social value in itself" (Ibid.).

Firstly, for Small (1999), musicking is a socio-cultural event that means "to take part in any capacity in a musical performance, and the meaning of musicking lies in the relationships that are established between the participants by the performance" (see also Small 1998: 13). As Odendaal, Väkevä et al. (2013) note, this view implies that a music pedagogue may be considered as a part of this social context. This can mean, for example, that the student and the pedagogue work towards shared educational goals.

Therefore, as a social perspective on my pedagogical design (cf. Small 1998, 1999), I aim to engage both the student and the pedagogue as active participants in an instrumental music lesson. In alignment with Elliott and Silverman (2015: 273, see also 138), and with Biesta's (2012) view that I discussed above, neither one is stepping aside (cf. Green 2008; Weimer

2013). Instead, I emphasize their vivid interaction, in that I am not only concentrated on student-selected repertoire as such, but – but more specifically – *how the musical expert pedagogue processes that music and, for example, applies it to personalized exercises*. Thus, in my view of the instrumental lesson as a socio-cultural event (cf. Small 1998, 1999), I see it as an intersection of the student's enthusiasm for music and the pedagogue's musical expert knowledge. As I will discuss this perspective below, my intention is that the pedagogue becomes an active participant by analyzing the student's favorite music. As another implementation of this vibrant exchange, I stress the importance of jamming during the lessons. Therefore, I intend that an instrumental lesson would not be excessively devoted to the theoretical analysis of music, but to musicianship in-action. From the perspective of Small's (1998) concept of musicking, jamming is essentially a shared activity between the student and the pedagogue. Such musical, non-verbal communication also relates to Small's (1998: 13) view that "the relationships of a musical performance are enormously complex, too complex, ultimately, to be expressed in words". Subsequently, jamming as a pedagogical practice has been explored by Lars Brinck (2017). I study jamming in electric guitar lessons in Subchapters 7.5, 8.2, 8.3, and 8.4.

My emphasis on such musicianship in-action (e.g., jamming as a pedagogical tool) is also aligned with Elliott's (1995) and Elliott and Silverman's (2015) concept of musicing, which is at the core of both versions of *Music Matters* (1995; 2015). More broadly, this view of musicing belongs to Elliott and Silverman's (2015) praxial philosophy of music education. Fundamentally, Elliott (1995: 14) argues that music is "a particular form of action that is purposeful and situated and, therefore, revealing of one's self and one's relationship with others in a community". As such a form of action, Elliott and Silverman (2015: 16: see also Elliott 1995: 40) employ musicing as a collective term for all forms of music making; for a few examples, performing, improvising, composing, arranging, conducting, recording etc.

Central to Elliott and Silverman's (2015) praxial philosophy of music education is an extensive concept that they call musical understanding. It is a multidimensional and holistic form of thinking and knowing (Elliott & Silverman 2015: 231). This view relates to my pedagogical approach in several ways as I discuss in the following. Emphasizing that this specifically means *thinking-in-action*, Elliott and Silverman (2015: 195–235) present 16 forms of musical thinking and knowing, most of which are embodied, nonverbal, and situated. In essence, Elliott and Silverman's (2015: 231) concept of musical understanding is built on the fundamental skills of musicianship and listenership. In line with the emphasis on musical agency, Elliott (1995: 53–54) defines musicianship as a multidimensional form of practical knowledge that is "demonstrated in actions, not words". Importantly, according to Elliott and Silverman (2015: 203, 432), musical understanding is educable – it is even the foundational content of music education. Elliott (1995: 121) also emphasizes that musicianship can be taught, and that to teach music is essentially to promote a student's musicianship (Elliott 1995: 72). Regarding the development of a learner's musicianship and musical thinking, Elliott and Silverman (2015: 231, see also 434) emphasize musicing in a practical, real-world setting. Applying this view, jamming during instrumental lessons is an

effort to promote a student's musicianship as a skill in-action. Furthermore, as mentioned, the pedagogical approach that I present below also aims to develop a student's musical understanding (see Elliott and Silverman 2015: 195–235) by employing a pedagogue's ability to analyze students' favorite music. From this analytical perspective, musical understanding includes increasing a student's awareness of why his or her favorite music sounds the way it does. For example, a pedagogue and a student can explore how groove is created in student-selected repertoire. When the results of such analysis are practically applied, jamming during a lesson can become goal-directed, instead of being arbitrary. My intention is that this promotes a multi-layered musical understanding in a way that combines an analytical and a practical approach to performing music. In any case, both the student and the pedagogue are, then, active participants in the lesson by exploring music and playing – or musicing – together.

Furthermore, since the praxial philosophy emphasizes that musicianship is essentially intertwined with listenership (Elliott & Silverman 2015: 206–208; Elliott 1995: 296), an integral component of musicing and musicianship is audiation, meaning inner hearing (Elliott 1995: 228; Elliott & Silverman 2015: 350–351), which I discussed in Subchapter 2.2.2. Similarly, Elliott (1995: 228) considers audiation "an important aspect of musical thinking-in-action". This is closely related to my premise that in popular music learning it is typical even for a beginner to have an extensive background as a listener of his or her favorite music (see Green 2002, 2008). Therefore, my aim is that studying student-selected repertoire by ear engages a learner's audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351).

However, Elliott and Silverman's (2015) praxial philosophy extends considerably further than emphasizing practicality. They essentially view music as "a diverse social praxis" that "involves many intertwined dimensions", for example social, cultural, intrapersonal, reflective, and ethical meanings (Elliott & Silverman 2015: 52). Consequently, music making and development in musicianship helps in achieving self-growth, self-knowledge, enjoyment, and even a state of flow (Elliott 1995: 121; Elliott & Silverman 2015: 380). Therefore, in Elliott and Silverman's (2015: 48) praxial philosophy, the aim of learning music is eudaimonia, which I discussed in Subchapter 2.2.4. This view relates to my psychodynamic exploration in Chapter 3, which suggested that a student's personal background as a listener is a crucial foundation for promoting an emotionally meaningful relationship with music. Therefore, I presume that by employing a student's favorite music as learning material, a pedagogue can actualize the eudaimonic basis of Elliott's (1995: 129) view and Elliott and Silverman's (2015: 380) praxial philosophy – that self-growth is a primary goal of music education overall. Working this way, instrumental lessons have the potential to promote musicianship even in the sense that Elliott (1995: 129) considers it "a unique and major source of self-esteem". Finally, Elliott and Silverman (2015: 386; see also Elliot 1995: 133) also state that such self-knowledge and enjoyment that musicianship promotes arise from significant effort. In line with everything that has been said above, my

aim is that a pedagogical setting would not involve passivity in any form. The practical implementation of this view is the main concern of the following explorations.

4.1.3 Introducing the Student-Centered Musical Expert Pedagogue

As I discussed above, a central question in outlining the role of an active pedagogue is how he or she applies their musical expertise. With a similar interest, Elliott (1995: 252) appropriately employs the term "unmusical education", as he strongly opposes instruction given by musically uneducated teachers whose musicianship is deficient. Elliott and Silverman (2015: 415; see also Elliott 1995: 262–263) emphasize that musicianship, listenership, and educatorship are interdependent for a pedagogue; in other words, any one of them is insufficient without the others. Elliott and Silverman (2015: 404) state that "[m]usicianship and listenership are the subject matter knowledge one must possess to be a professional music educator" (see also Elliott 1995: 252). In turn, Elliott and Silverman (2015: 404) define educatorship as "the flexible, context-based knowledge that allows one to think-in-action in relation to students' needs, subject matter criteria, community needs, and the professional standards that apply to each and all of these" (see also Elliott 1995: 252). As I construct the pedagogical design below, I intend to maintain a degree of flexibility that allows pedagogues to apply various student-selected repertoires.

My pedagogical approach is in agreement with many aspects of Hendricks' (2018) compassionate music teaching, which I discussed in Chapter 3. Firstly, I agree with Hendricks (see 2018: 2, 55) that empathy must essentially lead to action in a pedagogical setting. Secondly, my intention is that pedagogues share their passion for music and learning with their students (see Hendricks 2018: 4–5). Hendricks (2018: 4) argues that this ideal of shared passion is indicated by the word compassion, as it derives from Latin; the Latin prefix *com* means "with". Thirdly, according to Hendricks (2018: 17), compassionate music pedagogues are distinguished by "their ability to *simultaneously* exemplify [these] compassionate qualities *while also eliciting the highest levels of musicianship in their students"* [italics added]. Hendricks (2018: 17–20) discusses, among other examples, the renowned violin pedagogue Dorothy DeLay, who successfully promoted high virtuosity through a flexible and nurturing approach towards her students. My purpose is to contribute to this line of thought by elaborating a pedagogical model for popular music that actualizes such high musical standards, for example in exacting groove studies, and implements empathic teaching.

As a synthesis of the entire theoretical background that I have explored in Chapters 2 and 3, and above, I suggest a revised role for pedagogues in popular music instrumental education: the *student-centered, empathic musical expert*. My main intention is that pedagogues show empathy by reaching out to students' favorite music, and then employ their musical expertise to apply that music pedagogically. Fundamentally, my aim is to dismantle the dichotomy

between the master-apprentice model and student-centeredness by combining musical expertise and empathy (cf. Sarath 2018: 194).

In addition to employing student-selected repertoire, I focus on how a pedagogue can favorably connect it with repertoire from his or her own musical specialty. I presume that the use of student-selected repertoire does not alone constitute a high quality of music education. This view is in accordance with Cecilia Björk (2016: 73), who states that repertoire presented by the pedagogue can also have a meaningful effect on the learner. Björk (Ibid.) argues that music that is new to a learner may nevertheless become important when it is passed on from a trustworthy and respected authority. This appears accurate, since, for example, the impressive expert-level playing of a pedagogue can most likely inspire a student to discover new musical influences.

In summary, as the input of both the students and the pedagogues are valuable, I aim to find a fruitful interaction between these two. From these points of departure, I present an integrative model for popular music instrumental education. I entitle this approach *Student-Centered Musical Expertise*, henceforth abbreviated as SCME.

4.2 The Basic SCME Concept

As a key element of implementing this interactive pedagogical design, I utilize the *applicability* of musical phenomena. This starting point is in alignment with the views of Elliott and Silverman (2015: 48), who write that "there's nothing wrong with teaching musical skills and techniques, *as long as it's recognized that skill teaching is only one part of* the many processes needed to make, listen to, and understand music. Students should learn how to apply their musical abilities imaginatively and creatively, too". Consequently, I intend to elaborate on this thought so that this applicability can be utilized not only by students but also by pedagogues when personalizing studies.

With this background, the fundamental idea of the SCME approach can be summarized in the following short statements and logical conclusion. A musical expert pedagogue is able to analyze a student's favorite music; in other words, to identify the individual components of student-selected songs. The pedagogue can then use these components in personalized exercises as well as relate them to music from the pedagogue's own specialties, and thus present new musical influences to the student. This constitutes a reciprocal process that aims for a balance between student-selected repertoire and material derived from the pedagogue's musical expertise. Working in this way, I intend that the instrumental music studies would be essentially interactive. This is in alignment with social learning; for example, Hytönen's (1998 [1992]: 22) account of student-centeredness represents the extensive pedagogical literature that suggests that learning is a dialogue.

4.2.1 Constructing Learning Processes

In practice, an expert pedagogue can actualize this dialogue in different ways. In addition, maximal specificity in research on student-centeredness is desirable, due to the crucial demand for domain-specific classroom studies (see Hoidn 2017: 25). Therefore, I present a distinction between three practical configurations: Inductive SCME, Deductive SCME, and Relative SCME (see Figure 4.1 below). The terms inductive and deductive are derived from the philosophy of logic. Inductive reasoning (bottom-up) moves from specific observations to make broader generalizations and theories (Trochim 2020). Deductive reasoning (top-down), in contrast, works from the general to the specific and thus reasons from a known premise to reach a conclusion concerning a particular case (Trochim 2020). Below, Figure 4.1 illustrates these configurations.

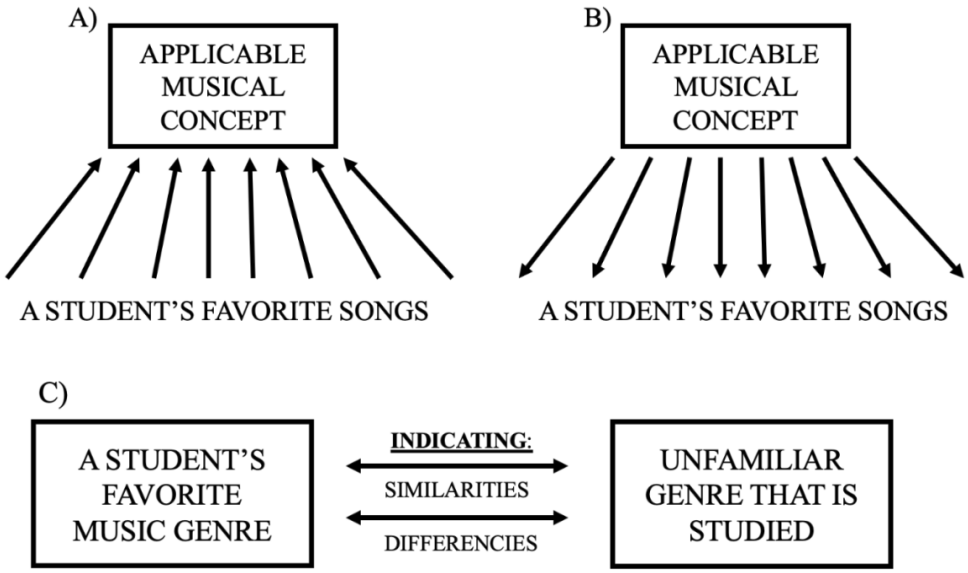


Figure 4.1. A) Inductive SCME, B) Deductive SCME, and C) Relative SCME.

In Figure 4.1 (see above), by the term "applicable musical concept" I refer to the musical phenomena and instrumental techniques that appear in, and can be applied to, various musical repertoires. For a few examples, this can mean chords and scales and, for guitar players, picking and legato techniques. Overall, the three configurations (Figure 4.1a–c) comprise three different ways to include students' favorite music in their instrumental studies.

Firstly, by Inductive SCME I mean a practice of presenting new musical concepts by discovering them from student-selected repertoire (see Figure 4.1a). In Chapter 8, I analyze the results of utilizing this bottom-up approach. It occurred when a student studied chords, instrumental techniques, and basics of transcription when we practiced the alternative metal

band System of a Down's piece "Chop Suey!" (*Toxicity*, 2001). The student favored that song, and brought it to the guitar lesson. Furthermore, in Chapter 8 I examine how students had independently transcribed their favorite guitar solos, which we then analyzed together during the lessons and consequently applied to the students' improvisation. With one student, we explored Marty Friedman's heavy metal lead guitar style on the Megadeth albums *Countdown to Extinction* (1992), and *Rust in Peace* (1990) in particular. In these lessons we analyzed Friedman's note choices, and the student consequently applied them to his own improvisation. Another student discovered a new scale, developed his fretboard knowledge, and improved his dynamics as we studied the jazz fusion guitar style of Mark Lettieri. In Inductive SCME, then, student-selected repertoire unfolds musical findings that, through interaction with a musical expert pedagogue, can enhance the understanding of common musical phenomena.

Secondly, Deductive SCME occurs in the exact opposite order. In this top-down approach, the pedagogue first presents a musical concept from their expertise, which is studied and only then applied to student-selected repertoire (see Figure 4.1b). In Chapter 7, I analyze video-documented lessons where students studied groove with this approach. I first presented the main components of groove (see Subchapter 5.1) and their corresponding exercises to the students. By utilizing these exercises, the students started out with practicing rhythm parts that I had suggested, because they exemplified outstanding groove. These primary examples included hard rock in AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976) and "Hell Ain't a Bad Place to Be" (*Let There Be Rock*, 1977; *If You Want Blood…You've Got it*, 1978), as well as funk in Red Hot Chili Peppers' "If You Have to Ask" (*Blood Sugar Sex Magik,* 1991). After the students had acquired the basic skills, I assigned them to apply the same exercises to several songs of their own choice. In doing so, we focused on adjusting the students' newly acquired skills to suit the groove that was typical for the music that they favored. As an example of Deductive SCME, the students learned a challenging musical concept first through teacher-driven instruction, after which they applied their new skill in accordance with a student-centered approach.

Thirdly, Relative SCME applies student-centeredness to situations where a student wishes to study something other than their favorite music. In my experience, this is not unusual with advanced students who seek variety. In accordance with Relative SCME, a pedagogue then approaches the new music genre by actively relating it to the learner's musical background. In practice, this means applying music analysis to indicating similarities and differences between the genres (see Figure 4.1c). For example, one of the participants in this study wanted to expand his stylistic versatility. He wanted to study jazz rather than blues/rock, which was his forte. The blues/rock guitarist Gary Moore was his main influence. In the lessons, we commenced jazz improvisation studies with a horizontal approach, which is more familiar to a blues/rock player. As we gradually moved on to vertical improvisation, I indicated similarities between the note choices in the melodies of Gary Moore's "Still Got the Blues" (*Still Got the Blues,* 1990) and the jazz standard "Autumn Leaves". As an example

of indicating such differences, I demonstrated that the upbeat eighth notes are more commonly accentuated in jazz than in rock. In Chapter 8, I will analyze how the student made progress by becoming aware of these relations between his favorite music genre and the new genre that we were studying.

Two renowned hard rock and heavy metal performers have articulated similar practices in popular music learning. Although they do not address utilizing student-selected repertoire as such, their ideas have served as inspiration when I have elaborated the SCME design. Guitarist Alex Skolnick, best known for the thrash metal band Testament but also for studying jazz, employs musical associations as a pedagogical tool. Here, he describes his monthly guitar educational column in the magazine *Guitar for the Practicing Musician* as follows (in *Hard 'N' Heavy*, 1991; appr. 28:30):

> In the columns I write, I try to make connections between different types of music, like, show how an Eddie Van Halen lick relates to Eric Clapton, how that would relate to Albert King, and just to try to tie things together.

In SCME, I employ musical associations in alignment with Skolnick, who emphasizes making connections between different types of music. However, as the medium that Skolnick refers to is a magazine column, it lacks the interaction between a pedagogue and a student. SCME, in contrast, emphasizes such interactions, and especially how a pedagogue can take into consideration the musical background of each individual student. Guitarist Dave "The Snake" Sabo of the hard rock band Skid Row expresses similar interests. He articulates his previous teaching activity (see Tolinski 1991: 80; in *Guitar World*) as follows:

> Believe me, I taught *a lot* of Ozzy. My basic approach was to teach things my students could apply to whatever they ultimately wanted to play. For example, I would dissect something like "Bijou Pleasurette" from the first Michael Schenker Group record and turn it into a series of exercises. Or I'd base a lesson on two-note bends, pentatonic scales and flatted fifths, and use the solo from AC/DC's "Highway to Hell" to illustrate the concepts.

Sabo's above description of illustrating concepts through real-life musical examples, dissecting them, turning them into exercises, and applying them to music that the students themselves wanted to play corresponds to the Deductive SCME approach. However, Sabo does not mention whether they also identified the applicable musical concepts from the students' favorite music as the starting point of the lessons, as in the Inductive SCME approach. Nevertheless, both Skolnick's and Sabo's above statements imply the importance of music analysis in pedagogical practices. In the following, I discuss the SCME approach mainly through the theoretical framework that I constructed in Chapters 2 and 3.

4.2.2 A Theoretical Outline of SCME

As an introduction to relating the SCME design to some of the theories that I have revised in this study, below I present an application of educationalist Pertti Kansanen's didactical triangle (see Kansanen 2014 [2004]: 79, 80; see also Kansanen & Meri 1999: 114).

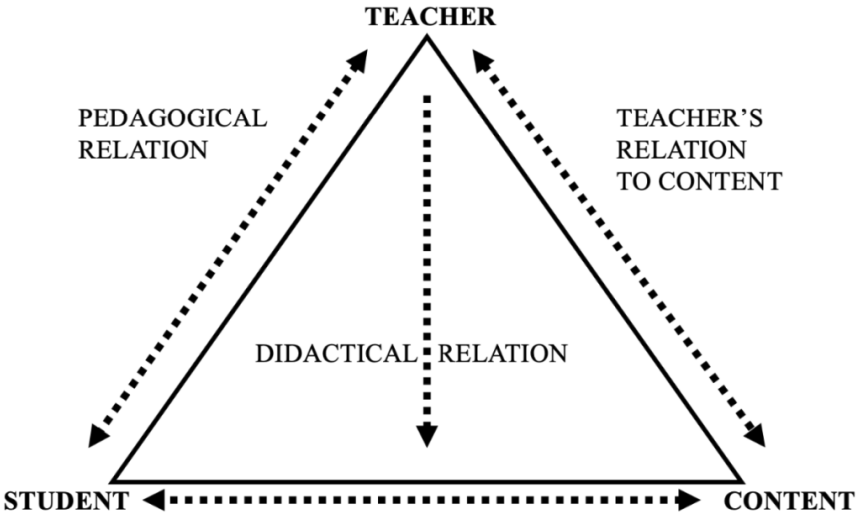


Figure 4.2. The didactical triangle developed by Pertti Kansanen (2014 [2004]: 79, 80; see also Kansanen & Meri 1999: 114). This illustration and English translation from the original Finnish is in accordance with Auli Toom (2006: 34).

In the following, I apply Kansanen's (2014 [2004]: 79, 80; see Kansanen & Meri 1999: 114) didactical triangle (see above in Figure 4.2) to the SCME approach. Firstly, the relation between the student and the content (i.e., the bottom side of the triangle) is different than in studies dictated by a non-personalized curriculum. The SCME setting involves the student's favorite music in the various ways that I presented above (Inductive, Deductive, and Relative SCME). Through extensive listening to favored music, the student has already absorbed, to some extent, the musical phenomena that are to be studied (i.e., implicit learning and enculturation; see Subchapter 2.2). Thus, the student's relation to content has the potential to engage audiation (Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Secondly, a core purpose of the pedagogical relation (i.e., the left side of the triangle) is that the pedagogue actively familiarizes themselves with each student's musical background. Thirdly, in the teacher's relation to content (i.e., the right side of the triangle), the pedagogue utilizes their musical expertise in analyzing the student's favorite music and associating it with the pedagogue's own musical specialty. Fourthly, in the didactical relation (i.e., the arrow inside the triangle), the pedagogue's musical expertise enables them to design personalized studies by applying student-selected repertoire.

Furthermore, my central intention with the SCME design, which is to engage both the student and the pedagogue as active participants in the learning process, needs further

discussion. I will start with elaborating on the role of the pedagogue. According to Lucy Green (2008: 34), a pedagogue needs to observe what goals the learners appear to set for themselves. In my work as a pedagogue, I have actualized this by interviewing the students thoroughly on this matter in their first lesson. The reason for my conviction that this is crucial is in alignment with Green's (2008: 13) objection to non-student-centered music pedagogy. Namely, as I have mentioned above, Green (2008: 13) argues that students have been *mistakenly labeled as untalented or unmusical* only because they have not been provided a chance to express their musical interests. With a corresponding interest in actualizing personalization in instrumental music education, Hendricks' (2018: 20) study observes that violin pedagogue Dorothy DeLay emphasized "finding every student's individual strengths". This relates to Hendricks' (2018: 64) description of how accomplished pedagogues implement empathy by "reading' their students", which then leads a pedagogue to shift his or her teaching accordingly. The term "proximal positioning" involves a corresponding pedagogical process (Hendricks 2018: 66; for further reading, see Gholson 1998). In this approach, a pedagogue is flexible and teaches in the individual "language of the student", as expressed by Hendricks (2018: 66). This is in contrast to employing the same approach and a fixed, teacher-directed repertoire with all students (Hendricks 2018: 18). In other words, the pedagogue adjusts to each student instead of expecting that the students adjust to the pedagogue's method.

As I discussed above, my intention is that a pedagogue's most central means of implementing such an active and flexible role is to analyze and apply student-selected repertoire. This may be rephrased so that a student and a pedagogue together make discoveries from the student's favorite music. I aim for this to be different from that which Hoidn (2017: 24) criticizes as the "unguided or minimally guided discovery learning that has been shown to lead to remote rather than meaningful learning". This emphasis on a musical expert pedagogue's input corresponds to John Dewey's (1902: 24) statement, which I cited above, that "nothing can be developed from nothing". Therefore, although I agree with Green that there are also phases of learning where a pedagogue does wisely in "standing back" (see Green 2008: 31), the SCME design clearly contrasts with Green's (2008: 30–40) view of the pedagogue as a rather passive observer. More specifically, as Green (2008: 35) mentions that a pedagogue is not necessarily an expert on the student's favorite music, my perspective is somewhat different. While a pedagogue, realistically, cannot be familiar with all repertoires that students might suggest, a goal with the SCME design is that the rapid transcription skills of a musical expert would offer a solution to that situation. The experienced ear of a professional musician enables the pedagogue to rapidly detect familiar musical structures upon hearing a song suggested by a student. In other words, a core skill of a pedagogue is to recognize *musical phenomena* even in new pieces of music, instead of adhering to a fixed repertoire. Relating this function of the pedagogue to Maryellen Weimer's (2013: 60) frequently cited view, in this approach the instructor is more active than being "a guide on the side", as Weimer suggests, albeit also not "a sage on the stage", which she opposes. Working in this way, the SCME design is, rather, aligned with Biesta's (2012) view of retaining the role of active pedagogues.

On the other hand, I also intend the student to be essentially active with the SCME approach. This agrees with Elliott and Silverman (2015: 386), who argue that the values of music "do not result from setting and meeting trivial goals" but arise from "significant and knowledgeable effort", and that "the aims of music education will not be accomplished if teachers merely entertain their students". Consequently, I aim for the application of student-selected repertoire and personalized exercises to motivate students to practice systematically. Therefore, the SCME design is in total consonance with Doyle's (2011: 7) statement that "the one who does the work does the learning". In other words, my aim is that relying on students' favorite music would not decrease their diligent work. Conversely, the intention is that disciplined studies that are guided by a musical expert would not reduce pleasure in music. With this background, a goal of SCME is to actualize the view that student-centeredness and the master-apprentice model are not dichotomous. As I have discussed above, the idea of integrating student-centered and teacher-directed approaches has been suggested by, for example, Sursock and Smidt (2010: 32), Björk (2016: 184), Hoidn (2017: 24), Sarath (2018: 194), and Mesiä (2019: 46).

In addition to prompting the students to practice systematically, the SCME approach expects a student to be aware of their personal goals. However, especially with young students, this may not always be realistic. In my experience, with the few students who have expressed that they do not favor any particular music, I have presented different music genres by playing records in the lessons until we have found something that they liked. At this point, the pedagogical setting is essentially a dialogue. It combines, firstly, a pedagogue's experience, and secondly a students' growing self-awareness of what is meaningful for them. Björk (2016: 69) discusses a similar view. The SCME approach thus aims to form a popular music application of the "democratic learning environment" that Björk (2016: 71) describes as a potential breeding ground for good relationships with music.

Therefore, I intend SCME to involve equal respect for expert pedagogues' insight into music and students' personally valued music. In this perspective, SCME's standpoint is different from the tradition of the music appreciation movement of the twentieth century. That movement aimed to enhance students' listening skills through education focusing on the discernment of quality (Green 2008: 11). I agree with Green (Ibid.), who argues that the music appreciation movement is not student-centered in the sense that it designates what is "good" instead of focusing on the students' personal ideas of what good music is. A similar view to that of the music appreciation movement is Bennett Reimer's (1972) aesthetic education, where students learn to appreciate music by listening to qualities presented by the teacher. Although guided listening can indeed be beneficial, with the SCME design I intend, in contrast, that a pedagogue *recognizes aesthetical values in a student's favorite music* and articulates the skills behind their production. With the interactive aim of the SCME design, a pedagogue can, subsequently, point out related qualities in music from his or her own specialty. This reciprocity relates to Gareth Dylan Smith and Silverman's (2020: 3) formulation of the "symbiotic eudaimonic dyad" in music education, which they describe as a "flourishing of oneself *and* of others".

With such interaction between a student and a pedagogue in the SCME design, I also aim to guide a student in discovering how his or her favorite music relates to a broader musical tradition. My intention is that a pedagogue can explicitly indicate such musical connections. In addition to presenting new musical influences for a student, this can have profoundly significant effects that have been discussed by several scholars. For example, Björk (2016: 66) suggests that the awareness of belonging to a music tradition may even make musical predecessors feel like companions for a student. Similarly, Hendricks' (1998: 124, 136) study on music education emphasizes the meaning of relatedness and the basic human need of belongingness. According to Patricia Campbell (2008: 25), it is common that pedagogues share Dewey's views on arts and a community, which she summarizes as "the arts are essential in socializing the individual into the community, and in recognizing that the individual is part of a collective heritage both past and present". On the other hand, Green (2002: 216; 2008: 4) notes the inclusive function of informal music learning where students are encouraged to play music of their own choice. Consequently, my aim is that the SCME design combines these perspectives and finds a balance between studying songs that the student suggests and repertoires that the pedagogue presents. When a pedagogue both welcomes a student's favorite music and associates it with broader music history, the sense of being part of a tradition might, at best, even contribute to averting social marginalization. This pedagogical utilization of a musical tradition can be seen as applying Elliott and Silverman's (2015: 49) more extensive concept of musical praxis, which they argue is not a synonym for musical tradition, although these concepts have some qualities in common. Taking a broader view of musical tradition, Elliott and Silverman's (2015: 49) concept of musical praxis emphasizes "critically reflective, creative, and ethical musicing and listening toward full human flourishing". Since the ultimate aim of a praxis is eudaimonia (Elliott & Silverman 2015: 48), this concept aligns with SCME's goal of promoting students' self-growth.

In any case, the inclusion of a student's favorite music in the learning process is a central point of departure in all of the configurations of the SCME design. This involves aims beyond engaging a student's audiation (see Gordon 1985: 34; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Consequently, the focus is on what comes out in the performance of a student who has learned through student-selected repertoire. My intention is that a student's musical expression could be described as a collection of musical elements that have produced pleasure in the student's individual background as a listener. This view on personally meaningful and engaging listenership relates to Elliott and Silverman's (2015; e.g.: 206) praxial philosophy, which emphasizes a holistic view on a learner's personhood and music. However, I intend to elaborate on this thought from a psychodynamic perspective (see Chapter 3). More specifically, a fundamental aim with SCME is that a student maintains *a vivid contact with that side of their personality that is able to find joy in music.* According to Donald W. Winnicott (2005 [1971]: 19, see also 54, 69, 144), this ability stems from the profound concept of the potential space, which in turn relates to the true self (see Winnicott 1965 [1960]: 142–143; 1964; see Subchapters 3.3 and 3.4). Therefore, an essential purpose

of SCME is to promote music becoming an actualization of a learner's true self in the sense that it feels their own, enables creativity, and supports a student's musical integrity. In practice, I intend the inclusion of student-selected repertoire to prevent students' excessive compliance with what they assume to be the teachers' expectations. In other words, an intention with the SCME design is to bypass a potentially problematic false self (see Subchapter 3.4). From the perspective of motivation theories, I intend this design to actualize intrinsic motivation (Deci 1975: 23); thus, a learner studies for the sake of the music itself instead of extrinsic rewards.

Fundamentally, this relates to SCME's endeavor to support students' good relationships with music. This can be regarded as an aim to establish music as an arena that offers several possibilities for correct performing instead of restrictions concerning "right" or "wrong" playing. In accordance with Kari Kurkela's (1993: 314) and Björk's (2016: 69) psychodynamic perspective (see Subchapter 3.1), the musical activity then becomes allied with a merciful and not a punishing superego. In doing so, the primary focus of learning is the musical content as such, and the accomplishment in terms of success or failure is secondary. Emphasizing pleasure over ranking can hopefully guide students away from excessive fear of failure and rather towards a capacity for self-expression. This relates to Barry Green and W. Timothy Gallwey's (1986: 101, 102–124) emphasis on the meaning of trust and "letting go" in musical expression. Correspondingly, Kurkela's (1993: 362–369, see also 216) concepts of the libidinal and narcissistic economies, which I discussed in Subchapter 3.5 from a pedagogue's perspective, also apply to students. A student's focus on the enjoyment of the musical content rather than on achievement belongs to Kurkela's (1993: 68, 216, 437) concept of a libidinal economy. In contrast, focusing on achievement more than the content itself aligns with Kurkela's (1993: 204, 216, 437) definition of a narcissistic economy. Essentially, overemphasizing the narcissistic economy relates to, for example, envy and rivalry (see Kurkela 1993). The SCME approach aims to avoid such traits, because they are opposed to the view of a good relationship with music that I have explored in this study. In practice, however, both the libidinal and narcissistic economies are, to some extent, always present when an individual is learning music (see Kurkela 1993). Therefore, finding a balance between them appears to be a realistic and important goal (see Kurkela 1993). One aim with SCME is that a student-selected repertoire – which is essentially music that brings joy to a student – has the power to *balance the libidinal economy and the narcissistic economy in the learning process.*

4.2.3 What is Required of a Pedagogue?

The revised pedagogical setting in the SCME design raises the question of what this approach requires of a pedagogue. In the discourse on popular music pedagogy, a corresponding matter is what competence informal learning and non-formal teaching requires of music pedagogues. According to Randall Allsup and Nathaniel J. Olson's (2012: 13) critical response to Green's (2008) work, educators are often left without sufficient

training. Similar problems have been discussed in *Future Prospects for Music Education: Corroborating Informal Learning Pedagogy* (edited by Karlsen & Väkevä 2012), for example in Lauri Väkeväs's (2012) chapter "The World Well Lost, Found: Reality in Green's 'New Classroom Pedagogy'". This issue is not a recent discovery, as Green (2008: 2) had already noted that informal learning practices are challenging for teachers. Still, more recent studies suggest that this problem persists. For example, Green, Don Lebler, and Rupert Till (2015) argue that pedagogical development is needed as popular music education continues to grow. According to Smith (2016), there is discrepancy between different countries in the quality of popular music pedagogy, especially in higher education. Furthermore, Warren Gramm (2021: xi) recognizes the importance of developing pedagogues' skills in facilitating peer mentoring in band education.

In response to this need, related guidebooks for music pedagogues have started to appear. For example, Cara Faith Bernard's and Joseph Abramo's (2019) book *Teacher Evaluation in Music: a Guide for Music Teachers in the U.S.* guides music teachers in improving practices and in evaluation (see also Abramo 2016: "Developing Core Practices for an Instrumental Music Education Method Course"). Bernard and Abramo (2019), as well as Abramo and Amy Reynolds (2015 [2014]), emphasize teachers' "pedagogical creativity" and argue that a pedagogue needs to be responsive, flexible, improvisatory, and able to handle ambiguity in learning situations. Another related release is *The Bloomsbury Handbook of Popular Music Education: Perspectives and Practices* (edited by Moir, Powell & Smith 2019), wherein Martina Vasil (2019) argues that balancing chaos with structures helps teachers working at the intersection of formal and informal approaches. Below, I contribute to this discussion from the perspectives of a beneficial mindset and the skills required of a pedagogue in the SCME approach.

I suggest that the view of a pedagogue may be considered from the perspective of psychologist Carol Dweck's (2000) theory of two contrasting mindsets. This concept involves a person's implicit belief concerning the malleability of human qualities. In Dweck's (2000) theory, a growth mindset relies on the possibility of continuous development. For example, a growth mindset sees even failure as a part of a learning process, and as an experience that potentially leads to progress (Dweck 2006: 6–7). Its opposite, a fixed mindset, assumes that personal traits and characteristics are unchangeable (Dweck 2006: 6). Initially, this concept focused on students' implicit theory of their own intelligence as being either fixed and invariable or, alternatively, incremental, and thus bearing the potential to be cultivated through practice (Dweck 2000: 20). Subsequently, this concept has been utilized more generally on development and ability. Research results suggest that students with a growth mindset acquire better learning results and, over time, accomplish more (e.g., Blackwell et al. 2007: 251). This is associated with the contrasting mindsets coloring a person's interpretations of situations, particularly concerning adversities, and the ensuing resilience that is engendered (Yeager & Dweck 2012). In other words, the implicit beliefs "create distinct psychological lenses that filter people's experiences" (Yeager & Dweck 2012). Research on this matter relates to social problems in education, for example

students' underachievement (Yeager & Dweck 2012). In instrumental music education, Dweck's mindsets have been discussed by, amongst others, Hendricks (2018: 81).

In consequent studies, Dweck's (2000) theory has also been applied to pedagogues. Educationalists Inkeri Rissanen et al. (2018) have conducted research on how a pedagogue's mindset influences their interpretations of students' learning and achievements. The study of Rissanen et al. (2018) shows that these implicit meanings steer teachers' pedagogical thinking and their practices towards the students. In the present study, in contrast, my concern is a pedagogue's willingness to be flexible in a pedagogical setting, not their conception of their students' malleability. With the SCME design, my aim is that a student-centered music pedagogue is open to any repertoire that is meaningful for their students – and to utilizing it as pedagogical material. This implies that a pedagogue is also willing to learn from student-selected repertoire, instead of routinely imparting their prior knowledge. This, in turn, is in alignment with an idea that appears in the discourse on popular music education, according to which pedagogues become learners alongside their students (e.g., Green 2008: 35; Vasil, Weiss & Powell 2019; see also Hendricks 2018: 5). As a similar example of highly successful music instrumental education, Hendricks (2018: 109) discusses how one of the strengths of Dorothy DeLay was that she continuously learned new repertoire along with her students. In their everyday practice, then, a pedagogue needs to act and react spontaneously instead of being bound to strict lesson plans. Correspondingly, since Elliott and Silverman (2015: 111, see also 403–404) argue that "one size does *not* fit all in music education", they recognize that being a successful music pedagogue requires "skills of improvisatory, on-the-spot decision making". According to Hendricks (2018: 5), such spontaneity requires courage: "[a] set agenda and rote approach might need to go out the window, of course, and this can be frightening". Therefore, to apply Dweck's (2000; 2006: 6–7) theory, a pedagogue who employs SCME ought to have a growth mindset instead of a fixed mindset.

As discussed, a pedagogue's empathy appears to be important in actualizing the SCME approach. As I mentioned in Chapter 3, Rogers (1983: 169) states that a teacher's empathy is the best predictor of achievement (see also Jordan & Schwartz 2018). Furthermore, according to Rogers (1983: 342), it is possible for anyone to become an empathic teacher. Similarly, Hendricks (2018: 30) argues that the skill of conducting compassionate music teaching is "attainable by all of us". Additionally, a wider aim of the SCME design is that even if a pedagogue might not be a particularly empathetic person, their way of teaching could nevertheless be considered empathetic if they employ the SCME approach. Furthermore, from a psychodynamic viewpoint, the more effort a pedagogue makes to find a student's musical true self (see Kurkela 1993), the better the pedagogue can help the student reach their personal goals. Overall, this perspective relates to Rogers' (1983: 167) and Elliott and Silverman's (2015: 158–164) descriptions of a holistic view of a person instead of perceiving a student merely as a receiver of information.

In terms of musicianship, the ability to transcribe rapidly is crucial for a pedagogue who applies student-selected repertoire. In other words, a pedagogue applies the informal learning practices of popular musicians, which essentially involves copying records by ear (see Subchapter 2.2). In the same way, a SCME pedagogue employs many of the skills of a freelance musician, who must constantly absorb new repertoire, including learning by ear. Furthermore, making musical associations as I described above requires stylistic versatility and an ability for music analysis. The benefits of musical versatility have also been acknowledged by Green (2002: 175–176). However, versatility does not suffice alone. Being highly specialized in a particular music genre is, arguably, crucial for analyzing and demonstrating musical components on a profound level. This appears important especially as related to intricate phenomena, for example the characteristics of groove in a particular genre. Ultimately, an optimal balance between a musician's versatility and stylistic specialization is difficult to define, but it appears that a pedagogue needs both. In any case, the solid musicianship that SCME requires corresponds to Campbell's (2008: 2) statement that the sarcastic comment "those who cannot, teach" could not be further from the truth.

4.3 Summary: The Intrinsic Triumvirate of Learning Music

A student's prolonged engagement with their favorite music as a listener unfolds many potentials for the learning process. Below, I summarize some of the main points in this chapter by presenting a model of the pedagogical goals of learning through SCME. I suggest that in popular music instrumental learning there is a close relationship between the following three internal phenomena. Firstly, intrinsic motivation (Deci 1975: 23) entails that the primary driving force of learning is the music itself instead of extrinsic rewards. Secondly, the true self (Winnicott 1965 [1960]), and its musical application (Kurkela 1993: 353–354) means that the music learning engages the part of a learner's personality that feels sincere, enables spontaneity, and is creative. Thirdly, audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) enables a learner to hear the music internally. The pedagogical aim of SCME, ultimately, is to establish these three facets as the leading forces of the learning process. Therefore, I entitle this connection the *Intrinsic Triumvirate of Learning Music*. I presume that the joint actualization of these phenomena offers insight into my observations of students who perform in a way that is at the same time enthusiastic, expressive, and skillful.

In practice, I presume that a learner who is unconditionally driven (i.e., intrinsic motivation; Deci 1975: 23) by music that feels sincerely their own (i.e., musical true self; Kurkela 1993: 353) would naturally desire to retain that music in his or her inner ear, in other words to employ audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Conversely, music that reinforces a learner's false self feels constrained (Winnicott 1965 [1960]; Kurkela 1993: 353–354), and motivates one to practice merely for extrinsic rewards (i.e., external motivation; Deci 1975: 23). Since this feels emotionally distant for the learner, it may be more unlikely to remain in their inner ear. Moreover, audiation is essential in

performing music to a high quality (see Subchapter 2.2.2). Therefore, I suggest that the successful realization of the Intrinsic Triumvirate of Learning Music promotes not only pleasureful but also musically superior achievements. When it is combined with a student's diligent practicing, I presume that it can result in a triumph of music learning.

Conceptually, the actualization of the Intrinsic Triumvirate of Learning Music relates to *eudaimonia,* which I have discussed above. Aligning with eudaimonia, this triumph provides a music learner an experience of flourishing, fulfilment, and self-growth (see Smith & Silverman 2020: 2; Elliott & Silverman 2015: 377) on both personal and musical levels. Therefore, as a form of eudaimonia (which is the ultimate goal of human life in Aristotelian ethics; see Smith & Silverman 2020: 2), the Intrinsic Triumvirate of Learning Music is the aim of the SCME approach – multidimensionally meaningful music learning. To elaborate, I suggest that the psychodynamic perspective offers a profound and specific perspective to the discourse on eudaimonia by exploring what subconscious psychic mechanisms, at least, may lie behind human flourishing. In the Intrinsic Triumvirate of Learning Music, Winnicott's (1965 [1960]) psychodynamic concept of true self (and thereby Winnicott's (2005 [1971]) fundamental theory of potential space) appears to be a potential theoretical path to achieve such understanding. The reason why the true self (Winnicott 1965 [1960]) and potential space (Winnicott 2005 [1971]) are crucial for a human being unfolds by considering that these concepts originate from researching the fundamental development of healthy and pathological psychic conditions (see Chapter 3). Thus, the actualization of a true self (Winnicott 1965 [1960]) contributes to profound human flourishing and thereby to eudaimonia.

My main points of interest here are the connections between the different theoretical concepts in the Intrinsic Triumvirate of Learning Music. Hendricks (2018) presents a similarly multifaceted approach to music pedagogy. As I mentioned in Chapter 3, Hendricks (2018: 59) argues that there is a close connection between aesthetic experiencing and empathy. In further detail, as Hendricks (2018: 144) summarizes some of Shinichi Suzuki's thoughts, she highlights the view that performing with a beautiful tone and being compassionate are related. In the same way, with the Intrinsic Triumvirate of Learning Music I suggest that inner hearing, or audiation (Elliott & Silverman 2015: 350–351), that promotes a high musical standard is related to having a vivid connection with one's true self (Winnicott 1965 [1960]), which is an intrapersonal, psychically healthy condition.

By focusing on multiple layers, the Intrinsic Triumvirate of Learning Music essentially displays the *holistic* nature of a successful music learning experience. Along with eudaimonia, the holistic view is central to the praxial philosophy of Elliott and Silverman (2015: 17; 156–164). It engages the learner on several levels, as a whole person (Ibid.). As this exploration shows, this principle is at the core of the Intrinsic Triumvirate of Learning Music as well. Firstly, the true self (Winnicott 1965 [1960]) involves subconscious and emotion-laden psychic phenomena. Secondly, intrinsic motivation (Deci 1975: 23) emphasizes a person's conscious goals and deliberate actions taken towards these aims.

Thirdly, audiation occurs vividly in the present moment as a form of procedural thinking-in-action that represents the praxial philosophy's emphasis on musical understanding, musicianship, and listenership (see Elliott & Silverman 2015: 350–351). Consequently, I also test the utility of the Intrinsic Triumvirate of Learning Music as I analyze the results of this study. Table 4.1 below illustrates this summary.

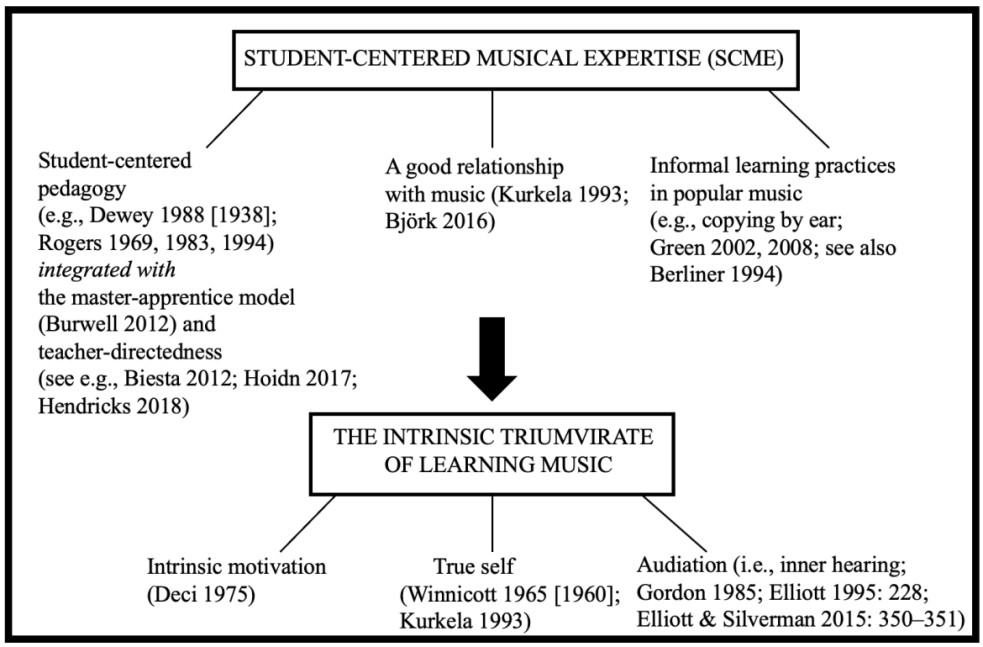


Table 4.1. Central concepts behind the SCME approach. The pedagogical goal of the SCME approach is ultimately summarized as the Intrinsic Triumvirate of Learning Music.

In conclusion, to achieve the goal that I describe as the Intrinsic Triumvirate of Learning Music, the SCME design suggests that a student-centered, empathic musical expert pedagogue actively applies the students' favorite music in their studies. Above, I have presented the practical configurations of Inductive, Deductive, and Relative SCME for this actualization. In order to construct personalized learning processes, the pedagogue needs to make an effort to become aware of the students' musical backgrounds. This relates to Green's perspective (2008: 34), in which she employs the term "diagnosing" the students' interests. Green (2008: 34) describes this as "getting inside their head and asking: 'What do they want to achieve now, this minute, and what is the main thing they need to achieve it?'". As I have discussed above, however, with the SCME design the pedagogue is a more active participant in the lessons than in, for example, Green's (2008: 30–40) research. Therefore, I elaborate on Green's (2008: 34) expression of "getting inside their head" as follows: the pedagogue needs *to get inside the music that is inside the student's head* and figure out *how that music is constructed* and *what it relates to*. In other words, the pedagogue's function involves the ability of music analysis. To exemplify such music analysis, the following chapter explores the musical implementation fields of the present study.

In the following studies, groove particularly relates to the above discussion on eudaimonia. Firstly, groove involves a sensation of pleasure (Danielsen 2006), which may contribute to human flourishing. Secondly, one aspect of eudaimonia is that it "fuses self and society" (Silverman 2020: 31). In other words, human flourishing involves a person living "for the betterment of themselves *and their community*", as expressed by Smith and Silverman (2020: 2; see also e.g., Elliott & Silverman 2015: 145). Similarly, groove is a key element and virtue of interplay within a band. Thus, it contains a social, communal aspect of music. From this perspective, a musician who excels in the groove skills that I explore below is purposeful for their community – a band member that contributes to the groove of the band. In practical terms, according to my experience, an aspiring musician who has, for example, coherent timing skills is more likely to succeed in establishing themselves as a sought-out performer. In other words, a music student who has developed their groove skills has also enhanced their chance to function in the musical community. This relates to establishing eudaimonia as a goal of music learning as, for example, in Elliot and Silverman's (see e.g., 2015: 425) praxial philosophy.

5 Musical Focuses: Hard Rock Groove and Beyond

5.1 Hard Rock Groove

In this subchapter I explore the groove of hard rock music, since it is the main practical implementation of the Student-Centered Musical Expertise (SCME) pedagogical approach in Chapter 7. The primary purpose of this subchapter is to illuminate how a selection of different grooves in hard rock are constituted. I analyze musical recordings through transcription and spectral analysis. Therefore, this study provides an empiricist, data-driven layer to the reflexive interpretation (see Alvesson & Sköldberg 2018 [2000]) of the research as a whole (see Subchapter 1.3.1, Figure 1.1). This analysis of hard rock groove then aims to form an example of musical expertise, which I later apply to pedagogy in a student-centered way. In essence, this subchapter aims to answer the question of what groove in hard rock consists of, and Chapter 7 explores how it can be taught.

As "groove" is often associated with "feel", it appears to transcend analysis. For example, Tiger Roholt (2014: 2) states that grooves have a feel, and to understand a groove is not to apprehend it intellectually but to feel it through the body. Nevertheless, groove has been defined as a rhythmic quality, which involves a sensation of pleasure and inspires physical movement (see Danielsen 2010: 11; Butterfield 2011; Janata, Tomic & Haberman 2011: 56; Senn & Kilchenmann, 2011: 800; Davies, Madison et al. 2013: 498; Whitall 2013). More precisely, Guy Madison (2006: 201) describes it as "a quality of music that makes people tap their feet, rock their head, and get up and dance" and "wanting to move some part of the body in relation to some aspect of the sound pattern". In much the same way, Carl Waadeland (2006) perceives groove as a phenomenon that makes the music come alive. In the field of jazz, the term "swing" has been utilized synonymously with "groove", and therein it has been characterized as essentially inducing forward motion (Butterfield 2010: 1; Schuller 1968: 7), as lending a musical performance a "vital drive" (Hodeir 1956: 207–209), and as an "engendered feeling" (Keil 1966) as well as a sense of continuity (Schuller 1968: 7).

To specify the employed nomenclature, the term "groove" does not here refer to a rhythmic pattern or a composed part that can be written in standard notation (see Danielsen 2010: 12), but the effect or characteristic that I have described above. In this study, I consider groove to transcend notation, meaning that it emerges predominantly on the level of performance rather than the structural level of music (see Danielsen 2006: 47). In other words, groove occurs mainly on the micro-rhythmical, non-syntactical level (see Butterfield 2011). Nor does groove here refer to any specific musical genre, as in the term "groove-based music", which, for instance, Mark Abel (2014: 18) and Anne Danielsen (2010: 4) have employed mainly in reference to the funk-related African American music of the 1970's. Furthermore, the verb "to groove" means that a musical performance succeeds in producing the sensation of groove (Danielsen 2010: 12), as in "making the song groove". As an adjective, a "groovy"

performance is of a high aesthetic quality in terms of the forward propelling rhythmical flow that I described above, as in "attempting to make the performance as groovy as possible" (Danielsen 2006). Similarly, the term "swing" has had a plurality of meanings; in addition to being utilized as a synonym for groove in jazz contexts, it is obviously the name of a specific genre of jazz, dating mainly to the 1930's and 1940's (see e.g., Spring 2014). In this study, the term swing means a form of phrasing that involves performing successive eighth or sixteenth notes with unequal durations, thus inducing a long-short continuum. This is opposed to "even" phrasing (see Berliner 1994; Benadon 2006; Butterfield 2011; Spring 2014; Danielsen 2010). Conceptually, this phrasing is closely related to "shuffle" (see Snelson 2001).

Previous research on groove has concentrated on other musical genres than hard rock, or even rock in general, and focused mainly on jazz and funk. Therefore, I employ the literature thereof as reference material and then apply it to a hard rock context. This appears natural, even despite the obvious aesthetic differences between these genres; it can be argued that all of the aforementioned music styles belong to the African American music tradition and thus share roots in the rhythms of African music. Given the scarcity of research concerning any form of rock groove, however, I must revise the theory of groove to some extent. Consequently, I carried out spectral analyses of selected recordings and described the findings, which resulted in a few novel terms, such as "Moderate Swing Phrasing", "Implied Moderate Swing Phrasing", and "Swing Percentage Split".

In accordance with music researcher Philip Tagg (2012: 296–297), as well as Waadeland (2016: 169), I herein suggest that different styles of music may groove in their own specific ways. This point of view is opposed to concentrating on "groove-based music", which I mentioned above (see Abel 2014: 18; Danielsen 2010: 4). Furthermore, my intention is not to evaluate any musical examples as better or worse than others. Instead, I aim to present different grooves within hard rock and to explore the central means of their production. In other words, my main endeavor is to clarify why certain grooves sound "stiff" while others sound "loose", or some grooves sound "hectic" while others sound "lazy", for example.

As groove could in itself be the subject of extensive research, within the scope of this dissertation I delimit it to the genre of hard rock (more specifics on the genre and labelling follow below). Most importantly, the examples that I explore below also belong to the pedagogical repertoire in Chapter 7. As I have attempted to demonstrate the essential elements of groove in my work as a pedagogue, I have frequently utilized the selected pieces as a pedagogical platform from which the students have then proceeded into repertoires of their own choice.

Since this study focuses on guitar instrumental education, the material that I study consists mostly of guitar riffs. Chris Washburne and Franco Fabbri (2003: 592) define a riff as "a short repeated melodic fragment, phrase or theme, with a pronounced rhythmic character". As Esa Lilja (2009: 154–157) points out, riffs are fundamental musical material in the genres

of rock and heavy metal. Classic guitar riffs can be heard in, for instance, Deep Purple's "Smoke on the Water" (*Machine Head*, 1972), Led Zeppelin's "Whole Lotta Love" (*Led Zeppelin II*, 1969), Black Sabbath's "Iron Man" (*Paranoid*, 1970), and Nirvana's "Smells like Teen Spirit" (*Nevermind*, 1991).

To be more precise, the examples that I study most thoroughly are from the Australian band AC/DC, for a number of reasons. During the 30 years that I have listened to their music and played the guitar, I have become increasingly fascinated by their extraordinary groove. Approximately 25 years ago, I transcribed all eight AC/DC albums up until *Back in Black* (1980) completely and learned to play all of the lead guitar and rhythm guitar parts note-for-note. Subsequently, the last 20 years of playing music professionally have in fact made me appreciate the exquisitely detailed quality of their performance even more. In general, AC/DC is widely considered the archetype of a rhythmically tight and groovy rock band, as Anthony Bozza (2009: 59–78) describes in the aptly titled book "Why AC/DC Matters". The high musical standard of the band is commonly recognized; for example, record producer and multiple Grammy Award winner Rick Rubin states: "I'll go on record saying that AC/DC is the greatest rock & roll band of all time" (Bozza 2009). Furthermore, it is undoubtedly an essential band within its genre and popular music in general, as their ongoing global success is exemplified by record sales of 200 million albums worldwide (Bozza 2009: xiv). Their album *Back in Black* (1980) alone had sold 22 million copies by 2007 according to the Recording Industry Association of America (RIAA 2019). They have been a highly influential band for decades, since 1973. They have inspired and shaped, for instance, the immensely popular band Guns N' Roses, whose guitarist Slash states: "As far as guitar goes…it doesn't get any better. AC/DC is *the* guitar band. They were definitely a band I turned to when I was learning to play and finding my style. No one sounds like Malcolm and Angus. They've always done their thing and done it better than anyone else" (Bozza 2009: 6).

Pedagogically, the rhythmical focuses are quickly accessed, as AC/DC's riffs are technically rather simple and repetitive. Therefore, AC/DC's riffs may be considered ideal for practicing groove. Also, since AC/DC belongs to my specialty, it presents an appropriate example of musical expertise in this dissertation. Additionally, it is favored by many guitar students as well, and therefore this material is often suitable for student-centered pedagogy. In terms of references, although a large amount of literature on AC/DC exists, it concentrates mostly on biographical content and unfortunately much less on music analysis. Based on my literature review, I choose to employ Bozza's (2009) work, as it seems to serve the musical focus of the present study.

The utilization of the term "hard rock" requires further explanation. AC/DC have often been labelled as hard rock, sometimes "blues rock", and even "heavy metal" (McParland 2018: 57–58). As Lilja (2009: 24) has stated, the distinction between hard rock and heavy metal is a "subject for endless dispute". In the present study, I choose to employ the term hard rock,

although it has been criticized in academic literature for being "an imprecise term, partly co-extensive with heavy metal" (Moore 2001). The reasons for this decision are as follows.

Firstly, my perspective is in alignment with Bozza (2009: 14), who considers heavy metal an "odd characterization" of AC/DC, since he argues that metal guitar playing employs techniques such as tapping, sweep-picking, and rapid virtuosity, which are all absent in AC/DC. The band's performance is considerably more bluesy, and relies on comparatively minimalistic, traditional rock. Secondly, according to Lilja (2009: 101), the two distinctive features of all heavy metal is high volume and guitar distortion. Albeit energetic and loud, AC/DC utilize significantly less distorted and thus differently approached guitar sounds than this characterization of heavy metal would suggest. This is especially evident in their material from the 1970s, which this study mainly concentrates on. Thirdly, as Lilja (2009: 102) states, the so-called "power chord" (i.e., the root and the fifth) is an "especially normative feature for heavy metal". To a degree, AC/DC departs even from this; in addition to the utilization of plain power chords, they often employ the major third in the chords.[29] As Bozza (2009: 14) further suggests, their interlocking guitar parts are arguably the sole similarity between AC/DC and heavy metal. For these reasons, it would be clearly inappropriate to label AC/DC as heavy metal. Furthermore, the band credits Chuck Berry and other early rock and roll artists, as well as blues artists such as Muddy Waters, as their main influences (Engleheart & Durieux 2006: 56–57). These roots-oriented influences are especially evident in songs like "Rocker", "There's Gonna Be Some Rockin'", "Ain't No Fun (Waiting 'Round to Be a Millionaire)" (all on *Dirty Deeds Done Dirt Cheap*, 1976) and "The Jack" (*High Voltage*, 1976). However, the terms blues rock and especially rock are rather generic and imprecise, although unbiased and seemingly correct. AC/DC's sound and performance are, nevertheless, evidently harder, more energetic, and powerful than, for instance, that of The Rolling Stones, who could be correctly labeled as rock or blues rock as well. Rather fittingly, musician Slash calls AC/DC "blues based hard rock-and-roll" (Bozza 2009: 105).

Considering all the above perspectives, the term hard rock seems appropriate for AC/DC, despite its aforementioned contradictions and limitations. Furthermore, it is also suitable for other musical examples that I explore more briefly, or only mention as references, below. For example, The Police and The Hives would surely never be categorized as heavy metal. However, one example used here is from Black Sabbath, which is certainly often labelled as early heavy metal. Pantera and Children of Bodom are generally considered metal bands and, consequently, differ from rock more than from hard rock. In conclusion, hard rock describes the entirety of this subchapter more correctly than heavy metal or the generic term rock. Finally, it seems likely that no label would be totally adequate, and therefore I feel that

[29] See e.g., "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976) at [01:15–01:18], "Hell Ain't a Bad Place to Be" (*Let There Be Rock*, 1977) at [01:20–01:33], "Live Wire" (*High Voltage*, 1976) at [00:28–00:33], and "The Rock and Roll Singer" (*High Voltage*, 1976) at [00:04–00:07] and [00:12–00:15].

hard rock is sufficient in this context. For the sake of brevity, I will not discuss labelling any further in this study.

By concentrating on hard rock, my object is not to present an all-encompassing study on groove, as I mentioned above. Furthermore, it is not to carry out an exhaustive analysis of the selected recordings either. In their entirety, the different elements of music may overlap and affect each other; for instance, previous studies suggest that timbre may affect the conception of groove (see Bjerke 2010), or elements of mixing and production obviously affect how listeners perceive the overall sound, an indivisible part of which is groove. Such elements are, nevertheless, beyond the scope of this study. Because of the pedagogical focus of this dissertation, my interest is those components of groove that an aspiring musician can potentially learn to adjust in performance. Based on my experience as a musician and pedagogue, I choose to explore the following elements in their individual sections: timing, dynamics, phrasing, time-feel and interplay, and finally the application of these elements to producing a dramaturgical arc within a musical piece. I match each component with specific exercises in Chapter 7. I devote the most extensive research to phrasing, because it encompasses previously unexplored issues to the largest extent. First, however, I will clarify essential rhythmical premises on the structural level of music, which lays the foundation for groove.

5.1.1 Rhythmical Premises: Backbeats, Layers, and Polymetrics

Before concentrating on the micro-rhythmic aspects of performance, this subchapter aims to map out the most essential rhythmical factors that can be transcribed using standard notation and analyzed accordingly. In Danielsen's (e.g., 2006: 47) terms, these are the structural elements of music as opposed to the elements of performance, or the level of figure ("what" is performed) as opposed to gesture ("how" it is performed). Matthew W. Butterfield (2011) refers to the same components as the syntactical level, as opposed to the sub-syntactical level of music. I discuss the effect of these structural phenomena briefly, as they are assumed not to be sufficient to create groove alone as I mentioned above. Therefore, I give micro-rhythmic elements far more attention in this study. I justify this with the notion that if structural elements were the sole source of groove, then any structurally "correct" performance (meaning that it is performed flawlessly as notated) would sound groovy, which is hardly the case in reality. However, since these musical structures naturally contribute to the groove of a song, they must be taken into consideration first.

An essential element of African American popular music is the backbeat, meaning the accentuation of the second and fourth downbeat in a 4/4-time signature (see Abel 2014: 49–59). Beats two and four are the weak parts of the measure, with which this accentuation contrasts (see Abel 2014: 49–51). This constitutes a syncopated effect on the level of a measure. The accentuated backbeats are characterized by a tendency to lead to the ensuing strong beats, thus enhancing a forward moving effect (Berliner 1994: 148–149; for a similar

effect in accentuation of eighth notes in jazz, see Butterfield 2011). Regarding rock rhythms, Langdon Winner (1969: 46) argues in his study on the earlier phases (i.e., 1950's and 1960's) of rock and roll as follows:

> The most fundamental defining characteristic of rock and roll, of course, has always been a 4/4 time signature in which the second and fourth beats are heavily accented. In all rock lyrics and dances the ineluctable "one–TWO–three–FOUR" is the force which sustains the motion.

Subsequently, this view has been discussed by, for example, Theodore Gracyk (1996: 134–135) and Mark Abel (2014: 49–50). Gracyk (1996: 134–135) states that "4/4 with backbeat is extremely common in rock, as one of the characteristics adapted from earlier rhythm and blues". However, he adds that "it is not essential", as he argues that "there is no *one* rhythm or meter which is characteristic of rock" (Gracyk (1996: 134–135). In Gracyk's (1996: 135) view, "[w]hat is typical, if anything is, is the way rock characteristically displaces accents", which "reject[s] the standard Western assumption that the first beat of the measure is the strongest". According to Abel (2014: 49), the accentuated backbeat (as well as similar accentuation on other metrical levels, see Butterfield 2011) can be highly obvious or subtle, but "it is always present and provides the skeleton on which the flesh of the groove hangs". The backbeat will receive more attention in Chapter 7, as I apply it extensively in practicing and teaching timing skills, and therefore this brief discussion is sufficient for now.

Moving ahead, the following applies Butterfield's (2010: 167; 2006) statement that "engendered feeling" stems from "syntactical configuration of rhythmic patterns played in the rhythm section". Concerning the arrangement of a musical piece, different instruments acquire particular functions within the band. Complementing each other within the entirety of the band, these different roles thus form layers, which may together constitute sensations of tension and release. An example of the different layers of a hard rock band is depicted in the following Figure 5.1.

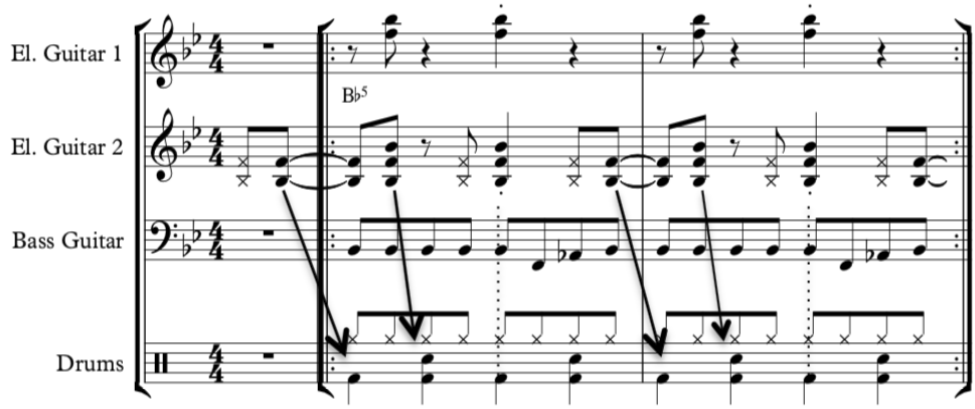


Figure 5.1. Main riff and rhythm part of "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" [00:43–00:58]. Layers within the band. The arrows indicate that the syncopated guitars contrast with the drums which are on the beat. These layers align on beat 3 (dashed line). The 8th note continuum of the bass and the hi-hat form a third layer. (Note that the guitars and bass are tuned up ½ step and fingered in A major.)

As Figure 5.1 presents, the main riff of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976) exhibits two contrasting rhythmical layers within the band. Firstly, the drums play on the downbeats by employing the bass drum and the snare drum. Secondly, the guitar riff contrasts with this by utilizing syncopation, or, more specifically, playing on the upbeats of beats four and one. This creates rhythmical tension, which in this example resolves when the guitars align with the drums on beat three. Additionally, the bass is playing eighth notes along with the hi-hat cymbal as a unifying third layer. This can be heard almost throughout the entire piece, and in particular at [00:43–00:58] when the lead guitar reinforces the rhythm guitar part with accents in the upper register. This interrelation of rhythmically complementary layers bears resemblance to African music, where rhythmic lines essentially interlock (see Nketia 1974: 134, see also Danielsen 2006: 45, 43–46). Furthermore, in this specific segment of the song the bass line adds a turning point on the upbeat of beat three (on the F-note). Thus, the bass also accents a weak part of the measure, which creates forward motion.

Metrical dissonance (counter rhythm) is another common practice in rock music (see Biamonte 2014; Danielsen 2006: 62–66; see also London 2001; Krebs, 1999: 22–61). A typical feature is called rhythmic grouping dissonance (tendency of cross-rhythm), which may, for example, involve grouping the eighth notes of a measure in 4/4 meter as 3+3+2 instead of the expected 2+2+2+2 (see Krebs 1999: 22–61; Danielsen 2006: 62–66). This figure is known as tresillo, a clave-type rhythm in Latin American music (Biamonte 2014). Figure 5.2 presents an example of this phenomenon in AC/DC's "Hell Ain't a Bad Place to Be" (*Let There Be Rock*, 1977).

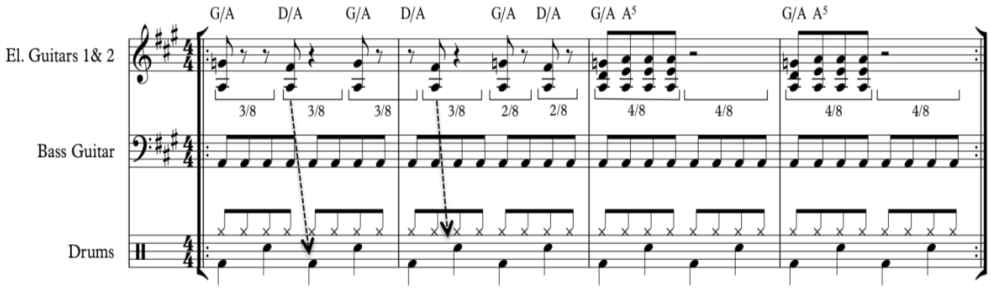


Figure 5.2. Main riff of "Hell Ain't a Bad Place to Be". Metrical dissonance: the guitar riff utilizes asymmetrical grouping of eighth notes (see horizontal brackets) which creates tension with the metric structure and additionally with the layer of the drums and the bass (see dashed arrows). (Additionally, note that in the first two bars, the indicated chords are implied by the double stops.)

As depicted in Figure 5.2, the riff of AC/DC's "Hell Ain't a Bad Place to Be" (*Let There Be Rock*, 1977) bears resemblance to this clave type rhythm. Utilizing Nicole Biamonte's (2014) terms, it may be called "double tresillo", meaning that it implies an eighth note grouping of 3+3+3+3+2+2+2 over the first two measures, as indicated. On the level of quarter notes, however, this constitutes a regular 3+3+2 tresillo. In either way, the composition of the riff creates rhythmic tension by challenging the metric structure with the asymmetrical groupings of three and then resolves this tension by reinforcing the metric structure with the groupings of two (cf. Berliner 1994: 156).

Concerning the arrangement, the drums and the bass maintain a steady 2+2+2+2 grouping, to which the polymetric guitar riff contrasts. The result is similar to the previous example (see Figure 5.1); the layer of the drums and the bass guitar emphasizes the quarter note downbeats and a steady eighth note continuum, whereas the two guitars add, now in unison, a contrasting layer by also accenting syncopated eighth notes (the upbeats of beat two in the first measure and beat one of the second measure). On the second half of the second measure and on the latter half of the riff, the guitars align with the drums and the bass, thus resolving the tension between the two layers. On the whole, the guitars generate tension and release in relation to both the metric structure and the other instruments. This is a frequent feature in AC/DC's repertoire. Variations of this idea can be heard in, for example, "Sin City" (00:20–00:34 and 00:41–01:53; *Powerage*, 1978), "If You Want Blood (You've Got It)" (00:27–00:54; *Highway to Hell,* 1979), and "Shoot to Thrill" (00:35–00:49; *Back in Black*, 1980).

5.1.2 Timing and Dynamics

From here onwards, I will concentrate on the level of performance instead of structure; in other words, the gestures instead of the figures in Danielsen's (2006) terms, or the sub-syntactical components to employ Butterfield's (2011) terms (see above). In short, the focus thus shifts from *what* is performed to *how* it is performed. As the name suggests, micro-

timing explores temporal events on a significantly more accurate level than standard notation. In non-academic contexts, "timing" has been utilized to refer to rhythmic precision of this caliber (e.g., Friedland 1999), and on consistency in implying "an unfailing sense of the beat" (Berliner 1994: 157). The ability to employ rhythmic fine-tuning aims at "locking the rhythm", "nailing the rhythm" (Danielsen 2006: 160), or "striking a groove" (Berliner 1994: 349), as opposed to mere structurally correct performances. As this chapter aims to show, in conjunction with Chapter 7, accomplished timing lends a musical performance, firstly, cohesiveness through temporal accuracy and, secondly, a quality of continuity and forward motion through consistent implication of the beat. This segment focuses on the latter, as I will present microrhythmical measurements later while exploring phrasing.

Much of what I examine below is covered in a quote from AC/DC's lead guitar player Angus Young talking about his brother Malcolm Young (1953 – 2017), now late rhythm guitar player of AC/DC:

> "To do this kind of thing well isn't easy; you have to be a master of rhythm, and that's exactly what Mal is. My part in AC/DC is just adding the color on top. Mal's the band's foundation. He's rock solid and he pumps it along with the power of a machine. He doesn't play like a machine, though. Everything he does grooves and he always seems to know exactly what to play and when to play it. He's a very percussive player too, his right hand just doesn't stop sometimes. It's scary, it really is!" (Angus Young in *Guitar World*; see Bowcott 2017)

When performing, a musician fundamentally employs an internal beat, an internalization of the song's pulse as a virtual reference structure. It may not be explicitly articulated in the sounding music as an actual sounding event, but it is rather an underlying basic beat that is essential to the bodily experience and physical inspiration of groove (Danielsen 2010: 20). Elaborating on Danielsen's (2010: 20) statement, depending on the music culture, dancing, handclapping, stomping, waving a fist in the air, and headbanging are all forms of externalization of this internal beat. From the listener's perspective, this is crucial in identifying the beat, the tempo, and the entire rhythmic constitution of the music. According to John M. Chernoff (1979: 48–49; see also Danielsen 2010: 20), the ability to recognize this essentially evokes the sensation of pleasure often attributed to groove, which I discussed in the beginning of Chapter 5. In the attempt to constitute groove, musicians aim to convey this internal beat to each other. Considering interplay, this way of communicating the pulse between the performers supports cohesiveness, as it provides a "uniform temporal reference for the rest of the band" (Butterfield 2011: 16). In a similar way, Ives Chor's (2010: 45) research describes how musicians in Afro-Cuban music communicate the sense of clave with each other. This is parallel to Paul F. Berliner's (1994: 349) study concerning the interplay in jazz bands: a "shared sense of the beat" generated by rhythmically informative performing provides stability and intensity, which are considered fundamental in groove. Referring to the points in this paragraph, I propose that a main component of *musicianship* in general

could be defined as *internalized music being externalized in a manner that is appropriate to the particular context.*

Communicating the basic pulse leads successively to implying the subdivisions of the beat, in other words the rhythmic units smaller than the quarter note. The underlying subdivision has been described as having the purpose of a "density referent" (Danielsen 2006: 44), a rhythmical common denominator within the band. As in many of the following examples derived from hard rock, the density referent is the eighth note in cases where there are no shorter note values. By comparison, the density referent in a funk context is typically the sixteenth note, the shortest utilized duration (Danielsen 2006: 44). The subdivision functions as a common denominator in a band's rhythmical fine-tuning, in the sense that everything is in relation to it (Danielsen 2006: 43–46). Thus, it pulls all the instruments in an ensemble together. As a fundamental timing exercise presented in Chapter 7 will aim to show, implying the continuum of the underlying subdivision effectively improves the micro-rhythmical accuracy of an individual instrumentalist as well.

From this perspective, the production of groove involves an approach to the instances of performing as "the continuous work on getting at the optional solution" in a micro-rhythmical sense, and thus aiming at "locking the rhythm" (Danielsen 2006: 160). Then, groove is considered as "itself a process for generating rhythmic feeling", meaning that its process is more important than its outcome, its practice overshadows the understanding of its means (Butterfield 2010: 173). It requires a state of presence in the continuous pulse and the repetitiveness that is common for most grooves, a striving for a feeling that the groove "might go on forever" (Danielsen 2006: 184, 150–171).

It would initially seem unlikely that one could depict this phenomenon in any reasonable way. However, I have attempted to detect its signs in the following example. A feature that reflects consistent timing is the utilization of "ghosted or indeterminate pitches whose effects are predominantly percussive" (Berliner 1994: 316). As professor Robin Stone of Berklee College of Music comments in an interview, rhythm guitarist Malcolm Young of AC/DC fills rhythmic space with extra attacks of muted notes (Bozza 2009: 17). The following Figure 5.3 illuminates this phenomenon and its significance.

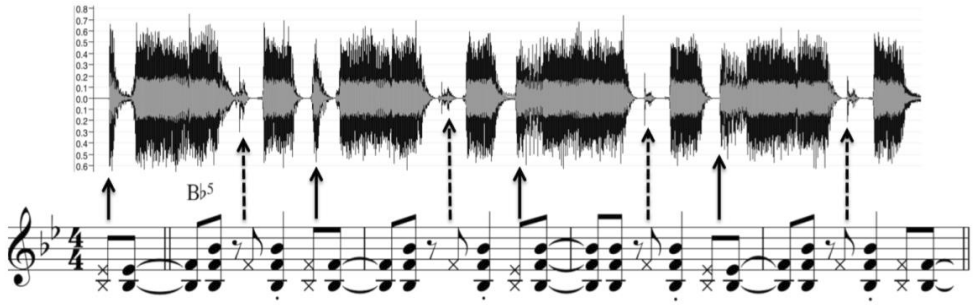


Figure 5.3. The guitar intro of "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)". The percussive muted notes (x-noteheads in the standard notation) imply the continuous beat, and additionally provide dynamics (see dashed arrows) as narrower wave forms in the oscillogram indicate softer notes (amplitude/time).

The guitar riff in the intro of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976) exemplifies this percussive approach [00:00–00:08]. Commencing the song, the rhythm guitar part on the left channel frequently employs muted notes, as depicted in Figure 5.3 with "x" –noteheads in the staff (lower part) and with the smaller highlighted wave forms in the oscillogram (upper part). Filling in the rests between the chords of the riff, these percussive notes serve as additional implications of the underlying eighth note subdivision, in other words, the density referent. The guitarist, Malcolm Young, is obviously playing more than the mere chords, which arguably constitute the main rhythm of the riff. Evidently, he also implies an illusory eighth note continuum and therefore generates consistency, resembling the function of the hi-hat cymbal in a rock beat. In accordance with the aforementioned definition of timing, he thus creates a sensation of continuity and forward motion. These percussive notes are also likely to aid the guitarist's obvious aim of rhythmic precision (see Chapter 7). Certainly, they communicate rhythmic referents to the other band members. In conclusion, they can be considered a deliberate implementation of timing.

Furthermore, dynamics are defined as "the intensity of volume with which notes and sounds are expressed" (Thiemel 2001). Commonly employed features of dynamic variations are "ghost notes" or "swallowed notes", meaning notes played as softly as possible between louder notes, and accents that emphasize some parts of a musical phrase (Berliner 1994: 67, 316). In effect, according to Berliner (1994: 156), utilizing dynamics and varying the rhythmic placement of ghost notes may increase tension and induce release. This is closely related to Butterfield's (2011) statement that accentuation may enhance forward motion and thus contribute to the groove.

The muted notes in the guitar intro of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976), which I discussed above as an indication of timing, have an additional dynamic effect on the rhythm guitar part. As depicted in the oscillogram in Figure 5.3, the wave amplitudes of the muted notes, which are indicated by the dashed

arrows, are clearly narrower than those of the actual chords, displaying their softer dynamics in contrast to the chords. Therefore, these percussive notes also serve as “ghost notes”, adding another dimension to the guitar part by lending it a wider dynamic range. This may affect the groove of the rhythm guitar part significantly.

5.1.3 Phrasing

Clarifying a variety of meanings in different musical contexts, the *Grove Music Online* defines phrasing as involving the grouping of successive notes (Chew 2001). It is closely related to, yet is distinguished from, articulation, which means the manner in which individual notes are detached from one another. Articulation therefore refers to, for example, employing legato or staccato techniques. Thus, phrasing and articulation collectively denote the performer’s manner of separating successive notes, singly or in groups (Chew 2001; for further reading, see Keller 1955). In the following, I explore different manners of phrasing in rock riffs from the perspective of the rhythmical grouping of successive notes. This is similar to previous studies on jazz phrasing, “jazz eighth notes” (see e.g., Benadon 2006, Butterfield 2011). Most importantly, the main interest in this chapter is the level of evenness (or unevenness) of consecutive eighth and sixteenth notes. In other words, the durations and relative proportions of the subdivisions of the quarter note beat are under examination. Concerning nomenclature, this study follows Fernando Benadon’s (2006) and Butterfield’s (2011) utilization of “downbeat eighth note” for the first eighth note of a beat and “upbeat eighth note” for the latter. I address sixteenth notes simply with their ordinal numbers, which correspond to their position within the beat. The term downbeat has commonly been employed in contradictory ways, meaning only the first beat of the measure or, alternatively, all the quarter note beats 1, 2, 3, 4 of a measure in 4/4 -time signature. In this study, I employ the latter. This terminology is presented in Figure 5.4.

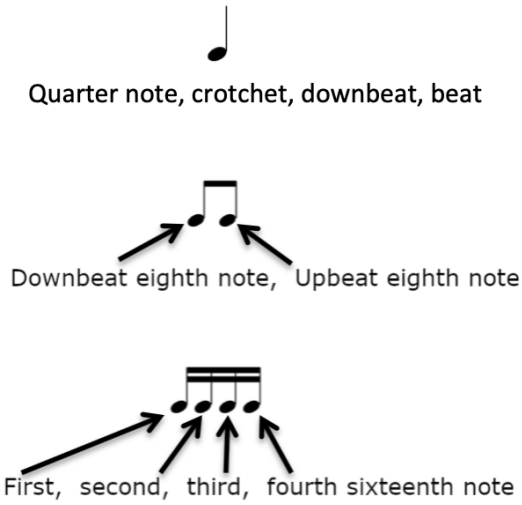


Figure 5.4. The employed terminology concerning the quarter notes, eighth note subdivisions, and sixteenth note subdivisions of the quarter note beat.

5.1.3.1 Even, Swing, and Moderate Swing Phrasing

The rhythmic unevenness of successive eighth notes, in other words swing phrasing, is a fundamental element in jazz (e.g., Benadon 2006, Butterfield 2011). In theory, it is commonly presented as a "triplet-feel", according to which the quarter note is divided into two-thirds plus one-third: the notated downbeat eighth note acquires the duration of the first two triplets and the notated upbeat eighth note equals the third triplet (see e.g., Benadon 2006, Butterfield 2011). In other words, the downbeat eighth note is, then, twice as long as the upbeat eighth note. Logically, this may be expressed as a 2:1 relation, or alternatively as a percentage split of 66,667/33,333, approximately 67/33. Conversely, completely "even" or "straight" phrasing divides the beat into two equal parts, and consequently the eighth notes would be expressed as a ratio of 1:1 or a 50/50 percentage split. In the following, I describe the employed terminology in detail, and Figure 5.5 presents the elementary concept below.

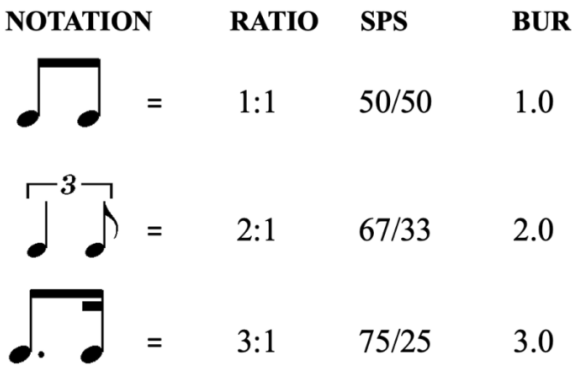


Figure 5.5. Common theoretical divisions of the beat. The notated rhythms and their corresponding ratios, Swing Percentage Splits (SPS) and Beat-Upbeat Ratios (BUR).

As I mentioned above, the divisions in Figure 5.5 may be considered as merely theoretical presentations. Consequently, studies concerning jazz phrasing have examined the actual level of this unevenness in recordings (see Benadon 2006, Butterfield 2011). The term *swing-ratio* has been employed as a measure for this (e.g., Friberg and Sundström 2002). As Figure 5.5 shows, the swing ratio for the triplet-feel equals 2 (i.e., 2 divided by 1 utilizing the aforementioned relation, or 67 divided by 33 utilizing the percentage split), whereas the swing ratio for even eighth notes is 1 (i.e., 1 divided by 1, or 50 divided by 50). Benadon (2006) employs the term Beat-Upbeat Ratio (BUR, see Figure 5.5) in favor of swing ratio. He suggests that using the term swing-ratio misleads one to assuming that jazz soloists exceedingly employ a triplet feel, which is not the case as his research shows. Therefore, the term Beat-Upbeat Ratio is intended to be a measure of any temporal inequality, even if it is closer to "even" than "swing". Such subtle unevenness in hard rock is of central interest in the present subchapter.

Outside the field of academic studies, audio software generally possesses the ability to adjust the amount of swing feel, additionally exemplifying the common interest in employing varying degrees of unevenness. For instance, the recording software Garage Band has a fader entitled "Swing", and historically sequencers and drum machines have featured a function called "shuffle" or "swing" since the advent of Roger Linn's 1979 LM-1 Drum Computer (Scarth & Curry 2013). The amount of swing is commonly expressed as a percentage (0 indicates no swing, in other words even phrasing).

In line with Benadon´s (2006) research, which clarifies that jazz soloists often swing their eighth notes to a significantly lesser degree than the triplet-feel theory suggests, in this study I explore whether hard rock musicians, at least occasionally, perform the seemingly straight eighth notes less evenly than the theoretical eighth note division suggests (see Figure 5.5). As mentioned earlier, I assume that a minute amount of swing feel is an essential component in a multitude of different grooves even in hard rock.

I employ the *Swing Percentage Split* (SPS, see Figure 5.5) as the main measure herein, since a percentage may be more accessible to readers not acquainted with previous phrasing studies, especially as this is not a study on jazz. Additionally, the amount of swing in what appears to be evenly phrased hard rock is, obviously, expected to be diminutive in comparison to jazz. Generally, a percentage is considered an intuitively understandable figure, as its aforementioned utilization within music technology may imply. Percentage, however, would refer to only one number, for example 0 % swing, or 50 % swing, and therefore it does not convey the interrelation between successive notes. In other words, it does not describe the phrasing sufficiently. "Percentage Split", in contrast, refers to the proportion between two numbers, the sum of which is 100. Consequently, a Swing Percentage Split (SPS) value of 50/50 denotes even phrasing, and a SPS value of 67/33 equals the theoretical swing phrasing of the triplet feel, for example. Thus, the aim of this measure is to express the relationship between the durations of two successive notes in the most understandable manner. In order to align with previous studies on phrasing, however, I also present the measure of Beat-Upbeat Ratio (BUR) in conjunction with the SPS values.

As established, my main focus is on phrasing, which is presumably in-between even and swing. More specifically, such phrasing occurs between the SPS values of 50/50 and 67/33, in other words between the BUR values of 1 and 2. I refer to unevenness in these proportions as *Moderate Swing Phrasing*. Due to the scarce research on hard rock groove, and because Moderate Swing Phrasing in hard rock is therefore not acknowledged in the research literature, I will first outline this concept with an example derived from funk music, essentially stemming from the New Orleans tradition.

As Danielsen (e.g., 2006: 77, 80, 83) points out, "slightly swung sixteenth notes" is a ubiquitous and acknowledged feature in funk. In the following, I present the drum intro on The Meters' "Hey Pocky A-Way" (*Rejuvenation*, 1974) as an example. Typically for the Meters, it is influenced by the New Orleans Second Line music tradition (Doleac 2013) and consequently involves swing phrasing to some extent. I chose this example because it represents the phenomenon rather clearly, and it was not ambiguous to research with spectral analysis since it contains only one instrument during the first two measures (I discuss ambiguities in measuring further in the following segment). Previous study on this piece has been carried out by Benjamin Doleac (2013), who also concludes that the phrasing is in-between even and swing phrasing, utilizing the term "between the cracks". However, since that study employed only visual measurement of the wave form and expressed the amount of unevenness in centimeters, I consider it appropriate to present a complementary approach. Herein, I determine the SPS and BUR values from measurements in milliseconds. I additionally utilize a spectrogram for a visual representation. I shall present the succeeding examples similarly, and therefore, "Hey Pocky A-Way" also serves as a methodological introduction. I hope it proves accessible to the reader.

As the amount of swing of the sixteenth notes is under investigation in this example, the point of interest here is the temporal event of the latter sixteenth note of each sixteenth note

pair. In other words, the question is: within each beat, how late does the second sixteenth note occur after the first sixteenth note, and how late does the fourth sixteenth note occur after the third sixteenth note. To be clear, the later they appear, the larger is the amount of swing. First, however, to confirm and present the utilization of Moderate Swing Phrasing visually, I constructed a sixteenth note grid, which I employ as a reference structure (see Bjerke 2010: 87). Below, Figure 5.6 shows this along with the standard notation, the spectrogram and the oscillogram of the drum intro of "Hey Pocky A-Way" [00:00–00:03]. The superimposed vertical lines in the spectrogram form the theoretical grid, which depicts evenly phrased sixteenth notes. I consider the first and the third sixteenth note of each beat as fixed reference points, and therefore I have placed their corresponding vertical lines in accordance with the temporal events that I derived from the actual sounding tones on the recording. Therefore, I name them observed tones (abbreviated *OBS*) in the following, and they are specially marked on top of Figure 5.6 after the header "Beat". Here, the numbers 1, 2, 3, and 4 correspond to the vertical lines, which indicate the first sixteenth note of each beat (which align with each downbeat). The "&"-signs correspond to the vertical lines, which indicate the observed third sixteenth notes of each beat (which align with the eighth note upbeats, "one-AND, two-AND, etc., hence the &-mark). Exactly between these marked lines, the *unmarked* vertical lines are placed to indicate the *theoretical* time events for the second and the fourth sixteenth notes, *if even phrasing was employed (i.e., 50/50 SPS, 2.0 BUR).* In the following, I call these theoretical points of time expected temporal events (marked as *EXP*).

I determined the placement of the theoretically expected temporal events (*EXP)* for tones by measuring the Inter Onset Intervals (IOI; see e.g., Benadon 2006, Danielsen 2010) of the observed tones (*OBS)*. This means the temporal space between two successive observed tones, in other words between the onsets of the first sixteenth note of a beat (marked 1, 2, 3, or 4) and the succeeding third sixteenth note (marked &), or, alternatively, between the third sixteenth note and the first sixteenth note of the following beat. When this duration is divided by two, the figure equals the theoretical duration of a sixteenth note if even phrasing would be employed, and when this is added to the onset time of the preceding Observed tone, the result is, obviously, the theoretical time event of the successive sixteenth note. Thus, this presents the exact theoretical temporal points of evenly phrased sixteenth notes, in other words a referential grid of 50/50 SPS (and the BUR value of 2). For clarity's sake, I express this calculation as a formula, as follows:

$$\frac{(OBS_2 - OBS_1)}{2} + OBS_1 = EXP$$

where OBS_1 = preceding observed tone, OBS_2 = following observed tone, and EXP = the theoretically expected temporal point of the tone between OBS_1 and OBS_2 if even phrasing was employed.

For example, in "Hey Pocky A-Way" the first sixteenth note of the first beat in the first measure appears at 0:00:204, and the third sixteenth note appears at 0:00:565. Applying the

formula given ahead, $\frac{(0.565 - 0.204)}{2} + 0.204 = 0.3845 \approx 0.385$. Thus, the theoretically expected temporal point for the second sixteenth note is at 0:00:385, if even phrasing was employed. The *observed* second sixteenth note, however, appears at 00:422, in other words 37 milliseconds later than the theoretical grid would suggest. This deviation between the observed tone on the recording and the vertical line belonging to the theoretical sixteenth note grid is seen in Figure 5.6. It is highlighted with the first circle from the left both in the oscillogram (wave form) and the spectrogram.

Elaborating on the same example, in order to determine the amount of swing during this first pair of successive notes (i.e., the SPS and the BUR values), I have calculated their relative durations as follows. The IOI (see explanation above) between the first and the third sixteenth note is 361 milliseconds ($0.565 - 0.204 = 0.361$). The duration of the first observed sixteenth note is 218 milliseconds ($0.422 - 0.204 = 0.218$). Thus, the first sixteenth note's relative duration of the note pair is $\frac{0.218}{0.361} = 0.604$, which equals $60.4 \approx 60\%$. In other words, in this pair the first sixteenth note comprises 60% and the second 40%. As a result, the SPS of the first pair of sixteenth notes is 60/40 (which equals a BUR of 1.5). This has been the method of determining the amount of swing throughout this study.

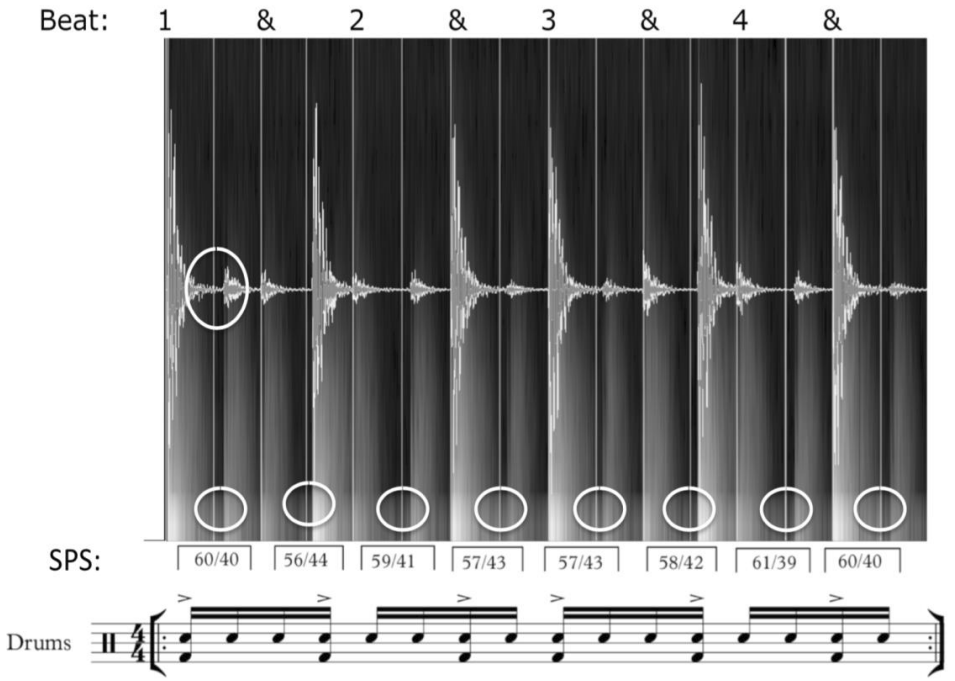


Figure 5.6. Drum intro of "Hey Pocky A-Way"[00:00–00:03]. Top to bottom: Wave form, spectrogram, SPS values of the successive 16th note pairs and standard notation. Light color depicts the sounding notes, black indicates silence. The superimposed vertical lines form a theoretical 16th note grid referring to even phrasing. Within each beat, the circles in the spectrogram highlight the second and the fourth 16th notes' deviations from the theoretical grid, thus depicting a Moderate Swing Phrasing.

As Figure 5.6 shows, the second and fourth sixteenth notes of each beat are performed later than the grid suggests, since they appear more to the right than their corresponding vertical lines (see the highlighting circles). This visually depicts that a sixteenth note swing phrasing is employed, therefore confirming Doleac's (2013) results. Most importantly, the amount of swing is presented as the SPS and BUR values for each pair of consecutive sixteenth notes, which are shown below the spectrogram, above the staff. The average SPS is 58/42, and therefore the average BUR is 1.38. Being so clearly between the SPS's of 50/50 and 67/33 (the BURs of 1 and 2), this may be considered a prime example of Moderate Swing Phrasing, or in Doleac's (2013) terms, "between the cracks" phrasing.

Further below, I present a more detailed account of the measuring process for AC/DC's "Hell Ain't a Bad Place to Be". This is due to its process of measurement being more complex. However, for musical reasons, "Hell Ain't a Bad Place to Be" must be presented later than "Hey Pocky A-Way". Moving towards hard rock, strikingly similar phrasing as in "Hey Pocky A-Way" is found in AC/DC's "Back in Black" (*Back in Black*, 1980). The following figure shows this below.

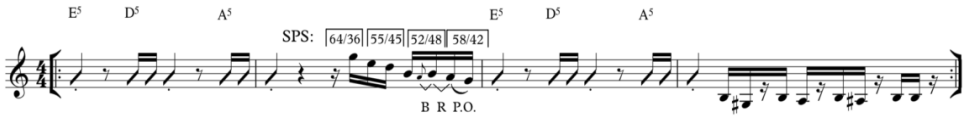


Figure 5.7. Main guitar of "Back in Black" [00:05–00:11]. The SPS values of the lead guitar part indicate Moderate Swing Phrasing. (Abbreviations for utilized guitar techniques: B = Bend, R = Release bend, P.O. = Pull-off.)

The high guitar phrase of the main riff of "Back in Black" (see Figure 5.7), as played by Angus Young, clearly employs Moderate Swing Phrasing concerning the sixteenth notes [00:09–00:10]. The SPS values are as indicated, ranging from 52/48 to 64/36 (in terms of BUR, from 1.08 to 1.78). Although mean is not an optimal statistic in such a limited sample, it is nevertheless noteworthy that, coincidently, their average value, SPS 58/42 or BUR 1.38, is the same as in The Meters "Hey Pocky A-Way", which I mentioned above. Like "Hey Pocky A-Way", this part of "Back in Black" is a clear example of Moderate Swing Phrasing, albeit now in a hard rock context. This example is particularly interesting, since the riff otherwise employs sixteenth note phrasing, which is clearly more even, for instance, in the fourth measure [00:13–00:16]. Additionally, the song features various amounts of swing elsewhere. The vocal parts employ variation in the amount of swing (BUR and SPS values), being more even in [01:20–01:22] and Moderately Swinging in [01:23–01:25]. Similarly, the guitar solo employs Moderate Swing Phrasing in [02:14–02:15] and [02:19–02:28]. Varying the amount of swing is a common practice of jazz soloists, as for example Benadon's (2006) and Butterfield's (2011) studies show. According to them, soloists seem to have the intention of building tension by employing an amount of swing that contrasts with that of the underlying rhythm section, and then resolving the tension by aligning with the rhythm section's phrasing again. It seems that a similar process takes place in "Back in Black", where the soloists are the vocalist and the lead guitarist. However, it must be pointed out that the rhythm section does not play sixteenth notes constantly. Therefore, the effect of isochronously divergent phrasings is more limited in this particular case.

5.1.4 Implied Moderate Swing Phrasing in Hard Rock

Based on my 30 years' experience of playing guitar and 20 years of performing music professionally, I believe that a seemingly even and steady rock beat also often encompasses a diminutive amount of swinging phrasing. Albeit to a lesser degree, this induces a similarly loose, forward moving and swinging effect as, for example, in The Meters' "Hey Pocky A-Way", which I explored above. In other words, what appears to be even phrasing in hard rock may actually not be so on closer inspection. In contrast, other grooves in the same genre and in otherwise similar songs create a rigorous and stiff impression. According to my experience as a performer, this is the net effect of more even phrasing. In this section, therefore, I research these distinctive nuances in different grooves through comparative analysis of two versions of AC/DC's "Hell Ain't a Bad Place to Be". The original studio

version is on the album *Let There Be Rock* (1977), and the live recording is on the live album *If You Want Blood…You've Got it* (1978).

I have played these two versions repeatedly to colleagues in music and to students of all levels throughout the last ten years or more. Frequently, the listeners describe the live version as lively, relaxed, danceable, and loose, and the studio version as stiff in comparison. At the preliminary stages of this study, I conducted a small survey with music students, which confirmed the consistency of these reactions in listeners. Even my pedagogical observations suggest that the obviously different feels may be due to a divergence in phrasing: the learning outcomes have been good when I have guided my students to approach the feel of the live version with a grain of Moderate Swing Phrasing, and in contrast described the studio version as totally even. My focus in the following study is mainly on the guitar, as I assume through my auditive judgement that the guitar is the instrument that is most significantly Moderately Swinging. This also aligns with the pedagogical material in this dissertation, which concentrates on guitar education. However, since the groove of popular music is widely considered to be a product of the entire band together constituting a "rhythm fabric" (see Danielsen 2006), I take the other instruments into consideration to the extent required.

The impression of Moderate Swing Phrasing in what initially appears to be evenly phrased music is a phenomenon that has not, according to my background research, been studied previously in hard rock. However, I suspect that it is this intangible feel that has been described abstractly in non-academic and non-educative literature as an important characteristic of the groove of AC/DC. An example of this is the following quotation from producer Rick Rubin: "[One] thing that separates AC/DC as a hard-rock band is that you can dance to their music. They didn't play funk, but everything they played was funky. And that beat could get a crowd going" (Bozza 2009: 70). Bozza (2009: 71) describes AC/DC's groove, albeit from the perspective of the rhythm section: "It's much more nuanced and vibrant than the hammering beats of classic or alternative rock because there is an uncharacteristic swing there, with one foot in funk and the other in the blues". Since this "uncharacteristic swing" and funkiness has not yet been articulated and analyzed systematically, it needs to be researched in order to detect and confirm the means of its production. Therefore, I conducted a pioneering spectral analysis of the two aforementioned recordings of "Hell Ain't a Bad Place to Be". This part of the present study is built on two presumptions: (1) in a loose, relaxed, and danceable hard rock groove there is a component of Moderate Swing Phrasing, although it appears to be performed evenly, and if this is accepted, (2) varying the minute amounts of swing is an essential technique in constituting different grooves in hard rock guitar playing. Below, I present the methodology and the results of studying the phrasing in "Hell Ain't a Bad Place to Be", after which I discuss *Implied Moderate Swing Phrasing* in hard rock as a broader phenomenon.

I made the measurements with the software Sonic Visualiser 3.0.3. With both recordings, I selected the left channel to be explored. I thus measured the performance of rhythm guitarist Malcolm Young and not Angus Young, who is on the right channel. A decision had to be made and this solution appeared appropriate, since the rhythm guitar performance of Malcolm Young, in particular, is widely considered to be the main driving force of AC/DC (see Bozza 2009).

I favored the spectrogram over wave form, since it depicts the frequencies vertically, which aids in distinguishing of the guitar from the other instruments. The temporal dimension, which is under investigation here, is represented horizontally. By employing a small time window, I was able to increase the level of micro-rhythmical detail to the most satisfactory proportion. This was at the expense of precision in the bass register, which was, however, redundant in this context (cf. Bjerke 2010: 87). At the preliminary stages of this study, I researched several other songs by AC/DC that are sonically otherwise similar if not identical, but commencing only on guitar. This confirmed the visual representation of the guitar on the spectrogram. This preliminary material included, for example, "Jailbreak" (*Jailbreak '74*, 1984), "It's a Long Way to the Top (If You Wanna Rock 'n' Roll)" (*High Voltage*, 1976), and "Shoot to Thrill" (*Back in Black*, 1980), as well as 10–20 pieces from other artists.

As the interest is here directed to the phrasing of the rhythm guitar specifically, I extracted the rhythmical referential structure from the measured performance of the rhythm guitar itself (see Johansson 2010: 70). In other words, in order to define the pulse, I derived it from the actual sounding guitar tones which are on the downbeats. As can be seen in the standard notation (see either Figure 5.2, 5.8, 5.9, or 5.10), they appear on beats one and four of the first measure, beats three and four of the second measure, and beats one and two of the last two measures. Additionally, the percussive muted notes appear on almost every quarter note beat in the live version. My purpose was thus to map out where Malcolm Young, instead of any other member of the band, perceives and implies the quarter note pulse. This is fundamental, since the focus herein is essentially on the level of unevenness in the guitarist's phrasing *in itself.* Applying a referential framework extracted from the drums, for example, would potentially have biased the result, as it is possible that the guitar and the other instruments are not absolutely isochronous (I examine interplay and discrepancies between instruments as an aesthetic device separately later). Nevertheless, the method of establishing a reference structure has been consistent throughout and should therefore lay out a reliable foundation for determining the relations between the beats and upbeats, or more specifically, the SPS and BUR values.

Since there is no access to the separate guitar tracks, the issue arose of how to determine exactly when the tones' attacks occur in the midst of the other instruments, as well as the audience noise in the live version. Additionally, distorted guitar sounds obscure the attack of the tone, making this an even more challenging task. To solve this problem, the

formulation of a consistent procedure was needed. I tested equalization tentatively, but later favored not manipulating the audio material. Instead, I utilized a set of four methods and considered them in accordance to the following hierarchy. (1) Reading the spectrogram, which represents the guitar on the correct frequencies. (2) Referring to the oscillogram (wave form), which depicts when the highest amplitude value is detected (however, this was rarely utilizable because of the interference of the other isochronous instruments, particularly the drums). (3) Slowing down the recording to eight times slower and making a cut before the target note, and then moving the cut 1 millisecond at a time towards the assumed visual representation of the target note until I determined by careful listening that I had detected the attack point of the target note. (4) Slowing down the recording to an eight times slower speed and adding a point marker to the assumed visual representation of the target note. As the point marker made a sound, I then listened repeatedly for whether this sound was synchronized with the target note. I adjusted the point marker by 1 millisecond at a time, working backwards and forwards, until it corresponded with the target note. I also utilized steps 1–4 when I determined the note durations. Then, I attempted to pin down the offsets of the target notes. Ultimately, I solved ambiguities by following the suggestion in the online article "A Musicologist's Guide to Sonic Visualiser" (Cook & Leech-Wilkinson 2009): "you need to use both eyes and ears. (If in doubt, favour ears.)".

Moreover, as defined by Bjerke (2010: 87): "'Onset' usually refers to a sound's point of initiation, while 'attack' refers to the period between the onset and the point at which the sound is at its most intense." Utilizing this definition, the temporal point that I considered here is thus the "attack", to be precise. This represents the factual sound of the music in the most accurate way, as it turned out on the basis of testing both approaches by utilizing the point markers, as I described previously (for further reading on the acoustic and perceptual onsets of a sound, and so-called "perceptual centers", see London et al. 2019). Furthermore, in trying out different methods during the preliminary research, it became evident that with this material the method that I chose was more suitable than an automatic onset detector generated by a computer program.

In addition to the mentioned ambiguities caused by distortion and interfering sounds, the most obscure attacks were imprecise, probably due to excessive string noise and subtle pick scraping. In addition, certain notes were gradually fading out as opposed to having sharp offsets. Most importantly, however, the measuring procedure and the employed set of criteria have been consistent throughout the whole process. Concerning all of the obscure attacks and offsets, I have made the same interpretive choices to resolve all ambiguities. As the measurement data is thus internally consistent, and the object of study is the temporal relations within the rhythm guitar track, the presented data and the results thereof can be considered accurate enough and therefore reliable. After I had first carried out the spectral analysis, I repeated the whole process to further reassure consistent validity and reliability.

It must also be noted that the ambiguities occurred on a level of detail that far transcends human perception, as they were considerably below the commonly agreed threshold of 20

ms (see Hirsch 1959). That is the minimum interval between two onsets, which is needed for human beings to be able to perceive which of two contrasting sounds comes first (see Hirsch 1959; Clarke 1989; Friberg & Sundberg 1993; Butterfield 2010: 158; Danielsen 2010). With the material in this study, I was able to confirm this by observing that the obscurities were perceivable on an eight times slower playback speed, but not problematic when slowed down less, for example at a four times slower pace, and not noticeable at the normal tempo. I tested this by utilizing the sound of the point marker at various playback speeds. To illustrate the relatively minute significance of this variance concerning the original performance pace, the tempo of 130 beats per minute (which the live version of "Hell Ain't a Bad Place to Be" is in approximately) is at an eight times slower speed, 16.25 beats per minute, for example. Ultimately, uncertainty of this kind is common in this field of research (see e.g., Danielsen 2010: 23; Johansson 2010: 73; Butterfield 2011: 8). As Butterfield (2011: 8) states: "There is inevitably some degree of uncertainty in identifying the attack point of each note, as noise and other onset ambiguities render an exact determination impossible."

In order to determine whether a Moderate Swing Feel occurs or not, the focus is herein on the phrasing of the eighth notes, instead of the sixteenth notes as in the previous examples (see "Hey Pocky A-Way" and "Back in Black" above). Next, I will apply my previous method of exploring the sixteenth note phrasing to the eighth notes of "Hell Ain't a Bad Place to Be".

In the following, Figure 5.8 presents spectrograms of both versions of "Hell Ain't a Bad Place to Be". As a visual constitution and reference structure, a superimposed grid depicts the theoretical points of the eighth notes by utilizing the narrow, light colored vertical lines (for reference, see Bjerke 2010: 87). At the top of the figure, the extended lines and the numbers 1, 2, 3, and 4 refer to the corresponding downbeats and their vertical lines in the grid. I derived these rhythmical events from the observed sounding events on the recordings, and I utilized them as reference points in constituting the grid. The vertical lines between them (i.e., those that are not numbered) are formed theoretically and illustrate the locations of the eighth note upbeats according to an even phrasing of 50/50 SPS (which equals a 1.0 BUR). I explain this method more thoroughly in the following section. It must be noted, additionally, that in some instances the spectrogram representation seems earlier (i.e., more to the left) than the vertical line, even on some downbeats, due to a longer attack point caused by string noise or other interference. I took these into careful consideration, as I explained previously, and ultimately, the representation of the guitarists' quarter note beat established under the numbers 1, 2, 3, and 4 should be the most reliable solution.

Similarly to "Hey Pocky A-Way", I established the placement of each theoretical eighth note upbeat, in short, by first measuring the duration of the specific quarter note beat, of which the upbeat is a part (i.e., the IOI between the particular downbeat and the ensuing downbeat). This duration is divided by 2 and added to the onset time of the former downbeat, which then equals the time instance when the eighth note upbeat would occur if precisely even

phrasing was utilized, thus producing a 50/50 SPS. Consequently, the superimposed eighth note grid defines a theoretical reference structure, to which the observed notes on the spectrogram should then be compared. Firstly, this visual presentation depicts whether even phrasing is utilized or deviated from. Secondly, the potential amount of swing (i.e., SPS) within each quarter note beat is determined by dividing the duration of the observed eighth note by the duration of that entire beat.

To further illuminate this process and facilitate the understanding of its results, I present the first beat of the guitar riff's first rendition in the live version as an example, as follows. The first note is the downbeat eighth note, which is followed by an eighth note rest during the upbeat (see standard notation in Figure 5.8). The first downbeat occurs at 0:34:385 (the attack of the riff's first guitar tone, in the following marked as OBS_1) and the measure's second downbeat occurs at 0:34:841 (derived from the guitarist's percussive muted note on beat two, marked as OBS_2). To detect whether the duration of the guitarist's downbeat eighth note follows even phrasing, I employed the formula $\frac{(OBS_2 - OBS_1)}{2} + OBS_1 = EXP$ (see "Hey Pocky A-Way" above): $\frac{(34.841 - 34.385)}{2} + 34.385 = 34.613$. Thus, the theoretically expected (*EXP*) temporal event of the eighth note upbeat is at 0:34:613, which is, conversely, when the downbeat eighth note would end if even phrasing was employed. Interestingly, the observed downbeat eighth note lasts until 0:34:658, and is thus *performed for 45 milliseconds longer than even phrasing would suggest.* As a result, it is most important to determine the relative duration of this extended downbeat eighth note, in other words the SPS. The duration of the downbeat eighth note is 273 milliseconds (34.658 – 34.385 = 0.273), and the duration of the entire downbeat is 456 milliseconds (34.841 – 34.385 = 0.456). Then, $\frac{0.273}{0.456} = 0.599 \approx 0.60$. Thus, the duration of the downbeat eighth note is 60 % and the eighth note rest during the upbeat acquires only 40 % of the beat. In other words, the SPS of the first downbeat is 60/40. These are the procedures I have employed to constitute the referential grid in Figure 5.8 and all of the SPS values.

Below appears Figure 5.8, a visual representation of the main guitar riff in "Hell Ain't a Bad Place to Be". It presents one rendition of the riff from both versions.

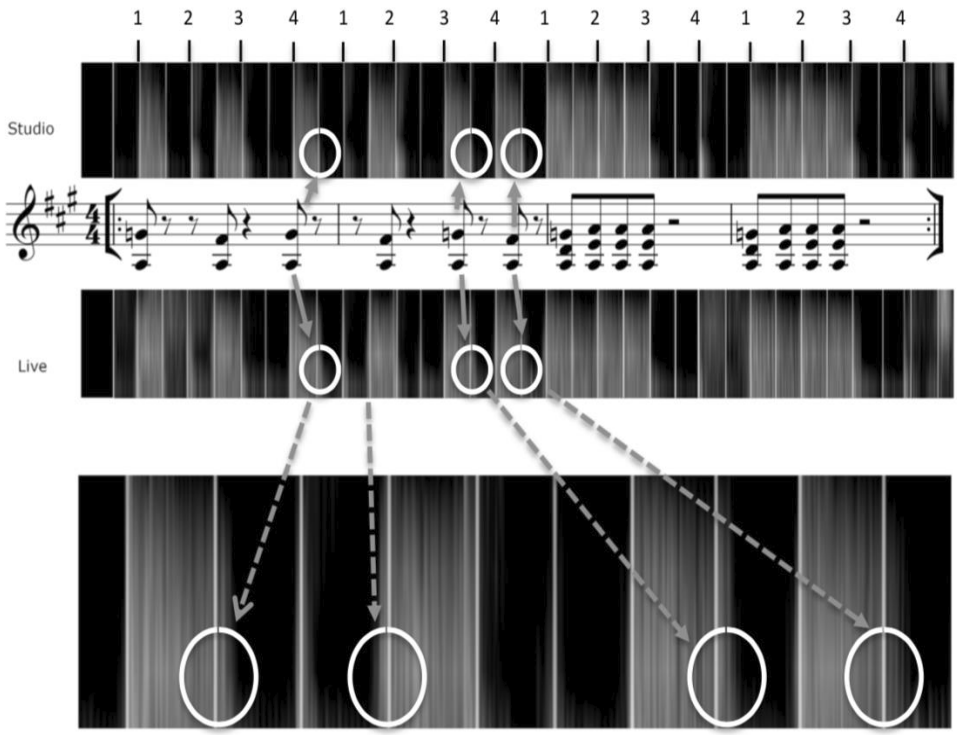


Figure 5.8. Spectrograms of the rhythm guitar in "Hell Ain't a Bad Place to Be", studio version [01:37–01:53] (above the staff) and live version [01:34–01:49] (below the staff), visible area: 1378–5512 Hz. The light grey areas depict the sounding tones, the black areas indicate silence. The narrow vertical lines form a theoretical grid referring to even phrasing. The circled note durations in the studio version are within the grid, while in the live version they exceed the grid. The lowest part zooms in on the live version, highlighting extended downbeat eighth notes (1st, 3rd, and 4th circles from the left), and additionally an anticipated upbeat eighth note (2nd from left).

At the preliminary stage of this exploration, I measured both versions with one rendition of the riff from each version, meaning four bars of each version. Interestingly, the preliminary results revealed that the note durations are relatively longer in the live version than in the studio version. As Figure 5.8 demonstrates, the extended durations of the downbeat eighth notes in the live version exceed the 50/50 SPS (1.0 BUR) values of even phrasing, thus *implying* a Moderate Swing Phrasing. This does not occur in the studio version, which seems to approximate even phrasing closely. Thus, this finding suggests that *it is primarily the manipulation of the note durations that constitute an illusion of a Moderate Swing Phrasing or, in contrast, an even phrasing.* Additionally, the consecutive eighth notes in measures three and four of the riff showed more uneven SPS's and higher BUR values in the live

version as compared to the studio version. Altogether, this would tentatively point towards an *implied* Moderate Swing Phrasing in the more relaxed live version, thereby contrasting with the more even phrasing of the stiffer studio version. Therefore, the preliminary results seemed aligned with both presumptions: firstly, a loose groove in seemingly even rock music is constituted by *components that imply* a Moderate Swing Phrasing, and secondly, the manipulation of phrasing towards either even or Moderately Swinging is employed as a device for creating different grooves.

However, there was an unexpected finding in both versions of "Hell Ain't A Bad Place To Be": the upbeat eighth notes preceded by a rest (the eighth note upbeats of beat two in the first measure and beat one in the second measure, see standard notation in Figure 5.8), turned out to be performed astonishingly early (see Figure 5.8), thus constituting a SPS value under 50/50 on the downbeat eighth note and a BUR value of less than 1.0 in both versions. This was surprising particularly because it also occurred in the live version, and such a division of the quarter note stands in contrast to any degree of swing phrasing. This prompted a closer research in order to determine whether these discovered divergencies were happenstances or a consistent tendency. Therefore, I explored four performances of the riff from both the live and the studio versions, meaning 16 measures from each version. Aiming at minimum ambiguity, I utilized the renditions without vocals, meaning the two riffs before the first verse and the two riffs before the second verse. In the studio version, they can be heard at [00:34–00:50] and [01:37–01:53], and in the live version at [00:33–00:49] and [01:34–01:49].

This exploration confirmed the tentative results and revealed that, on the whole, the eighth notes occur in contradictory ways but certainly not randomly. Clearly, they are executed with intent, which divides them into categories depending on their rhythmical placement within the riff. These categories are evidently divergent from each other but intrinsically homogenous. Consequently, in the successive analysis I formed three categories: A) downbeat eighth notes, B) upbeat eighth notes, and C) consecutive eighth notes (see Figure 5.9). In the following, I analyze each group separately, as I aim to illuminate their musical intentions and functions. In describing the expressive tendencies of each group, the essential information is summed up by utilizing the average SPS values (see Figure 5.10). On the whole, I intend the average values to be more informative than merely presenting the SPS and BUR values of any individual sample of the riff. This was encouraged as the exploration revealed that the SPS and BUR values are consistently similar within each category and within each version of the song. In the context of this study, the amount of measured eighth notes in each category should be sufficient for the average to be a reliable statistic (in each version, Group A: n=16; Group B: n=8; Group C: n=32).

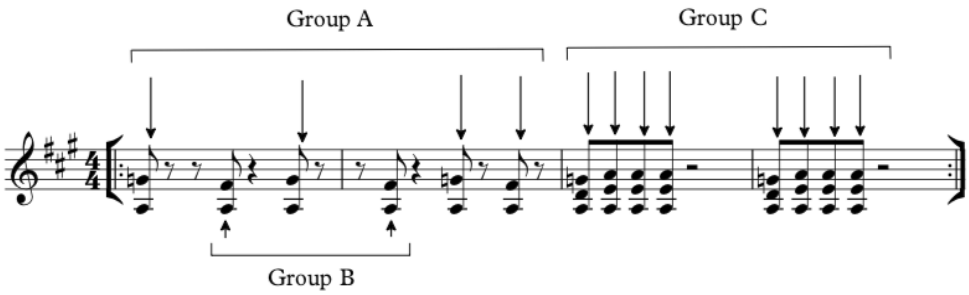


Figure 5.9 (above). "Hell Ain't a Bad Place to Be". In the following analysis, the eighth notes are categorized as indicated, based on their musical tendencies.

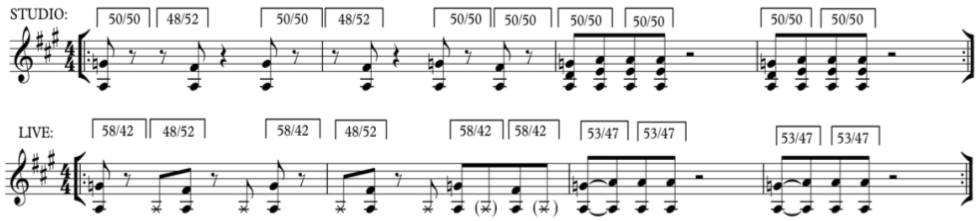


Figure 5.10. "Hell Ain't a Bad Place to Be". The average SPS values in accordance with the categorization presented in Fig 5.9. The live version (lower part) implies Moderate Swing Phrasing in contrast to the evenly phrased studio version (upper part).

Group A) The downbeat eighth notes (see Figure 5.9). As Figure 5.8 depicts, the eighth note durations in the studio version are aligned with the superimposed grid (see the highlighting circles). Accordingly, the average SPS of this category in the studio version, as presented in Figure 5.10, is 50/50 (average BUR 1.0). This implies even phrasing, as expected. In stark contrast to this, the eight note durations in the live version clearly exceed the grid in Figure 5.8, which denotes longer durations than those in even phrasing. This is confirmed by the average SPS of 58/42 (average BUR 1.38) in Figure 5.10. This proved to be a consistent tendency. As the extended duration of the downbeat eighth notes *implies* a long-short eighth note division of the quarter note beat, it may be concluded that it is an *Implied Moderate Swing Phrasing*. I comment on the terms "implied" and "moderate" in the following. Firstly, I call it "implied" because the swinging effect is herein produced by manipulating the duration of individual notes succeeded by rests, instead of the grouping of consecutive eighth notes. Secondly, I consider it moderate because the deviation from even phrasing is, albeit significant, diminutive in comparison to the so-called "triplet-feel", which is traditionally referred to as swing phrasing (for further reading, see Benadon 2006, Butterfield 2010). Nevertheless, this is a consistent divergence between the two recordings, and seems to be an essential element in constituting the loose groove of the live version and the stiff groove of the studio version.

Group B) The upbeat eighth notes (see Figure 5.9). The syncopated eighth notes that follow a rest (the latter eighth notes of beat two of the first measure and beat one of the second measure, see standard notation in Figure 5.9) are phrased similarly in both versions. As opposed to the Moderate Swing Phrasing, the notes commence even earlier than the eighth note grid (see Figure 5.8, second highlighting circle from the left), constituting an average SPS of 48/52 (average BUR 0.92), as demonstrated in Figure 5.10. They are thus performed with an "ahead of the beat" –time-feel, which creates a "rushing" effect (I explore time-feel separately below). Within the context of this riff, these anticipated notes offer an energetic and aggressive quality. In turn, this creates a contrast to the other elements of the riff, especially in the live version, where the loose effect of Implied Moderate Swing Phrasing is created by the eighth notes in groups A and C. Naturally, the live version could be alternatively described by simply stating that the note durations are generally extended; the downbeat eighth notes end later and the upbeat eighth notes commence earlier than expected. Extending the notes might have even been the intention of the performers. Nevertheless, the net effect of specifically the anticipated upbeat eighth notes in group B is the added stress and tension within the phrase, as I analyzed above.

Group C) The consecutive eighth notes (see Figure 5.9). In the live version, Implied Moderate Swing Phrasing also occurs in the third and fourth bars of the riff. As the standard notation in Figure 5.10 depicts, legato technique (slur, hammer-on) is employed between the first and the second notes in both measures, thus creating variations in dynamics and lending a round effect. This may contribute to the illusion of a Moderate Swing Phrasing, as it blurs the attack, especially since it occurs between downbeat and upbeat eighth notes. Also, the last eighth note of the phrase is accentuated, which may inspire it to be performed minutely later than expected. This, in turn, produces an Implied Moderate Swing Phrasing on beat two of the third and fourth measures. In this category, increasing ambiguity rendered the distinction of exact attack points especially demanding, and I utilized steps 3 and 4 of the measurement methods (see above) exclusively. Relying on the most careful estimates that I formed through repeated listening at an eight times slower playback speed, the average SPS value of the live version is 53/47 (average BUR 1.13), as seen in Figure 5.10. Albeit to a lesser degree than the downbeat eighth notes (Group A), this constitutes Implied Moderate Swing Phrasing. The studio version diverges from all of this with the absence of legato technique and, consequently, with the utilization of steady dynamics. Logically, this appears to correlate with greater evenness in rhythmical phrasing, as the average of the estimated SPS and BUR values are the exactly even 50/50 and 1.0, respectively.

On the whole, the extended durations of the downbeat eighth notes most essentially explain the looser feel, which creates an illusion of a Moderate Swing Phrasing in the live version. Secondly, although to a lesser extent, the successive eighth notes render the same. The stiff groove of the studio version appears to be caused by a significantly more even phrasing throughout. Confirming the presumptions, the level of evenness or unevenness is thus a component that contributes to constituting different grooves in hard rock. As the live version of "Hell Ain't a Bad Place to Be" exemplifies, in music that appears to be evenly phrased a

nuance or an illusion of a Moderate Swing Phrasing is a means of expression. The amount of swing is, however, absolutely diminutive in comparison to jazz, for example. Strictly speaking, the phrasing is still even and not swinging, but as it presents an ingredient of roundness or bounciness it implies or hints at swing phrasing. It is as if a minute proportion, or a feel, of swing is "present" in the music rather than swing phrasing being produced explicitly. Therefore, it may be referred to as an "illusion", "nuance", or, as herein, *Implied* Moderate Swing Phrasing. It is, nevertheless, utilized as a device for creating an evidently different groove than even phrasing would suggest, either consciously or intuitively. Therefore, it must not be neglected, but researched and recognized as an essential musical tool. Consequently, it may, with the help of music analysis, be practiced and taught. However, the reality seems to transcend a simple distinction between a consistently even phrasing and a Moderate Swing Phrasing. Variations in phrasing occur during a phrase or riff that apparently aims at producing movement and ultimately forward motion musically. The anticipation of the upbeat eighth notes signifies this versatility. Therefore, a more profound analysis of the three different categories of eighth note performances in "Hell Ain't a Bad Place to Be" follows.

The homogenous manner of performance within the three categories that the SPS and BUR values revealed suggests that these elements can be distinguished as "rhythmic events with respect to function" (see Hasty 1997, see also Butterfield 2011). In other words, they are not random deviations from any given norm, but instead clearly possess *consistent tendencies and imply musical functions.* Within both recordings of "Hell Ain't a Bad Place to Be", the anticipated performances of the upbeat eighth notes create tension that is then resolved by the downbeat eighth notes, and especially the consecutive eighth notes in the second part of the riff. This effect is further reinforced in the live recording by utilizing the extended downbeats and the legato technique between consecutive eighth notes, thus creating a more relaxed gesture in the points of resolution. Moreover, this is in alignment with the polymetric feature of the riff (see Figure 5.2 and Subchapter 5.1.1). On the level of eighth notes, the polymetric dissonance of the 3+3+3+3+2+2 grouping during the first half of the riff creates a tension that is even further enhanced by the urgently anticipated performance of the upbeats. The latter half of the riff provides a resolution, when the guitars align with the drums and the bass as well as the underlying 4/4 meter. All instruments are, then, in consonance with each other by following a 2+2 grouping of eighth notes. Therefore, there is a constant movement between tension and release, an ebb-and-flow effect within the riff, which occurs *both on the structural level and the micro-rhythmical level* (for further reading, see Danielsen 2006, Benadon 2006, Butterfield 2011). In a rock context, this applies Butterfield's (2010) statement: "Variations in any musician's swing ratio produce varying qualities of motional energy in relation to phrase structure." Had the eighth notes not been categorized in this analysis, an average of all the eighth notes would have given a biased value because of the divergent SPS and BUR values of the eighth notes, which on closer inspection were revealed to be based on consistent musical tendencies. Thus, essential musical information would not have been discovered without this categorization.

Albeit in a different musical context, the findings regarding "Hell Ain't a Bad Place to Be" are similar to Benadon's (2006) discovery that jazz soloists vary the amount of swing in proportion to the underlying harmony. In other words, micro-rhythmical tension and release between the soloist and the accompaniment responds to the harmonic movements of tension and release (see also Butterfield 2011). In both Benadon's (2006) results and the present study, the performers clearly vary their phrasing in accordance with the overall musical context and the tendencies of the structural events. Furthermore, the present study converges with Benadon's (2006) and Butterfield's (2011) research, in that the results show that, overall, phrasing is rarely strictly "even" or "swing", but instead that there are subtle variations between these theoretical extremes. The contribution of the present study is the notion that this phenomenon also occurs in hard rock, although to a much lesser degree in comparison to jazz.

It should be acknowledged that other factors naturally also contribute to the two versions of "Hell Ain't a Bad Place to Be" sounding different. The tempo is slightly faster in the live version, which enhances the livelier feel.[30] In the studio version, the bass is playing notes of a consistently short duration. In the live version, conversely, the bass is playing minutely shorter notes on the downbeats and longer notes on the upbeats, almost leaning towards a phrasing that could be notated as  . This emerges as a forward moving effect, as linking the upbeat to the successive downbeat renders the weak upbeat into an anacrusis of the ensuing strong beat, thus leading forward. This upbeat-to-downbeat -grouping of a pair is known as iambic, as opposed to the so-called trochaic downbeat-to-upbeat -grouping, which lacks the continuity and has a halting effect instead (see Butterfield 2011). The bass also accentuates the downbeat eighth notes, i.e.,  , thus aligning with the drums and occasionally contrasting with the guitars. Between these two recordings, Cliff Williams replaced Mark Evans as AC/DC's bass player, whereas the rest of the group remained the same. Perhaps this exemplifies the significance of chemistry between band members, particularly within the rhythm section. Williams has been perceived as "the driving force" of the rhythm section (Bozza 2009: 71), and his collaboration with drummer Phil Rudd has been celebrated, for example, by Bozza and Slash (Bozza 2009: 70–71). In addition, the timbral qualities of the two recordings are different. In the studio version of "Hell Ain't a Bad Place to Be", the guitars are mixed relatively loud and perhaps the sharper treble sound increases the impression of choppiness that contrasts with the general smoothness of the live version (see Bjerke 2010, Butterfield 2010: 165). The overall timing of the entire band seems to be more accurate in the live version, which generates a stronger cohesiveness or a perceived "togetherness", than in the studio version, which appeared in this investigation to be more discrepant. Nevertheless, the strongly diverging manners of the guitars' phrasing, which I have presented in this study, remains an essential explanatory factor for the contrasting grooves.

[30] The approximate tempos are 130 bpm (beats per minute) in the live version and 128 bpm in the studio version.

In conclusion, the term swing phrasing is commonly defined in music theory as the triplet feel, meaning a 67/33 SPS approximately. Therefore, I decided to employ the term Moderate Swing Phrasing to describe the less uneven phrasing in, for example, "Hey Pocky A-Way" (58/42 SPS) and the lead guitar phrase in the riff of "Back in Black". Furthermore, I utilize the term Implied Moderate Swing Phrasing in reference to even more delicate appearances of an uneven division of the beat. I intend this term to describe the minute amount of swing in the consecutive eighth notes in "Hell Ain't a Bad Place to Be" (53/47 SPS), and the practice of implying a swing feel by extending the upbeat eighth notes that precede a rest in the same song (58/42 SPS).

The above results from an analysis of "Hell Ain't a Bad Place to Be" relate to previous studies on groove in other genres of music. Concerning funk of the 1970's, Anne Danielsen (2006) has made a distinction between figure and gesture. The former means a virtual rhythmic structure that can be notated, and the latter is the actual sounding event, which includes all the manners of performance. According to Danielsen (2006: 48), figure and gesture are like sentence and utterance (see also Bakhtin 1986). Concerning the present study, the same sentence, namely the riff of "Hell Ain't a Bad Place to Be", is uttered in different dialects. In other words, the stiff studio version is phrased more evenly, and the loose live version echoes a tendency towards a Moderate Swing Phrasing. There are, however, joint gestures in these divergent performances as well. The anticipated upbeats exemplify this. Their energizing effect is similar to Danielsen's (2006: 73–91) description of the "downbeat in anticipation" in James Brown's (1965) "Papa's Got a Brand New Bag". Bengtsson, Gabrielsson et al. (1969: 95–96, see also Danielsen 2010: 4) have explored "systematic variations in duration" and, furthermore, separated "expressive variation" from "idiomatic variation". From the perspective of this study, firstly, a performer's choice between even phrasing or Implied Moderate Swing Phrasing is an application of such expressive variations. Manipulating the note durations can thus be regarded as an expressive device, which Malcolm Young utilized in contrasting ways to constitute different grooves in the two recordings of "Hell Ain't a Bad Place To Be". Secondly, the anticipated upbeats are, in turn, an example of idiomatic variations, as they are "repeated as part of a recurring rhythmic pattern" (Danielsen 2010: 4). The energetic sound of the anticipated upbeats seems to be idiomatic for the performance of the song in both the studio and the live versions. Furthermore, my studies of other songs by AC/DC suggest that both the extended note durations and anticipated upbeats are reoccurring features in the band's performances, for example in "Shoot to Thrill" (*Back in Black*, 1980), "Jailbreak" (*Jailbreak '74*, 1984), and "It's a Long Way to the Top (If You Wanna Rock 'n' Roll)" (*High Voltage*, 1976).

While this study is limited to hard rock, I will make a brief note on related characteristics of phrasing in other genres. As I mentioned above, Waadeland (2006: 169) and Tagg (2012: 296–297) state that different genres groove in different ways. My preliminary studies showed that, for example, the aggressive, rigorous heavy metal groove in the guitar intro of

Children Of Bodom's "In Your Face" (*Are You Dead Yet?*, 2005) employs a very even phrasing. In country music, by contrast, the guitar in Albert Lee's "Arkansas Traveler" (*Speechless*, 1986) produces SPS's and BUR's indicating Moderate Swing Phrasing. Furthermore, reggae features several variations of swing phrasing, as can be heard in, for instance, Bob Marley's "Could You Be Loved" (*Uprising*, 1980) and "Waiting in Vain" (*Exodus*, 1977). As Mats Johansson (2010: 71–72) notes in his study of Norwegian and Swedish folk music, variations in phrasing and timing are crucial in identifying musical styles overall. However, this matter is not as simple as categorically stating that a certain type of phrasing automatically belongs to a certain genre. For example, in heavy metal, Pantera's "Cowboys from Hell" (*Cowboys from Hell*, 1990) features a variety of phrasing, which I discuss further below. Although there are characteristics in phrasing that are more typical for a particular musical style than others, it appears that individual songs, parts of songs, and different renditions seem to call for different phrasings as well. Furthermore, varying the amount of swing is also associated with other music cultures. Concerning the roots of African American music (e.g., Danielsen 2006), future studies could explore how Implied Moderate Swing Phrasing relates to African music. A more distant example of a parallel for Moderate Swing Phrasing in other musical traditions can be found in European classical music: the term "notes inégales" was utilized mainly during the baroque period of the 17th century to describe the manner of performing certain equal-note pairs unequally (e.g., Ferguson 1975; Hefling 1993; Friberg and Sundström 2002; Jerold 2014). Therefore, unevenness of successive notes, as in swing phrasing, is clearly a means of expression that is employed in various forms in a plurality of musical traditions. A more extensive discussion of this matter is, however, beyond the scope of this study.

A few fundamental questions still need discussion – firstly, why do musicians utilize Implied Moderate Swing Phrasing? As I discussed above, it is a potential aesthetic device that presents an opportunity for the performer to render artistic choices such as the different renditions of "Hell Ain't a Bad Place to Be" exemplify. However, it may or may not be utilized depending on the performer's expressive intentions. But still, why specifically use Implied Moderate Swing Phrasing, since other expressive devices are at the performer's disposal as well? As Butterfield's (2011) study entitled "Why Do Jazz Musicians Swing Their Eighth Notes?" suggests, swinging induces forward propelling motion. As indicated by the definitions of groove, which I referred to earlier, forward motion is often mentioned as a primary characteristic and intention of groove. I presume that *this forward moving effect is sought after even in the Implied Moderate Swing Phrasing* that hard rock musicians employ.

Secondly, in the performances of hard rock musicians specifically, where does Implied Moderate Swing Phrasing stem from? Along with blues artists such as Muddy Waters, who obviously performed shuffles instead of even eighth notes, the roots of AC/DC are in 1950's rock and roll music, as the band credits, for example, Chuck Berry, Little Richard, and Jerry Lee Lewis as their primary influences (e.g., Engleheart & Durieux 2006: 56–57). In the recordings from this early era of rock and roll, it is common that even phrasing and swing

phrasing occur simultaneously within same the band. The rhythm section might utilize swing phrasing even though, for instance, the guitar playing of Chuck Berry or the piano playing of Little Richard persistently employed even eighth notes (Glass 2013). There may be historical reasons for this. Apparently, the studio musicians were not initially accustomed to the rising artists' novel manner of performing even eighth notes, especially in the otherwise familiar 12 bar blues form. For example, drummers Earl Palmer and Fred Below, who played in the recording sessions of Chuck Berry and Little Richard among others, were used to playing with the swing feel used in the traditions of rhythm 'n' blues, blues, and New Orleans jazz. The resulting sound has been described as an "in-between" feel. (Glass 2013). Examples of this can be heard on Little Richard's "Tutti Frutti" (1955), Jerry Lee Lewis' "Whole Lot of Shakin' Going On" (1957), and Chuck Berry's "Johnny B. Goode" (1958). I studied Eddie Cochran's seemingly even "Summertime Blues" (1958) in the preliminary stages of this exploration, and the acoustic guitar riff [e.g., 00:02–00:09] evidently employs Moderate Swing Phrasing. In any case, this mixture of swung and even eighth notes within a band is a characteristic of early rock and roll. Later performers, such as AC/DC, most probably absorbed this sound as they listened to that music.

On the other hand, the Implied Moderate Swing Phrasing in hard rock musicians' performances may also represent an influence from other genres that belong to African American music. This would appear to be a possible explanation, since variations of swing phrasing are frequently employed in a multitude of genres, as I discussed above. Importantly, the "tendency to swing the 16ths that is almost always present" is an essential feature of funk, as Danielsen (2006: 71) argues in her study on James Brown and The Parliament. In hard rock (or early heavy metal), Led Zeppelin employs Moderate Swing Phrasing extensively, as the preliminary stages of my study suggested. Therefore, it is very unlikely a coincidence that the drummer of Led Zeppelin, John Bonham, was influenced by James Brown, as well as jazz drummer Elvin Jones and early rock and roll drummer Earl Palmer, to name a few (see Moore 2013). Songs like "Whole Lotta Love", "Bring It On Home", "Moby Dick" (all on *Led Zeppelin II*, 1969), and especially "Out On The Tiles" (*Led Zeppelin III*, 1970) all contain Implied Moderate Swing Phrasing, and I explore them as elements of a pedagogical repertoire in Chapter 7. Concerning other 1970's bands, Deep Purple employs Moderate Swing Phrasing in, for example, "No No No" (*Fireball*, 1971), which also appears in the pedagogical material in this study. Deep Purple's drummer Ian Paice cites jazz drummers Gene Krupa and Max Roach, as well as Earl Palmer, as his influences (Glass 2011). The above observations suggest that Moderate Swing Phrasing in hard rock could be an influence from funk and jazz. Nevertheless, Moderate Swing Phrasing is apparently a crucial element in other 1970's hard rock besides AC/DC. Even more recent examples of Moderate Swing Phrasing exist, however; the band Rage Against the Machine utilizes various degrees of swing as a means of creating different grooves. This can be heard in "Killing in the Name" (*Rage Against the Machine*, 1992), particularly by comparing the riffs at [00:41–01:16] and [01:59–02:22].

5.1.5 Time-Feel and Interplay

In order to avoid confusion in the following, I emphasize that there is a common conception of groove being fundamentally built on micro-rhythmical precision (see Subchapter 5.1.2), which results in an accurately isochronous timing between the instruments in a band (e.g., Berliner 1994; Danielsen 2006; Butterfield 2010). Accordingly, it is a joint endeavor of all the musicians in an ensemble to maintain synchronized, homogenous timing in furtherance of generating stability and consistency (Berliner 1994: 157, 349–350). However, within the scope of such contemporaneity there seems to be room for deviations on an even smaller scale. Firstly, on the level of milliseconds, some discrepancy always occurs as an inevitable result of human imprecision. This means that it is practically impossible that several individuals would play exactly identically (see Rasch 1988: 71; Butterfield 2010: 158). More importantly, some forms of deviation seem to occur consistently instead of randomly. They produce rhythmical nuances, which in turn contribute to the emergence of different grooves. Here the concepts of time-feel and participatory discrepancies appear (e.g., Keil 1966), which I discuss in the following.

5.1.5.1 Time-Feel: Laidback, On the Beat, Ahead of the Beat

A skillful performer can enhance expressivity by performing with accurate timing and still manipulate micro-rhythms. In other words, the performer possesses flexibility within the boundaries of temporal precision. This capability constitutes different musical characteristics known as "time-feels" (see Berliner 1994: 150–151; Johansson 2010: 78). On this level of minute detail, timing is not solely a matter of correctness. Rather, it represents an opportunity for different expressive qualities. Three categories of time-feels are commonly recognized: on the beat, behind the beat, and ahead of the beat. The term "on the beat" describes a time-feel that is synchronized with the pulse as closely as possible. It creates a neutral impression. Performing "behind the beat" or with a "laidback" time-feel denotes a manner of performing the tones slightly later than the beat. This creates a lazy, heavy impression and can make a song seem slower than it actually is in terms of tempo (see Friedland 1999). "Ahead of the beat", or "on top of the beat", in contrast, means playing slightly before the beat, which creates a hectic, energetic feel. This can make a song feel faster than the tempo would otherwise suggest (see Berliner 1994: 150–151; Friedland 1999).

These deviations are subtle, and often imperceptible to a less experienced ear. It is not essential for the lateness or earliness to be audible, however; more important is the recognition of the expressive effects (Butterfield 2010: 158; see also Brown & Dempster 1989: 96). According to my pedagogical experience, only after a learner has acquired the skill of impeccable timing (see Subchapter 5.1.2) can this even further intricate fine-tuning be explored (cf. Berliner 1994: 351; Friedland 1999). These nuances should not be confused with inaccuracy or lack of precision (Johansson 2010: 78). What distinguishes these

expressive devices from imprecise timing is, firstly, that this manipulation is deliberate and consistent. Therefore, it creates a coherent tendency as opposed to diverging from the beat erratically. Secondly, these deviations are usually of lesser proportions than in weak timing skills (cf. "rhythmic tolerance": Johansson 2010; Danielsen 2010: 29–34).

5.1.5.2 Participatory Discrepancies

The concept of participatory discrepancies was first introduced in 1966 by Charles Keil. It involves "asynchronous timing at the microrhythmic level within an ensemble" (Keil 1987: 277; Butterfield 2010: 157). The discrepancy refers to one instrument being slightly ahead of another. The classic example of this phenomenon is that the double bass purportedly plays ahead of the drums in a jazz band. The participatory discrepancies theory suggests that it is this "push and pull" effect between the instruments that generates groove, or swing, as denoted in jazz contexts (Keil 1966: 341; Keil 1987: 277; Butterfield 2010: 157–158). The instruments thus acquire individual roles within the band's groove. The instrument that is ahead of the others, in other words plays with an "on top of the beat" time-feel, is the leading instrument that energetically drives the band forwards. Alternatively, an instrument (the drums, for example) that performs slightly later than the rest of the band, in other words, employs a "laidback" time feel, calms down and drags on the band (e.g., Berliner 1994). This has become a well-known theory concerning jazz groove, although it is also a debated issue and has been criticized by, for instance, Butterfield (2010). The main critique has been directed at the saliency of the phenomenon, which according to the critics is not as widespread as originally assumed. Keil and Steven Feld (1994: 155, 171) went so far as to state that music "must be out of time to groove". Butterfield (2010: 166, 168) concludes that participatory discrepancies do exist, and that they are not negligible, although their expressive effects are more limited than previously thought.

Elsewhere, Anne Danielsen (2010: 29) has introduced the "beat bin model". This concept describes the beat as an extended temporal unit, a bin rather than a specific point. The width of such a bin involves the concept of "rhythmic tolerance" (Danielsen 2010: 29). This means how long the temporal interval between structurally simultaneous events can be without sounding out of time (Danielsen 2010: 29; Johansson 2010: 76). For instance, when different instruments in a band perform simultaneously but not exactly synchronously, they merge into one extended beat, a beat bin or "beat window" (Johansson 2010: 76). Minute asynchronism produces a narrow beat bin. Asynchronism, which is larger yet within certain limitations, forms a wider beat bin. Relating this to the theory first suggested by Keil (1966), the effect of participatory discrepancies would thus be that they extend the beat, or more specifically alter our perception of the pulse. This happens via an increase in the listener's rhythmic tolerance by establishing a time window that is broader than that of completely synchronized interplay.

Furthermore, Kristoffer Carlsen and Maria A.G. Witek (2010: 51–68) have explored the perception of rhythm and proposed the theory of dynamic attending. This concept describes how, in the process of rhythm perception, internal "attending rhythms" in the listener entrain with the audible rhythms. In other words, the external stimuli call for synchronization in the listener. This generates expectations about the development of the external rhythm. Working this way, when an "attentional pulse" has been formed in the listener, he or she expects the following beat to appear at a specific point in time (Carlsen & Witek 2010: 53–54; for further reading, see Large & Jones 1999; Barnes & Jones 2000; Jones 2004). Consequently, when a performer occasionally manipulates the time-feel, this externally sounding music deviates from the internally expected pulse in the listener, which thus presents a sensation of surprise. In practice, this may occur if one instrument first generates an internal attending pulse in the listener, and another instrument joins later and contrasts with this internal reference structure by being more laidback or on-top-of-the-beat. The experience of subtle unexpected rhythmic events has been described as pleasurable and important in engaging the listener (Danielsen 2010: 28–29). A more thorough discussion on rhythm perception is, however, beyond the scope of the present study. In the following, I concentrate on its influence on a band's groove in hard rock.

A broader beat bin, as Danielsen (2010: 33) states, "comprises all of the pulse locations suggested by the different layers". Furthermore, in a funk context, Danielsen (2006: 88, 90) refers to the disparity and tension "between the upper and lower layers in the groove", and interestingly, "the slower and the faster layers". Within the format of a rock band, this could translate into the layers of the rhythm section (the drums and the bass) versus the guitars, or, alternatively, the drums versus the bass and the guitars. To elaborate this point of view, it emphasizes that the layers of a band have different functions that are affected by the structural elements of the song, and that these functions complement each other. In practice, this view relates to musicians' descriptions of listening for "a certain sound" that they create together through their playing (Berliner 1994: 351). From the performers' point of view, it involves constantly listening to what all of the band members' performances sound like in relation to each other. This perspective describes a band's joint endeavor to produce various multifaceted soundscapes to which these layers contribute with their different functions. This emphasis on function in adherence to time-feels and participatory discrepancies is thus different from, for example, mechanically forcing asynchrony within a band in search of a groove. I suggest this as a reconciliation between the advocates and critics of participatory discrepancies. I will explore this perspective of multiple layers in the context of AC/DC's groove in the following.

Drummer Phil Rudd's significance for AC/DC's groove and overall sound has received recognition in non-academic contexts (e.g., Bozza 2009). According to Mötley Crüe's drummer Tommy Lee, Phil Rudd

> holds it down! He is the king of two and four beat. If you want to hear a drummer locking everything into place, time after time, it doesn't get any

> better. […] His beat is what everyone is pounding their feet and pumping their fists in the air to! That beat makes the entire stadium move. You can never underestimate how important that is to the entire band's sound.
> (Tommy Lee; in Bozza 2009: 76–77)

Evidently, the drummer's time feel, especially concerning the backbeat, affects the whole band. Producer Rick Rubin's opinion aligns with this sentiment, as he describes how Rudd's drumming lends the band its characteristic feel: "You can hear it how he drags the beat" (Bozza 2009: 75). These observations appear to describe participatory discrepancies, and therefore I will examine this in further detail with Figure 5.11 below.

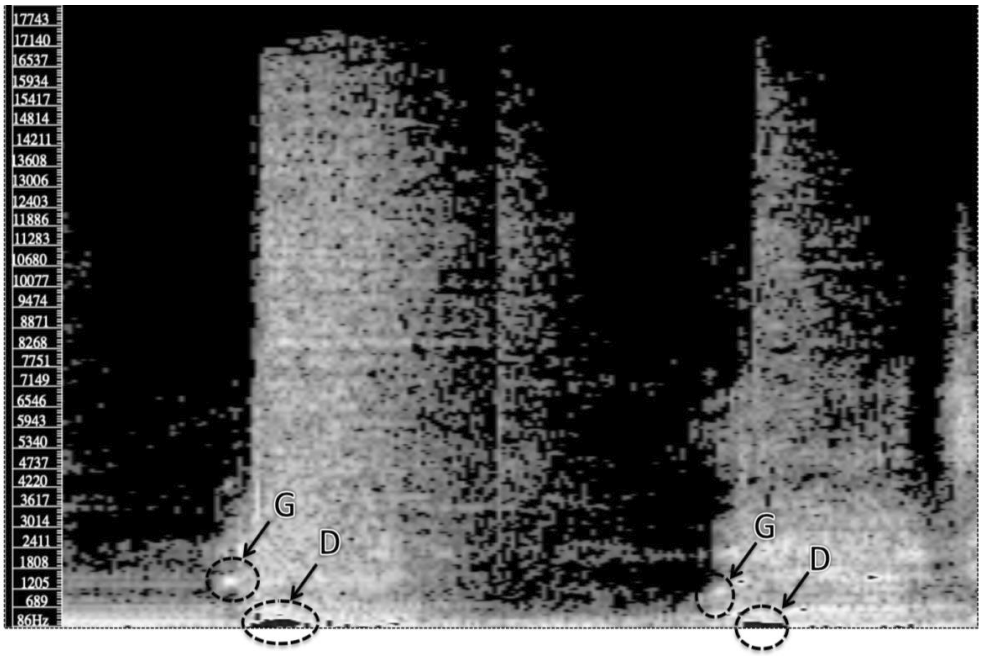


Figure 5.11. Spectrogram of "Rock and Roll Ain't Noise Pollution" [01:15–01:16]. The temporal dimension is depicted horizontally (moving from left to right). In accordance with the indicated frequencies (shown vertically to the left) and my listening observations, this figure implies that the drums (D) emerge appr. 30 milliseconds later than the guitars (G), thus constituting Participatory Discrepancies. (Note that in color the drum representation (D) is dark orange and not black, which would indicate silence, and is not to be confused with this.)

In Figure 5.11 (see above), a spectrogram of AC/DC's "Rock and Roll Ain't Noise Pollution" (*Back In Black*, 1980) aims to capture this phenomenon. The sample is from the location [01:15–00:16], from the first verse part of the song. Based on the indicated frequencies, and on my listening observations at normal and at eight times slower playback speed, I make the interpretation that the signals indicated by letter D represents the drums, and the signals indicated by letter G represents the guitars. According to this interpretation, the drums on the lower part of the figure appear on the right side, indicating that they emerge

later, compared to the guitars in the upper section, which appear on the left and thus occur earlier. The difference (IOI) is approximately 30 milliseconds. As a reference, a typical discrepancy between the bass and the ride cymbal in a jazz band is approximately 20 milliseconds (Butterfield 2010: 160). This interpretation of the spectrogram in Figure 5.11 supports my observation as a listener. The overall sound in the verse part is heavy and lazy. In addition to the whole band employing a laidback time-feel, the drums are especially dragging. This demonstrates the potential of careful manipulation of time-feel and participatory discrepancies that adds expressivity to a hard rock band's performance. Furthermore, in the intro of the song the snare drum on beats two and four is significantly laidback compared to the guitar [00:21–00:46].

The lazy effect of the drums being slightly more laidback than the rest of the band appears to be a reoccurring phenomenon in AC/DC. The preliminary phases of this study suggested that, for example, in the song "Jailbreak" (*'74 Jailbreak,* 1984), the hi-hat cymbal on beats two and four in the intro is laidback in relation to the guitar [00:08–00:19]. The snare (or other drums) emerge similarly on the backbeats in "T.N.T." (*High Voltage*, 1976) [01:21–01:49] and "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976) [02:43–02:57]. This "backbeat delay" is also a common phenomenon in African diasporic rhythm (Chor 2010: 50; see also Iyer 2002). It appears that the effect that this has on AC/DC's groove is that while the drums constitute a lazy element, they consequently make the guitars sound urgent, energetic, and aggressive, since the guitars are ahead of the drums. This is particularly true with the guitars' rushing upbeats, which are performed by utilizing an ahead of the beat -time feel, as the above study on "Hell Ain't a Bad Place to Be" showed. I suggest that it is these subtle divergencies between the layers of the band that produce the push and pull effect that producer Rick Rubin (see Bozza 2009: 87–88) describes as "the tension and release that drives the music". Other examples of the drums being more laidback than the guitars can be heard in "For Those About to Rock (We Salute You)" (*For Those About to Rock (We Salute You)*, 1981), "Back in Black" and "Hell's Bells" (*Back in Black*, 1980). This effect can be detected by listening to AC/DC's recordings with different drummers from 1983 through 1993. Especially the albums *The Razors Edge* (1990) and *Live* (1992) sound drastically different as they feature drummer Chris Slade, whose time-feel is not laidback in relation to the other instruments. The period of Phil Rudd's absence from AC/DC has been criticized, for example, by Slash (Bozza 2009: 63–64).

In sum, the above results suggest that the groove of AC/DC encompasses a broad range of artistic characteristics, which is the net effect of micro-rhythmic expression on multiple layers of the band. Fundamentally, cohesive timing constructs their tightness. On top of this, different manners of phrasing importantly contribute to their variety of grooves. Additionally, the functions and micro-rhythmic relationships of the individual instruments create a sonic totality that offers a many-faceted range of expressions. Consequently, this constitutes a pleasurable friction between contrasting elements – tension/release, aggression/calmness, and "ac/dc". In addition to the band's unmistakable achievements in, for example, songwriting, I suggest that this is a highly potential candidate for explaining

why the seemingly one-sided music of AC/DC has for many decades persistently produced aesthetic pleasure for a multitude of listeners globally.

Besides AC/DC, I discuss a few analyses that I made by ear. In future studies it would be interesting to gather more detailed data on them as well. Black Sabbath's song "Sabbath Bloody Sabbath" (*Sabbath Bloody Sabbath*, 1973) exemplifies the effects of time-feel and participatory discrepancies, and therefore I utilize it pedagogically in Chapter 7. I suggest that one factor that causes the overall heavy sound is that the drums are apparently more laidback than the rest of the instruments [e.g., 01:11–01:25]. Again, comparing two versions of the same song offers invaluable illumination of this phenomenon. A live version on Ozzy Osbourne's (1982) album *Speak of The Devil* contains this laidback time-feel and participatory discrepancies to a noticeably lesser degree [e.g., 01:11–01:25]. Consequently, the live version does not sound as heavy as the original studio version and, instead, causes a lighter and more forward moving effect. It must be noted that other factors contribute as well; the tempo is faster, the drums are orchestrated differently, the timbral qualities are different, and the key is higher in pitch. Nevertheless, the micro-rhythmic elements appear to be significantly different in these two versions.

Furthermore, I propose The Police's song "Next to You" (*Outlandos d'Amour*, 1978) as a prime example of time-feel and participatory discrepancies, although in the opposite way compared to the above examples. The band sounds hectic, and I suggest that they create this effect by employing an ahead of the beat -time-feel. Additionally, the drums, and especially the hi-hat cymbal [00:13–00:22], appear to be ahead of the rest of the band, which most likely produces the energetic impression. A similarly driving time-feel can be heard on performances by The Hives, for example, on the songs "Die, All Right!" and "A Get Together to Tear it Apart" (*Veni Vidi Vicious*, 2000).

In conclusion, time-feels and participatory discrepancies enhance expressivity in all of the musical examples above. Therefore, they have the potential to contribute to the creation of different grooves. In line with Butterfield's (2010) study on jazz, I suggest that time-feels and participatory discrepancies are musical effects that add characteristics to hard rock, although they may not be the most central, let alone only, sources of groove.

5.1.6 A Horizontal Application: A Piece's Dramaturgical Arc

In my experience as a performer and a pedagogue, I have considered it important that groove can also be applied in an expressive way from a horizontal point of view. In other words, this perspective involves varying the groove over the structure of an entire musical piece. Therefore, this approach is different from focusing only on isolated segments, such as a riff, as I have done in the analyses above. Below, I discuss briefly how applying different grooves horizontally can provide versatility and enhance a song's dramaturgical arc. As my main point, I suggest that in a similar way as groove induces forward motion on the level of micro-

rhythm, variations of groove can also generate a forward-moving sensation on the macro level of rhythm, that is, within the duration of an entire piece (Wahlström 2015: 410).

This concept applies to Soundgarden's "Spoonman" (*Superunknown*, 1994). At first, the main riff and the verse part [e.g., 00:00–00:43] may be described as closed and stiff. In contrast, when the chorus part emerges [e.g., 00:43–00:53], it lifts and opens the whole piece, which creates a sensation of moving forward. I suggest that the grooves in the two parts are characteristically different, and that contrasting forms of phrasing are of key significance in this variation. I suggest that the song's main riff part [e.g., 00:00–00:43] sounds stiff because it employs even phrasing. I made this observation by listening to the accented sixteenth notes on the snare drum during the last downbeat of the riff. In contrast, the chorus part of the song [e.g., 00:43–00:53] sounds loose, as it implies Moderate Swing Phrasing in the sixteenth notes. This can be detected by listening to the sixteenth note syncopations on the snare drum [e.g., 00:47]. In the chorus, furthermore, a minute swing feel occurs with the guitar as well. This may be an unintentional result of employing legato technique (i.e., pull-offs). Nevertheless, it is a contrast to the main riff, which features more picking than legato and thus sounds stiffer. Consequently, the guitar's rather round and smooth phrasing in the chorus implies Moderate Swing Phrasing, which differs from the even phrasing of the verse part and the main riff. Realistically, there are also other factors that contribute to the forward effect of the chorus. For example, the chorus involves the drums shifting from the floor tom to the ride cymbal. Harmonically, the riff suggests a transition to the fourth chord degree (G), as opposed to the previous center of the first chord degree (D). Although several factors contribute to the forward motion as the chorus emerges, I suggest that the subtle transition from even phrasing to Implied Moderate Swing Phrasing enhances this effect. Moreover, I have stressed this variation in phrasing when I have taught this song in band workshops, and it has provided versatility to the students' performances from the perspective of the entirety of the piece.

Another example is Pantera's "Cowboys from Hell" (*Cowboys from Hell*, 1990). Albeit occasionally and not consistently, the main guitar riff delicately employs Moderate Swing Phrasing in the sixteenth notes [e.g., 00:15–00:32]. Although this looseness is very subtle, it contrasts with the more even and stiff-sounding phrasing that appears in the heavily syncopated guitar riff in the verse parts [00:34–01:08] (Wahlström 2015: 410).

When contrasting parts succeed each other within a song's structure, even the syntactical elements (i.e., those that can be notated; see Butterfield 2011) create variation, obviously. The above examples suggest that performers further enhance this variation by adjusting the sub-syntactical components of groove (i.e., which transcend notation, e.g., micro-rhythm; see Butterfield 2011) for each part individually. Over the course of an entire song, each part's syntactical elements apparently inspire performers to employ certain expressive manners, at least intuitively.

5.1.7 Discussion of Hard Rock Groove

In conclusion, groove is a many-faceted phenomenon, which is essentially the product of a plurality of sources (e.g., Butterfield 2011: 24). As Butterfield (2010: 173) has stated concerning jazz: "It seems a mistake to imagine that a phenomenon as complex, mysterious, and intractable as swing can be explained by any one process". The above analysis of the various components of groove suggests that first, at least in hard rock, an important foundation for groove is the cohesiveness that consistent timing within a band can engender. Other components of groove, which at least include dynamics, phrasing, time-feel, and participatory discrepancies, are essential tools that performers can utilize in various ways in order to create *different* grooves. For example, Implied Moderate Swing Phrasing among seemingly even phrasing offers an understanding of certain vibrant grooves in AC/DC and hard rock. The utilization of these artistic devices is, furthermore, affected by a song's structural elements. However, according to Danielsen (2006: 140): "The 'recipe' of the analysis can never create a groove". In other words, the cliché "to be more than the sum of its parts" applies to groove. Since groove is, fundamentally, a feeling that transcends all-encompassing analysis, even an element of mystery remains an often-mentioned aspect of groove studies (see Danielsen 2006: 140; Butterfield 2010: 173).

The question of whether performers utilize the above components of hard rock groove consciously or intuitively deserves a comment. Given the scarcity of music analytical comments from rock musicians, it may be assumed that they largely create groove without being conscious of the subtle devices that they employ. This, however, remains unclear. Danielsen (2006: 192) describes the mindset of funk performers and argues that being immersed in creating a groove requires plunging into a "total presence in in the groove". According to Danielsen (2006: 160), performing a repetitive funk groove, paradoxically, is not merely repeating, as it involves continuous micro-rhythmical reworking in order to "nail the rhythm" and alertly striving for musical intensity (for further reading, see Danielsen 2006: 141–218). Regardless of how much of this micro-rhythmical reworking is a conscious process, the above analyses show that performers utilize the components of groove consistently and not randomly. This may, nevertheless, happen intuitively, meaning that the performers aim for "that certain sound" (see Berliner 1994: 351) and instinctively adjust their playing until it feels right. They have most likely acquired such auditory imagery (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) of the desired sound through implicit learning, as they have listened intensively to recordings of their predecessors (see Subchapter 2.2).

Most importantly, this entire study aims at developing popular music pedagogical practices. If music students can improve their ability to groove by practicing exercises that align with the above music analysis, it would be fair to consider it less important whether or not the original performers utilized the same means consciously or intuitively. More specifically, my emphasis in this study is on exploring how musical expertise – which this analysis of groove aims to exemplify – can be applied to student-centered pedagogy. In practice, this

means that as a pedagogue I do not force my guitar students to exhaustively concentrate on, for example, AC/DC, if it is not to their liking. In other words, I fundamentally suggest that *advanced musical expertise does not necessarily impel a teacher-directed pedagogy*. Rather, my main interest is how such musically ambitious expert knowledge can be applied to teaching the individual students' favorite music. The above findings can most certainly be applied to a variety of music outside AC/DC or hard rock. Therefore, in Chapter 7 I will explore how the above research results pertaining to groove can serve to improve guitar students' abilities to perform repertoire that they choose themselves and that they consider personally meaningful.

5.2 Other Musical Focuses

To conduct a broader exploration of the Student-Centered Musical Expertise (SCME) approach, I also explore other musical application fields than groove in this study. According to my experience, these musical focuses are common in guitar instrumental education, and consequently they appeared in the lessons that I documented on video. Therefore, it would also be a shame not to utilize these aspects of electric guitar pedagogy in this study. In terms of delimitation, I do not endeavor to construct a comprehensive exploration of any of the following musical focuses. Rather, the object in this subchapter is to map out these matters only to the extent that it is necessary for reading the music pedagogical analysis in Chapter 8. For example, improvisation has been studied extensively elsewhere,[31] and therefore only a delineation of the approaches that appear in Subchapter 8.2 is needed here. I discuss all the musical focuses below with this delimitation. In the future, many of these aspects of music pedagogy would offer interesting topics for further studies.

5.2.1 Learning Musical Fundamentals through Transcription

In the pedagogical analysis in Chapter 8.1, I explore learning transcription, fundamental chords, and basic instrumental technique through student-selected repertoire. Collectively, I address these features as "musical fundamentals" in Chapter 8.1.

As I discussed in Subchapter 2.2.2, transcribing, or copying by ear, is a common practice in learning popular music (see e.g., Green 2008: 7–8; 2002: 38). Through transcription, a guitar student develops fundamental skills such as aural recognition of musical structures; for example, chords. Chords are an example of the "applicable musical concepts" that I discussed in Subchapter 4.2.1. This means that as students proceed, they can apply the chords that they have learned to a variety of new repertoires. As I described in Subchapter 4.2.1, with the Inductive SCME approach a student learns his or her favorite songs and through that process discovers such applicable musical concepts. Relating this to a good relationship

[31] I refer to the essential literature below, in Subchapter 5.2.3.

with music, which I explored in Chapter 3, my pedagogical aim is then that the new musical concepts that the student learns by transcribing personally favored songs would acquire a special subjective meaning for the students. From a student's perspective, new chords, for example, then remain associated with personally meaningful and emotion-driven repertoire, as opposed to being learned as emotionally distant technical requirements. For example, for a black metal-oriented student, a minor triad may become "the Dimmu Borgir chord" when he or she discovers it through the music of symphonic black metal band Dimmu Borgir (see e.g., "The Chosen Legacy", [00:46–00:53], *In Sorte Diaboli,* 2007). According to my observations of my students over the years, I argue that the results of this approach can be immensely more inspiring than learning chords from a textbook.

Therefore, in exploring the video-documented guitar lessons in this study, Subchapter 8.1 includes an analysis of a lesson wherein a student and I together transcribed a song that the student suggested. One beneficial technique of transcription is pausing the record immediately after a particular chord or tone that one is listening for. "The last thing you hear, stays in your ear", as advised in JustinGuitar's (2021) online tutorial on transcription (see also Heikkilä & Halkosalmi 2013b [2005]: 7). In Subchapter 8.1, I utilize this technique as I guide a student towards independent transcribing. We transcribe harmony by listening to a chord's bass note, the chord type (e.g., a major or minor triad, or a root/fifth power chord), and a chord's top note.

5.2.2 Guitar Instrumental Skills: Fretboard Knowledge and Techniques

The pedagogical material in Chapter 8 focuses on guitar instrumental skills in two ways. On one hand, it includes learning the fretboard, and on the other hand it addresses guitar playing technique in a motoric sense. In essence, the former involves knowledge of tones, scales, chords, and arpeggios on the guitar neck. This is obviously crucial in improvisation. For example, Mick Goodrick's (1987) book The Advancing Guitarist concentrates on learning guitar skills from this perspective (e.g., see pp. 27–33). Below, figures 5.12a and 5.12b illustrate two complementary approaches to practicing scales on the fretboard. They display the C major scale, firstly from the perspective of position playing (Fig. 5.12a), and secondly from a lateral view of the guitar neck, where each string may be practiced separately (Fig. 5.12b).

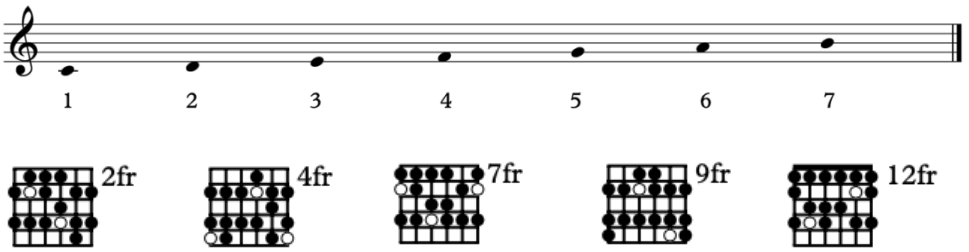


Figure 5.12a. On top: the C major scale and its intervallic structure as numbers beneath the staff. Below: five positions of the C major scale.

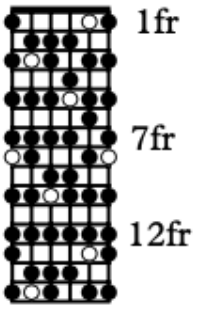


Figure 5.12b. The C major scale with a lateral view of the fretboard. Each root note (C) is indicated with white circles.

Figure 5.13 (below) displays a few examples of frequent guitar techniques in terms of motoric, physical ability. Figure 5.13a shows an exercise in alternate picking (i.e., consistently alternating downstrokes and upstrokes) from Paul Gilbert's (1988) landmark instructional video *Intense Rock* [04:10–05:30]. Next, Figure 5.13b shows legato technique (i.e., in this example, only the downbeats are picked, followed by hammer-ons when ascending and pull-offs when descending). Figure 5.13b is similar to Yngwie J. Malmsteen's (1995) demonstration in his instructional video *Play Loud!* [06:56–08:56]. Outside of pedagogical materials, Joe Satriani employs advanced legato technique, for example, on "Ice 9" [1:19–1:32] (*Surfing with the Alien*, 1987) and "Flying in a Blue Dream" [2:33–2:37] (*Flying in a Blue Dream,* 1989). Lastly, Figure 5.13c displays an example of the technical control of a broad range of dynamics that Jeff Beck performs on "'Cause We've Ended as Lovers" [01:02–01:12] (*Blow by Blow*, 1975).

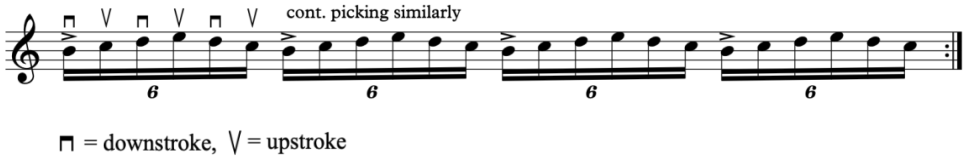


Figure 5.13a (above). Alternate picking technique. Exercise from Paul Gilbert's instructional video "Intense Rock" (1988) [04:10–05:30].

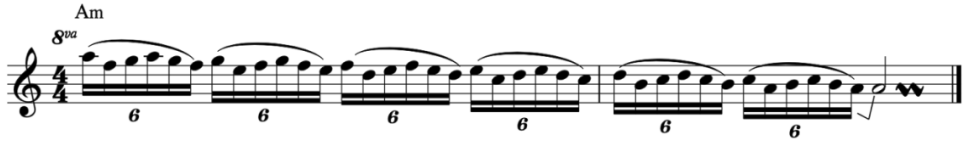


Figure 5.13b. Legato technique. Yngwie J. Malmsteen demonstrates similar sequences as this A aeolian line in his instructional video "Play Loud!, The 1st Movement" (1995) [06:56–08:56].

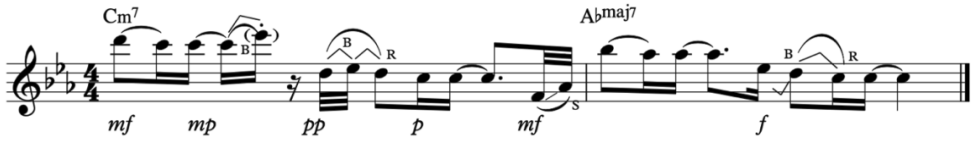


Figure 5.13c. Control of dynamics. Excerpt from Jeff Beck's "'Cause We've Ended as Lovers" (Blow by Blow, 1975) [01:02–01:12]. The dynamics are indicated below the staff, ranging from pp (pianissimo, i.e., very softly) to f (forte, i.e., loudly).

In Chapter 8, I explore teaching technical skills, such as the ones above, by employing student-selected repertoire. This involves learning scales on the guitar fretboard in order to facilitate improvisation in student-selected songs. I also explore personalizing technical exercises and applying them to students' favorite music. My pedagogical intention is then to engage students' Intrinsic Triumvirate of Learning Music, which I presented in Subchapter 4.3. In practice, my aim with this approach is that the students' need to learn the technical skills stems from their desire to be able to play music that is meaningful for them (see e.g., Subchapter 2.2.4; Chapter 3).

5.2.3 Practicing Improvisation: Imitation – Assimilation – Innovation

Among the classic theory books on jazz improvisation are Mark Levine's *The Jazz Piano Book* (1989) and *The Jazz Theory Book* (1995). Other learning resources include, for example, Derek Baileys' (1993 [1980]) *Improvisation: Its Nature and Practice in Music* and Robert Rawlins' and Nor Eddine Bahha's (2005) *Jazzology: The Encyclopedia of Jazz Theory for All Musicians*. In music pedagogical studies, improvisation has been research by, amongst others, David Ake (2003), Kenneth E. Prouty (2008), Eitan Y. Wilf (2014), Ed

Sarath (2018), Guro Gravem Johansen, Kari Holdhus, Christina Larsson and Una MacGlone (eds 2019), and Eeva Siljamäki and Panagiotis A. Kanellopoulos (2020 [2019]).

Furthermore, Kenny Werner's (1996) book *Effortless Mastery* relates to this study's emphasis on a good relationship with music and, for example, Carl Rogers' (1983: 52) focus on self-actualization in learning. Werner approaches improvisation by stating that "there are no wrong notes" (Werner 1996: 87; 87–92) and encourages his readers to search for an "inner space" (Ibid.: 6; 77–85) that involves fearlessness, freedom of musical expression, and personal potential. This could be related to Donald W. Winnicott's theories of potential space (Winnicott 1971: 15) and true self (Winnicott 1965 [1960]), as well as Kari Kurkela's (1993: 352) musical application of Winnicott's concepts, which I explored in Chapter 3.

Most importantly, in Subchapter 8.2, I apply a popular practicing method that is often credited to jazz trumpeter Clark Terry (1920–2015) to my pedagogy. This approach is simply called *imitation, assimilation, and innovation,* as it consists of those three sequential phases of practicing (O' Donnell 2011; see also Berliner 1994: 120–145). David Liebman's (1991, 2015) concept of *The Complete Transcription Process* is essentially similar to this approach. I discuss Terry's approach below.

At the first stage of this process, imitation, a learner transcribes a solo and practices it identically to the original recording (O' Donnell 2011). In other words, this phase exemplifies the aural and informal learning practice of copying more experienced performers (see Subchapter 2.2.2; Green 2002: 4–5; see also Berliner 1994: 105 and Wilf 2014: 44). Relating this to the comparison between learning a language and learning music (see Subchapter 2.2.2), this phase of imitation bears resemblance to learning new vocabulary.

In the second phase, assimilation, a learner incorporates the transcribed solo into his or her musical conception (O' Donnell 2011). This involves theoretical analysis, as well as practicing fragments of the solo in various ways, for example transposing phrases to different keys (Ibid.). This theoretical analysis can focus on, for example, scales that are employed in the solo, note choices in relation to the underlying harmony, rhythmical motifs, patterns, or the overall structure of the solo (see e.g., Gress 1992 [1990]; Charupakorn 2010). Employing the above metaphor of learning a language, this phase of assimilation can be likened to studying the grammatical construction of phrases and expressions as well as utilizing them as such.

In the third phase, innovation, a learner varies the musical phrases that he or she has already imitated and assimilated (O' Donnell 2011). Such elaboration of the musical vocabulary is a primary form of improvisation. Berliner (1994: 142) describes a similar development from imitation and assimilation to innovation: "To discover their own applications for model phrases, musicians commonly analyze a phrase for its central elements, focusing on one derived principle as the basis for creating new analogous patterns".

Below, Figures 5.14a–e illustrate the imitation–assimilation–innovation approach by employing Slash's solo on Guns N' Roses' "Sweet Child O' Mine" (*Appetite for Destruction*, 1987) as an example. Figure 5.14a (see below) shows an excerpt of the original recording [04:23–04:27]. This phrase is in the key of E minor, and it employs the E minor pentatonic scale (E, G, A, B, D; note that the original recording is tuned down a ½ step). In essence, it is a one-measure phrase that is repeated. In this analysis, I further divide this phrase into two motifs (see Figure 5.14a). Figures 5.14b–e are examples of variations that I have written. In Figure 5.14b, the pitches are identical as in the original, but rhythmical variation is created by first expanding and then condensing motifs 1 and 2. In Figure 5.14c, the melodic material is condensed to shorter time values and varied poly-rhythmically before retaining the original. As an example of melodic variation, Figure 5.14d presents two alternate endings to the phrase by employing the same scale as in the original recording (E minor pentatonic). The first variation of motif 1 descends, while the second variation ascends. Figure 5.14e is the most different from the original phrase, as it varies both the rhythmic and the melodic material. The first two measures retain the original rhythm but employ a different scale than in the original, the E dorian mode (E, F#, G A, B, C#, D). The last two measures apply motif 2 to construct a sequence and, consequently, a poly-rhythmical variation.

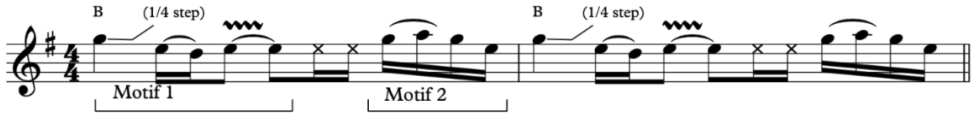


Figure 5.14a. Excerpt from Slash's guitar solo in Guns N' Roses "Sweet Child 'O Mine" (1987) [04:23–04:27]. (Note that the original recording is tuned a ½ step down.)

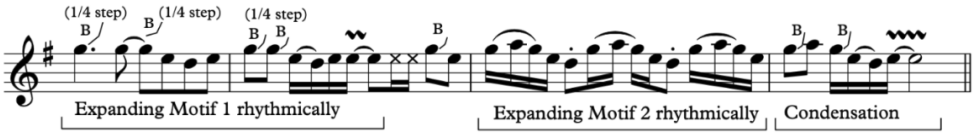


Figure 5.14b. Rhythmical variation. Expansion and condensation.

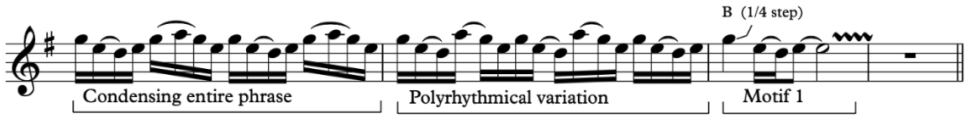


Figure 5.14c. Rhythmical variation. Condensation and polyrhythms.

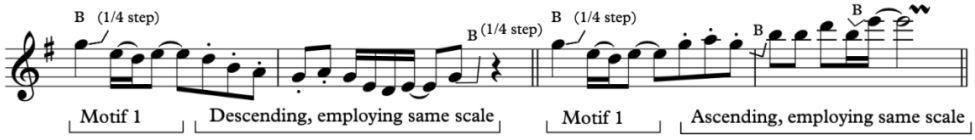


Figure 5.14d. Melodic variation by employing the same scale as in the original.

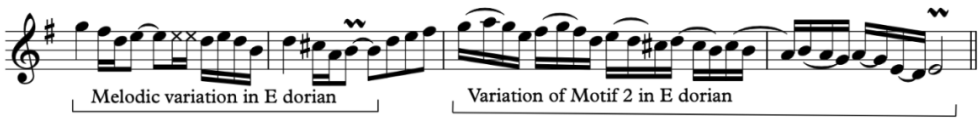


Figure 5.14e. Melodic variation by applying the phrase to a different scale.

The above variations increasingly take distance from the original solo transcription. Especially when a learner utilizes them over different songs, he or she clearly moves away from the original transcription of "Sweet Child O' Mine". Working in this way, a learner's performance may grow into improvisation that is personal and thus different than copying, although it is built on influences taken from preceding artists. Berliner (1994: 142) describes the development from copying to creativity as follows: "The most elaborate changes commonly occur when students deliberately vary phrases learned from their mentors by adding personal marks to them, in a sense legitimating their use".

The method I used to apply the SCME approach in this study was for students to transcribe personally favored solos. I, as the pedagogue, guided them in the music analysis and innovation process. By utilizing a student-selected repertoire and the students' prior musical knowledge, this interactive process is essentially an actualization of constructivist learning (see Subchapter 2.1; Hytönen 1998 [1992]: 22; Tynjälä 1999: 365; Hoidn 2017: 21). Furthermore, the imagination of the learner is the only limit for such innovations, and the solos available to be transcribed can, obviously, never come to an end. Therefore, this approach is suitable for life-long learning, which is widely regarded as a goal of student-centered pedagogy (see Subchapter 2.1; Weimer 2002: 49–50; Doyle 2008: 10).

5.2.4 Stylistic Versatility: Horizontal and Vertical Improvisation

In Subchapter 8.4, I explore the learning process of a rock/blues-oriented student who expressed an interest in stylistic versatility and wanted to learn the basics of jazz. With a student-centered approach and an aim for empathy (cf. Hendricks 2018), I endeavored to *perceive jazz from the perspective of the student's background in blues/rock* (cf. Subchapter 2.1.1; EUA 2019; McCombs 2008: 2). This brought up the following discussion on horizontal and vertical approaches to improvisation.

Below, Figure 5.15a shows a II–V–I chord progression (in C: Dm7–G7–Cmaj7). The guide tone lines (3rds and 7ths of each chord; see e.g., Levine 1995: 22) appear in the upper staff. As I discuss below, I employ the middle line (F–F–E; see Figure 5.15a) as an essential pedagogical tool in introducing jazz improvisation to a blues/rock -oriented student in Subchapter 8.4.

Figures 5.15b and 5.15c, respectively, illustrate the vertical and horizontal approaches to the II–V–I progression. Berliner (1994: 128) describes a vertical view as "emphasizing chord arpeggiations and interpreting a chord progression's individual chords faithfully,

‘articulating each chord that comes up’ with selected pitches”. A vertical concept in improvisation is known as chord/scales (see Figure 5.15b), where an improviser employs a corresponding scale for each chord individually (see e.g., Levine 1989: 60; Levine 1995: 31–94). In the II–V–I progression in C major, a vertical approach would involve D dorian, G mixolydian, and C ionian, for example. The V chord (in this example, G7) in particular offers a multitude of chord/scale options. Figure 5.15b shows two common possibilities, G mixolydian and G altered.

In contrast, an example of a horizontal approach is that an improviser employs a single scale that corresponds to the tonal center (i.e., the tonality, the key) of an entire chord progression. Figure 5.15c depicts this, as the C major scale is employed over the entire II–V–I chord progression. Therefore, a horizontal approach is “less concerned with describing each chord and incorporating the features of chord changes in the formulation of melodies, although it does rely on progression as a general guide” (Berliner 1994: 128). According to Berliner (1994: 128), the result of a horizontal approach is “ambiguous or neutral” in comparison to a vertical approach.

Berliner (1994: 128) adds that mixing both approaches is a common practice for jazz musicians. For example, in Figure 5.15c, within the C major scale, the F–E movement is played when going from G7 to Cmaj7, which resolves the 7th of the V chord to the 3rd of the I chord. Thus, an improviser may think horizontally and employ the C major scale over the entire progression, and still articulate the chord changes by performing the F–E resolution. In Subchapter 8.4, I explore this approach as a starting point for a rock/blues player who wants to learn jazz improvisation. After the following notated examples, I discuss why I suggest this mixed approach as an important tool in student-centered pedagogy of jazz improvisation for rock/blues-oriented learners. (For further reading, see Berliner 1994: 128–129, 197, 250, 277, 544; Levine 1989, 1995; Rawlins & Bahha 2005).

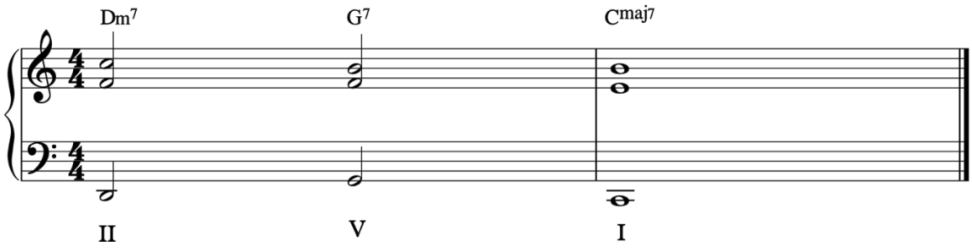


Figure 5.15a. A II–V–I chord progression in C. The guide tone lines (3rds and 7ths of each chord; see e.g., Levine 1995: 22) appear in the upper staff.

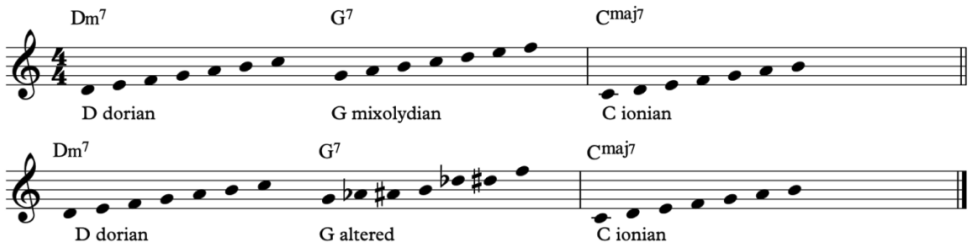


Figure 5.15b. A vertical view of improvisation: chord/scales. Each chord is approached with a corresponding scale.

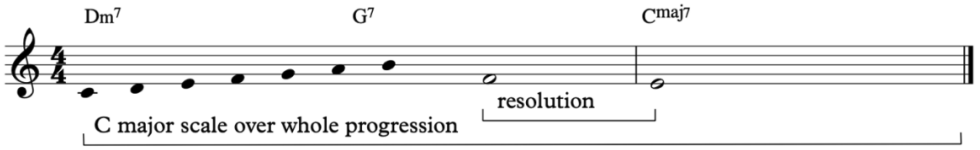


Figure 5.15c. A horizontal view of improvisation. The C major scale is employed over the entire II–V–I chord progression.

According to my experience, blues/rock-performers utilize horizontal improvisation more than the vertical approach (cf. Gress 1992 [1990]). This is different from most approaches to jazz improvisation. Over an entire 12-bar blues progression, a blues/rock -guitarist typically employs a scale (or scales) starting from the tonic (see e.g., Gress 1992 [1990]). For example, the chords in a standard blues progression in C are C7, F7, and G7 (see Figure 5.16 below). In the styles of, for only a few examples, Gary Moore, Jimi Hendrix, Stevie Ray Vaughan, and Eric Clapton, a common approach is to employ the following C-rooted scales over the entire progression: C minor pentatonic, C major pentatonic, and/or the C blues scale (see Figure 5.16 below). As the chords change, a soloist may emphasize the current chord tones, but each chord is rarely addressed with an individual scale. Out of innumerable examples, this approach can be heard in Eric Clapton's performances in "Hideaway" and "Stepping Out" (both on Mayall's *Blues Breakers with Eric Clapton*, 1966).

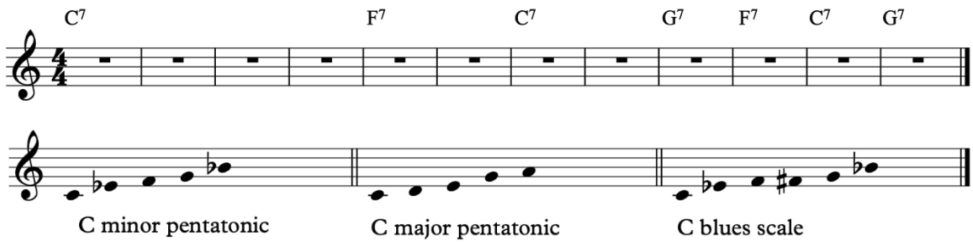


Figure 5.16. Above: a standard 12-bar blues progression in C. Below: three common scale options for the entire progression in a horizontal approach to improvisation.

My personal experiences as both a student and pedagogue suggest that the difference between the horizontal and vertical approaches has received insufficient attention in popular

music instrumental education to date. I presume that it is an important reason for rock- and blues-oriented learners' common difficulties in accessing jazz. Therefore, I suggest the following practice, where verticality is approached gradually, through a mix of verticality and horizontality as I mentioned above.

Initially, this means applying the horizontal approach of a blues/rock performer to tonal jazz harmony. A blues/rock -guitarist may first approach a II–V–I chord progression (e.g., Dm7–G7–Cmaj7; see Figure 5.15a) with the scale starting from the tonic, a C-major scale. The consequent learning goal would be, while employing the C-major scale, to imply the tension and release between G7 and Cmaj7 by emphasizing the movement of the tones F–E (see Figure 5.15c, "resolution"). However, from a rock/blues guitarist's perspective, this may be easier to conceive as a movement from the fourth note (F) to the third note (E) of the C-major scale. This notion is based on my pedagogical experience, which implies that rock/blues guitarists are more familiar with a horizontal scalar way of thinking than a vertical focus on chord tones. By utilizing such a mix of verticality and horizontality, a pedagogue can gradually lead the learner towards an entirely vertical approach. This follows the constructivist thought of connecting new knowledge to prior knowledge (see Subchapter 2.1.2; Hytönen 1998 [1992]: 22; Tynjälä 1999: 365; Hoidn 2017: 21). According to my experience, the vertical chord/scales D dorian–G mixolydian–C ionian, let alone D dorian–G altered–C ionian (see Figure 5.15b) can be an intimidating and demotivating starting point for a learner with a rock/blues background. Instead, I presume that gradually approaching verticality promotes an experience of success, which in turn supports a good relationship with music (see Chapter 3; cf. Kurkela 1993: 464–466; Björk 2016). This way of expanding stylistic versatility by indicating differences and similarities between a student's favorite music and an unfamiliar genre is an example of the Relative SCME approach (see Subchapter 4.2.1). I explore the actualization of this approach in Subchapter 8.4.

6 The Research Setting: Methodological Outlines and Conduct of the Study

The two basic approaches that I employ in my popular music pedagogical study that deal with actual instrumental guitar lessons are Design-Based Research and Video-Stimulated Recall interviewing. The former has been considered a research approach rather than a methodology (e.g., Herrington et al. 2007), and it functions as the general frame of this study. The latter is my method of gathering and handling the research data.

First, a few words about how these approaches connect to the epistemological entirety of this study. As established in Subchapter 1.3, this pedagogical study resides in qualitative research (see Stake 2010: 11). As I have discussed, reflexive interpretation functions as a meta-methodology of this study (see Subchapter 1.3.1; see Alvesson & Sköldberg 2018 [2000]). Under this umbrella, Design-Based Research, which means studying the utilization of the Student-Centered Musical Expertise (SCME) pedagogical design, belongs to the paradigm of critical theory, as I mentioned in the introduction of Chapter 4. Furthermore, video-documenting the lessons employs an empiricist, data-driven approach, as I work with raw pedagogical data (see Alvesson & Sköldberg 2018 [2000]: 68–114). In addition to my own analysis of the videoed pedagogical events, I included the research participants as informants by interviewing them through the Video-Stimulated Recall method. This inclusion of multiple voices in interpretation forms another layer in the knowledge construction of this study: the postmodern, polyphony-driven paradigm, which opposes the idea that a researcher is the sole authority in interpretation (see Alvesson & Sköldberg 2018 [2000]: 262, 264). In this chapter, I first investigate the Design-Based Research and Video-Stimulated Recall approaches in order to explicate my methodological decisions in further detail. Thereafter, I describe the conduct of this study. Finally, I discuss the reliability of this research setting.

6.1 Applying Design-Based Research

Design-Based Research (henceforth DBR, as in e.g., Barab 2014; also known as design research as in Edelson 2002, and other similar terms) is a methodology in the learning sciences that Sasha Barab, one of DBR's prominent developers, characterizes as "a collection of approaches that involve a commitment to studying activity in naturalistic settings, with a goal of advancing theory while at the same time directly impacting practice" (Barab 2014: 151). Researchers who employ DBR realize this twofold purpose of developing both practice and theory by designing pedagogical models, commonly referred to as *interventions*. In practice, researchers study the utilization of interventions systematically and refine them iteratively in order to yield authentic and useful knowledge (van den Akker 1999; Barab & Squire 2004: 6, 8; Plomp 2013: 11, 15, 16; Christensen &

West 2018; Armstrong et al. 2020). In the present study, the Student-Centered Musical Expertise (SCME) approach (see Chapter 4) functions as such an intervention.

According to the Design-Based Research Collective (2003), a widely recognized problem is that educational research is "often divorced from the problems and issues of everyday practice". Because of this aim to bridge the gap between theory and practice, DBR appears appropriate for researching student-centeredness, which remains weakly actualized despite extensive literature (see Estes 2004; Hoidn 2017: 23; EUA 2019), as I discussed in Subchapter 2.1. Even historically, DBR was first introduced by educational psychologist Ann Brown (1992) and cognitive scientist and educationalist Allan Collins (1990, 1992) for researching and designing pedagogical practices in real-life settings (Barab 2014: 154). They were among the researchers who argued that pedagogical research that is conducted in controlled, experimental settings fails to develop classroom teaching in practice (Armstrong et al. 2020). Therefore, DBR is by definition conducted in naturalistic environments, and it essentially directs its interest towards the multiple interacting variables in a real-world learning situation, instead of cutting them away as in a positivist, laboratory-like approach (Barab 2014). By doing so, DBR endeavors to facilitate the reconstruction and practical implementation of novel pedagogical designs (Design-Based Research Collective 2003; Barab 2014). The contextualized nature of this methodology aligns with the notion that student-centeredness is a context-sensitive matter (EUA 2019) that requires further domain-specific research (Hoidn 2017; see Subchapter 2.1).

In essence, DBR situates researchers as agents of change (Armstrong et al. 2020; see also, e.g., Collins 1990; van den Akker 1999; Barab & Squire 2004; Reeves 2006). By exploring the SCME approach as an intervention, the purpose of my study is to apply this endeavor to the context of popular music. Since I research how popular music pedagogy could be developed instead of how it is currently actualized, my point of departure is opposed to other research methods (e.g., surveys, statistical analyses, or observing the actions of other instructors) whose focus is mainly on investigating the existing state of affairs without the researcher changing it. Therefore, my focus is also aligned with the field of practitioner research, where teacher research aims to develop new practices (see Rikandi 2012: 51; for further reading, see Cochran-Smith & Lytle 2009). Furthermore, DBR is not a unidirectional methodology; the students who participate in the research are commonly considered collaborators (Barab & Squire 2004; Armstrong et al 2020). Certainly, viewing learners as informants appears crucial in exploring student-centered pedagogy.

In terms of aims, DBR strives for generalizable results by promoting the learning of the research participants locally (Barab 2014: 162), which corresponds to practitioner research (see Cochran–Smith & Lytle 2009; Rikandi 2012: 51–52). As described by Barab (2014: 153), a well-conducted DBR study can constitute "petite generalizations" (for further reading, see Stake 1995), which means that a design narrative provides other pedagogues with insights into their own work. Another closely related concept is known as "storied truths", which aim to reveal the underlying mechanisms that constitute a desired change in

learning (Barab 2014: 162, 152; for further reading, see Gee 2013). This concept suggests that a researcher in DBR essentially considers all of the naturalistic components of a pedagogical situation through narratives, which are called storied truths. In music educational research, this corresponds to the concept of narrative inquiry, which has been employed by Margaret S. Barret and Sandy L. Stauffer (2009), for example. In further detail, Barab (2014: 158–159) emphasizes a distinction between outputs and outcomes. He summarizes outputs as "direct and tangible products from activity" and outcomes as "more lasting changes that occur over time following an intervention" (Barab 2014: 158–159). In this study, the output that I endeavored to produce is that the guitar students who participated in this research improved their skills in groove and the other musical focuses (i.e., musical fundamentals, improvisation, technical skills, and stylistic versatility) while they also attained or maintained a good relationship with music (see Chapter 3). In the long-term perspective, the desirable outcomes of this study are that the SCME approach would offer an applicable tool for popular music education and that it would suggest a solution to the deficient realization of student-centered pedagogy (see Estes 2004; Hoidn 2017: 23; EUA 2019).

6.1.1 The Iterative Nature of Design-Based Research and its Applications

A "hallmark of DBR" (Armstrong et al. 2020) is the fundamental idea that informed experts refine practices (Barab & Squire 2004) through repeated cycles of analysis, design, evaluation, and revision (Plomp 2013: 17). However, "DBR is not a fixed 'cookbook' method", as argued by Barab (2014: 151); it is flexible, as it comprises a collection of approaches that actualize the same principles in various ways (see also Barab & Squire 2004). As summarized by Kimberly Christensen and Richard E. West (2018), for example, Collins' (1990) DBR process model consists of 10 steps, whereas Thomas C. Reeves (2006) employs only four steps, and Terry Anderson and Julie Shattuck (2012) present an aggregate model based on earlier research. Despite such differences, the core processes are the same in all DBR studies (McKenney & Reeves 2012). According to Tjeerd Plomp (2010 [2007]: 15), for instance, all researchers agree that DBR processes encompass the three steps of preliminary research, a prototyping phase, and an assessment phase.

In the first phase of a DBR study, a pedagogical problem is identified and analyzed and literature is reviewed with the purpose of constituting the frequently discussed "informed explorations" (e.g., Christensen & West 2018). Thus, a pedagogical design is produced, and is then tested and adjusted through several iterations, also known as design cycles, in the prototyping phase. Next, the results are evaluated and typically further improved in the assessment phase (Plomp 2010 [2007]: 15). As argued by the Design-Based Research Collective (2003), the distinction between the different phases may often be diffuse. Throughout this process, nevertheless, researchers perform systematic reflection and documentation (Plomp 2010 [2007]: 15).

As noted by Janice A. Herrington et al. (2007) and Wendy Goff and Seyum Getenet (2017), DBR is a long-term approach for intense educational research, as it consists of multiple cycles and continuous refinement. Therefore, DBR has previously been considered an unsuitable methodology for doctoral studies, as their typical time span of approximately five years is not sufficient for several iterations to be carried out (see Herrington et al. 2007; Anderson & Shuttock 2012; Goff & Getenet 2017). However, researchers have also proposed practical solutions to this problem. Among them, Herrington et al. (2007), Jessica Pool and Dorothy Laubscher (2016), and Goff and Getenet (2017) have suggested alternative applications, and as a result they conclude that DBR is recommendable even for doctoral research. In practice, Herrington et al. (2007) suggest models where the phases of DBR are condensed to the temporal scope of a doctoral research, and Pool and Laubscher (2016) emphasize dividing the long-term macro-cycles into shorter meso-cycles and micro-cycles. Goff and Getenet (2017) present an idea of doctoral studies concentrating only on the preliminary stages of a DBR process, "by developing a set of draft principles that could be further refined, tested, and built upon post-candidature". Consequently, Anderson and Shuttock (2012) report that studies that concentrate only on a selected phase of an extensive DBR project are not unusual. One such application that Anderson and Shuttock (2012) mention is to explore only the final stage of a DBR project. Below, I explicate how I apply this methodological solution in the present study.

6.1.2 Previous Phases Leading to the Present Study

In line with Anderson and Shuttock's (2012) aforementioned report, this study concentrates on one final phase of a longer pedagogical development process. In the following I will explicate how the earlier stages of my music pedagogical efforts relate to the typical practice of refining multiple iterations in DBR. My pedagogical practices have evolved gradually over my professional career as a guitar pedagogue, which commenced approximately 15 years prior to this study. I have emphasized student-selected repertoire from the very beginning of my career, and I have constantly experimented with personally designed instrumental exercises. In addition, my previous studies on guitar pedagogy, as well as my educational development projects (see Figure 6.1 and discussion below), have served as preparation for the present research. As a result, I have evolved my pedagogical practices into this intervention, the Student-Centered Musical Expertise (SCME) approach. During the preliminary stages, in addition to playing over 1000 live performances as a guitarist, I have taught approximately 500 students of various levels (from beginner to higher education) and ages (6 to approx. 60 years) in three permanent teaching affiliations and in two summer camps (see Subchapter 1.1, footnotes 1, 2, and 3). As Figure 6.1 below illustrates further, I divided the preliminary stages to two phases. In this study, I do not research those preliminary phases. The preliminary phases were not at the time intended as research cycles of this doctoral study. However, in retrospect, I argue that they do correspond to the practice of refining multiple iterations in DBR. In this sense, my view is similar to

Inga Rikandi's (2012: 53) position as a practitioner-researcher in music pedagogy; she states that one's "own experiences add a heuristic quality to the inquiry". This statement relates to heuristic research that encourages a researcher's self-reflection, and which aims at discovering meanings of human experience (see Moustakas 1990).

The first seven years of my teaching assignment (2002–2009) constitute the first of the preliminary phases that lead to the present study (see Figure 6.1 below). In addition to teaching at the Helsinki Pop & Jazz Conservatory,[32] during the last two years of that period I was part of a working group of three persons[33] who created a new guitar curriculum for that affiliation (see Pop & Jazz Conservatory 2012 [2009]). The object was to constitute a syllabus that facilitated the utilization of student-selected repertoire and systematic assessment. That curriculum has been employed at the Helsinki Pop & Jazz Conservatory since, and the model was also later applied to other instruments. Based on my pedagogical experiences, which largely belonged to a basic level of popular music education, I began exploring the integration of student-centered pedagogy and the pedagogue's musical expertise in my previous final project (see Wahlström 2008). That final project, and the associated curriculum design commenced a process that aligns with Barab's (2014: 151) description of DBR's purpose to "develop new theories, artifacts and practices that can be generalized to other schools and classrooms".

From 2010, I gradually transitioned to teaching in vocational education. As I overhauled my pedagogical practices to meet the requirements of more advanced learners, I regard this as Preliminary Phase 2 (see Figure 6.1 below). I designed and implemented workshops that fall within the scope of the present study; for example, I have annually conducted a groove workshop at the Helsinki Pop & Jazz Conservatory since 2015 and a hard rock band workshop at the Pop and Jazz Music degree program of the Helsinki Metropolia University of Applied Sciences since 2010. During this phase, I also began my doctoral studies at the University of Helsinki, the result of which is the present research. Consequently, my article (Wahlström 2015) on hard rock groove laid the foundation for the more profound exploration that appears in Subchapter 5.1. The process that I have described above is illustrated in Figure 6.1 below.

[32] A brief description of the Helsinki Pop & Jazz Conservatory appears below.

[33] The other participants in the working group were guitarists and pedagogues Juha Kataja and Sami Linna.

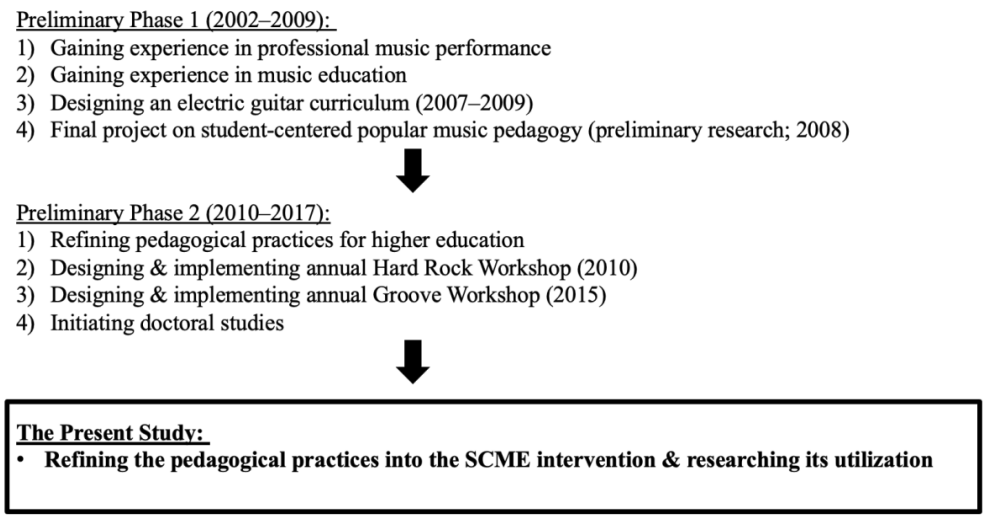


Figure 6.1. A longitudinal perspective of developing the SCME design through continuous refinement. Two previous phases form the background of the intervention of this study.

Even at later stages (i.e., during this study), I have continuously tested and reworked my pedagogical practices in ways that, as I suggest, relate to the iterative nature of DBR. For example, I have articulated my pedagogical approach when I taught guitar pedagogy at the Pop and Jazz Music degree program of the Helsinki Metropolia University of Applied Sciences since 2018. During the course of my employment, I have also conducted systematic pedagogical documentation even outside the research material of this study. In 2018, a survey of 46 students in vocational education clearly showed that the students valued demanding instruction over total freedom of choice.[34]

Overall, I suggest that this background comprises "prolonged engagement" and "persistent observation", two qualities that Yvonna S. Lincoln and Egon G. Guba (1985: 301) emphasize. According to Lincoln and Guba (Ibid.), such qualities enhance the credibility of qualitative research, as the researcher is then deeply involved with the research context. While I have focused on actualizing student-centered pedagogy throughout my pedagogical career so far, the SCME intervention finally combines the emphasis on student-selected repertoire of Preliminary Phase 1 with the musically advanced focus of Preliminary Phase 2 (see Figure 6.1 above). Considering the diversity of how DBR has been applied in previous research throughout its history, I argue that concentrating on this final phase is suitable for this study. In the following, I discuss the methodology that I employed when I gathered the research data.

[34] That document, however, was not officially released, as it was strictly for the internal use of the Helsinki Pop & Jazz Conservatory (see Pop & Jazz Conservatory, Helsinki 2018).

6.2 Applying Video-Stimulated Recall

One of the pioneers who established the Stimulated Recall (SR) method was the American educational psychologist Benjamin Bloom (see Stough 2001: 2; Gazdag et al. 2016: 119). According to Bloom (1953: 161), the basic idea of the method is "that a subject may be enabled to relive an original situation with vividness and accuracy if he is presented with a large number of the cues or stimuli which occurred during the original situation". Bloom (1953) and his colleagues studied university students' thought processes by audiotaping lectures and thus stimulating the students' recall. As accounted by Laura Stough (2001: 2), the utilization of audiotaping – as well as videotaping – became a popular method in studying pedagogues' thought processes in the 1970s and the 1980s (for further reading, see Stough 2001; Gazdag et al. 2016). At that time, the point of interest was to research teacher cognition in a naturalistic environment instead of a laboratory setting (Stough 2001: 2), which aligns with the starting point of design-based research that I discussed above. More recently, educational researcher Auli Toom (2006) has employed Video-Stimulated Recall interviewing (henceforth, I employ the abbreviation VSR)[35] in her research on teachers' utilization of tacit knowledge in unexpected pedagogical situations. In addition to its extensive popularity in the learning sciences, VSR has been employed in various other fields of research, such as medicine, psychotherapy, nursing, counseling, and coaching (see Lyle 2003; Rowe 2009). Consequently, these practices have also been applied to research on music pedagogy. As defined by music education researcher Victoria C. Rowe (2009), VSR is a method that involves "video-recording an activity and then replaying the recording to the participants so that they can comment on matters of interest".

Importantly, then, the VSR method involves the research participants as informants. For a few examples outside music, P. Zitlali Morales and Joseph C. Rumenapp's (2017) research on pre-school language learning emphasizes that the method allows the participants to "engage in analysis" in recall interviews. Similarly, David Clarke, Christine Keitel, and Yoshinori Shimizu (2006) describe in their classroom research how VSR provides an invaluable "insider's perspective" from the participants, who review the events from an outsider's perspective. Since the interest in employing participants as informants is essential in both VSR and design-based research (see above), it would appear to be appropriate to combine these two approaches.

However, several researchers also argue that VSR has many potential limitations. For example, sports coaching researcher John Lyle's (2003) VSR study concerns the non-deliberate decision-making by sports coaches during competition. Lyle (2003) argues that in any VSR research, "the fundamental problem of accessing individuals' cognitive activity will be present". A recurring remark on researching previous thought processes is that

[35] This method (and its similar variants) is also referred to with different names, for example: Stimulated Recall, abbreviated SR (see Lyle 2003); alternative abbreviations include STR (see Toom 2006) and SRI (see Nguyen et al. 2013). In this study, I employ the abbreviation VSR, which is in alignment with Nguyen and Tangen (2017).

minimizing the time delay between the event and the recall interview increases validity (see Gass & Mackey 2000; Lyle 2003). I discuss this matter from the perspective of the present study further below. Educational researcher James Calderhead has already in 1981 given a critical and frequently quoted account of the advantages and limitations of VSR. He notes the potential for bias in the responses; participants may censor or distort their recall of thought to present themselves more favorably (Calderhead 1981: 215). I recognize this risk in my research setting, and I shall discuss it in conjunction with my conclusions in Chapter 9. Moreover, Calderhead (1981: 213) discusses the potential problem of the research subjects' anxiety over being filmed.

Even despite these limitations, and in consonance with the other researchers mentioned above, Lyle (2003) concludes that with careful research design, VSR is a valuable method that has remarkable potential advantages. Among these advantages is that it allows exploration in a naturalistic context, as I discussed above. This is of considerable importance in the present study, since student-centered pedagogy essentially requires domain-specific research (see Subchapter 2.1; Hoidn 2017; EUA 2019). Furthermore, Lyle (2003) recognizes VSR as a flexible research tool, and a multitude of adaptations of the method exist, since it has been employed in many different research designs. Consequently, Lyle (2003) argues that it is essential to reach a consonance between the methods and the focus of the study. This is agreed by Nga Thanh Nguyen, Amanda McFadden, Donna Tangen, and Denise Beutel (2013), who note the "unique nature of each qualitative study" and emphasize that individual researchers should develop a stimulated recall interview procedure "that best fits the purpose of their study". Similarly, Lyle (2003) points out that it is important to make the distinction between focusing on decision behavior and other purposes. Lyle (2003) states that when stimulated recall is utilized, for example, to encourage reflection instead of attempting access to previous cognitive processes, the method is not subject to the same limitations. Such justified flexibility applies to the issue of time-delay. For example, educationalist Marcia J. Keith (1988) seeks "retrospective reports" that are not concerned with the time-delay, and applies stimulated interviews that are unstructured. Keith (1988) even argues that this alternative approach to VSR is more trustworthy than attempting to access previous decision-making. Educationalist Maryanne Theobald (2012) utilizes the term "video-stimulated accounts" for studies that do not aim to assess recall. The point of interest is then what the participants focus on when they see the video, instead of their thought processes during the filmed event.

In this study, the interviewed participants are the students, which is due to my focus on student-centered pedagogy. The video-documented lessons have two main purposes. First, they provide observation material for the utilization of the Student-Centered Musical Expertise (SCME) approach. Second, in alignment with Rowe's (2009) statement, they serve "as a stimulus to help [the students] to recall and develop their ideas about the lesson[s] and as a springboard to further discussion" in the VSR interviews. Therefore, the focus is not on specific decision-making processes, as opposed to VSR studies that scrutinize teachers' pedagogical thinking (see Lyle 2003; Toom 2006). Rather, the VSR interviews in this study

aim to explore the students' subjective experiences of learning through the SCME pedagogical approach in a longer time-perspective. Specific events, such as when the students performed personalized exercises, are of interest primarily from the viewpoint of what their meanings were for the students' learning processes during the entire three-month period that I documented.

For this reason, I conducted all of the VSR interviews at the end of the semester, as I shall explain in further detail below. Since this research design is significantly different from Lyle's (2003) study, for example, the rigor of VSR studies that concentrate on accessing previous cognition does not apply to this research setting as such. Therefore, I argue that the later timing of the interviews is not problematic but is, in fact, beneficial for reflecting on the entire learning processes.

Moreover, even the guitar lessons contained much spontaneous self-reflection from the students. I inquired of them frequently, for example, "What do you say to that?", "What do you think of this?", and so forth, after they had, for example, first experimented with a new exercise. In pedagogical research, a related method, "thinking aloud", involves requesting students to reflect spontaneously while they solve a problem (Rowe 2009). In learning mathematics, for example, this has been considered problematic, as it could interfere with the performance of the task (Rowe 2009; see also Lyle 2003). However, I suggest that individual guitar instruction is different in this respect, because such dialogue is a constant feature of my lessons. Therefore, it did not alter the naturalistic setting of the lessons (see Lyle 2003). In summary, the entire material in this study contains both retrospective reflection and spontaneous comments from the students. For further detail, I explicate the conduct of this study in the following.

6.3 The Conduct of the Study

The methodology above forms the basis of the pedagogical research setting of this study. For a guide through the entire report on the research process, I start with presenting the main procedures in Table 6.1 below.

1) Video-filming lessons with 9 individual guitar students + additional group lessons (see Table 6.2) (65 lessons; during 3 months, September – November)
2) Preliminary analysis of the videos, selecting the pedagogical episodes, editing into individual compilations for each participant (avg. 35 min./participant)
3) Conducting the VSR-interviews with each participant separately (avg. 60 min./participant, with audio recording; at the end of the semester, December)
4) Transcribing and translating the video-compilations and the recorded VSR-interviews
5) Final analysis

Table 6.1. A summary of the research process. In order to protect the privacy of the participants, the exact academic year of the data gathering is not mentioned (the 2nd half of the 2010's). Nevertheless, the months show the course of the research process during the semester.

6.3.1 Research Participants

I gathered the data at my place of employment, the Pop & Jazz Conservatory in Helsinki. This conservatory is the leading institute of popular music education in Finland, and it was the first one in its field in Northern Europe when it was founded in 1972. The conservatory comprises two departments; firstly, a department of full-time studies, which offers a vocational upper secondary qualification of music, and secondly, a department of basic music studies with a hobby approach. Nine of my guitar students participated in this research. In terms of research ethics (see further discussion below), I anonymize the research data so that the participants' privacy is protected. Therefore, I do not mention the exact time of documentation. Nevertheless, it was during the fall semester of an academic year in the second half of the 2010s. For the same reason, when I present the results of the analysis, I refer to the students with numbers. Eight of the nine participants were 18–25 year-old vocational students who were aiming for careers as professional guitarists, and thus represent a higher level of music education. One participant was an under 15 year-old student on the basic level. All my guitar students during this academic year were males, as were most of the guitar students at that time at the Pop & Jazz Conservatory. Therefore, there were no possibility to have more diversity gender-wise in the group of informants.

Five of the participants were new students to me in the semester that I documented. I did not leave out any first-year students who had guitar as their main subject from this research. This is my effort to document guitar instruction as it emerges in a naturalistic setting without censoring or selecting any particular types of students. Thus, I aimed to avoid the bias that "arises when researchers select subjects that are more likely to generate the desired results, a reversal of the normal processes governing science" (see Shuttleworth 2009). For example, selecting only familiar or (perhaps unconsciously) favored students as research participants could be interpreted as an act of constructing results in a premeditated way. I intended to avoid this bias by documenting all of the weekly lessons of, at least, all the guitar students with whom I was not familiar previously.

However, in other pedagogical studies, researchers have selected participants and assessed that it did not weaken reliability (see e.g., Toom 2006). In my research setting, I also added four selected guitar students to the group of informants. My reason for these additions is in alignment with Toom (2006: 96), who selected participants with the intention of providing variation in data. By doing so, I avoided a possibly too homogenous group. During the academic year when I gathered this material, I continued with six students whom I had already taught previously. At the time of the data gathering, the studies with those four whom I selected from these previous students featured typical interactions between student-centeredness and my active input as a musical expert. Since similar cases had appeared frequently during my experience as a pedagogue, I wanted to explore them in this study. These previous students were also different than the other participants, as I explain below. Thus, they complemented the research material in an important way.

More precisely, I chose to include one participant of the basic level (henceforth, Student 7). This addition provided a chance to explore how the Student-Centered Musical Expertise (SCME) approach can be employed in teaching musical fundamentals, which I would have missed otherwise. In contrast to the other participants, with another previous student (henceforth, Student 8) we studied improvisation in heavy metal through student-selected repertoire. This topic has rarely been scrutinized, although it has appeared frequently in my pedagogical work. The third addition (henceforth, Student 4) was a student who had commenced his studies with me the year before and had already studied the basics of groove. During this semester, he specifically wanted to improve his skills of Implied Moderate Swing Phrasing (see Subchapter 5.1.4) as well as develop his improvisation. This addition deepened the research material considerably in terms of advanced groove studies and their applicability to lead guitar, which we did not cover with the other participants. The fourth added participant (henceforth, Student 3) was a new student who I taught only on guitar group lessons and band education at first. For this research material I added an individual lesson with him, because he had no prior experience of groove studies but needed to practice it. That added lesson was an introduction to timing, and its documentation was an important addition to my research materials, because the basics of groove skills could not be overrepresented due to the lack of previous research on hard rock groove pedagogy. After this added lesson, I additionally video-documented five of the guitar group lessons where

Student 3 applied the timing exercises to repertoire of his choice. In summary, I believed that the inclusion of these four selected guitar students could significantly increase the amount of information on the SCME approach.

As a final addition, I videotaped five lessons of a groove workshop that involved an entire band. This was crucial for this research, since groove essentially concerns interplay within a band, as I explored in Subchapter 5.1.5. If I only researched guitar lessons for individual students, I would have missed the pedagogical practices of those components of groove (i.e., time-feels and participatory discrepancies; see Subchapter 5.1.5). The groove workshop also included female students, but I did not interview them because they were not guitarists. Table 6.2 summarizes the contents of the video-documented research material from altogether 65 lessons. It also indicates the main musical focuses that each participant studied.

Groove:

Student 1 (Advanced; all components of groove; 8 lessons)
Student 3 (Basic; timing; 1 added lesson)
Student 4 (Advanced; Moderate Swing Phrasing, also applied to improvisation; 8 added lessons)
Student 5 (Basic; timing; 8 lessons)
Student 6 (Advanced; all components of groove. For reference, no student-selected repertoire; 10 lessons)

+ additionally: 5 lessons of a groove band workshop; 5 group lessons for guitarists

Other Musical Focuses:

Student 2 (Technical skills; 9 lessons)
Student 7 (Musical fundamentals; chords, transcription, basic technique; 1 added lesson)
Student 8 (Improvisation; 2 added lessons)
Student 9 (Expanding stylistic versatility; 8 lessons)

In Total: 65 video-documented lessons (44 h 23 min)

Table 6.2. Contents of the video-documented research material. The correspondence between the research participants and the main musical focuses of their studies. "Added lesson" refers to students who were selected as participants (see text above).

The main musical focuses of the students, which Table 6.2 displays above, were determined as follows. With each guitar student, we discussed in the first lesson what they wanted to study and what they needed to improve. Most of the students in vocational studies expressed an interest in refining the essential skills of a professional performer, which I suggested that groove arguably belongs to. As Table 6.2 shows, the research material encompasses information on learning groove from several perspectives since this group was somewhat heterogenic by the skill level of the participants. Although all of the students at least familiarized themselves with groove overall, the components of groove that we emphasized with each participant depended on that particular student's current skill level (see Table 6.2). For this reason, the participants present different aspects of groove in the analysis in Chapter 7. As Student 1 was on an advanced level, his studies display the entire range of the

components of groove most thoroughly. With Students 3 and 5 we concentrated on timing, as they had no prior experience of practicing groove. Student 4 specifically refined his skills in Implied Moderate Swing Phrasing and their further application to improvisation, as I discussed above. For the sake of comparison, the material with Student 6 exhibits groove studies that do not employ student-selected repertoire. Furthermore, Students 2 and 9 were new students, and their studies display the utilization of the SCME approach for other musical focuses. With Student 2, technical skills were the main musical focus when we studied solo transcriptions of his favorite jazz fusion guitarist, Mark Lettieri. Student 9 expressed in his first lesson that he wanted to move on from his favorite music, blues/rock, and expand his stylistic versatility by studying jazz. As I mentioned above, the addition of Students 7 and 8 provided the research material with perspectives on learning musical fundamentals and heavy metal improvisation, respectively, through the SCME approach.

6.3.2 Ethical Considerations

Firstly, I reviewed research ethics from the pertinent literature, the *European Textbook on Ethics in Research* (European Commission 2010) and a book by Arja Kuula (2006). Before the semester began, I requested in writing permission to gather the data at the Pop & Jazz Conservatory from the institution's headmaster. Before the first lessons, I requested confirmation of the approval and willingness of each student with an informed consent. In the case of the only underage student, I did so with the student's parents as well as with the student.

The details of our agreement with the students followed the instructions of the Finnish Social Sciences Data Archive (s.a.). The information that I gave the students included: first, that I am the researcher and that the study is carried out at the University of Helsinki; second, that the guitar lessons will be video-filmed during the current semester; third, that the participants will absolutely remain anonymous, and that the videos will never be shown publicly or for any other purpose than this study; and fourth, that the participants' role is to study guitar as they would normally, but also to participate in an interview that will be recorded and cited anonymously. I explained to the guitar students that this process would involve one individual interview at the end of the semester. In terms of ethical rights, I specified that participation was absolutely voluntary, that the students could cancel their participation at any time, and that they had the right to receive more information about the research, its aims, or any risks that they could think of.

Without hesitation, all of the students proved willing to take part in the study, and none of them canceled their participation during the process. Furthermore, to eliminate the risk of anybody outside this research accessing the documented material, I stored the gathered video-material and the recorded interviews in an encrypted and protected file on the internal network of the University of Helsinki.

6.3.3 Video-Documenting the Lessons

The phase of video-documentation lasted three months (September–November). The video-documented lessons that Table 6.2 indicates (see above) share the following background. During these 12 weeks, excluding one holiday week and a concert week with no lessons, the maximum number of lessons per student was 10. As Table 6.2 shows, Student 6 attended all of his lessons, and Students 2, 5, and 9 were absent once or twice for personal reasons (e.g., sickness, other musical commitments, etc.). Although Student 4 was a previous student whom I had added to the research material as I explained above, I filmed all eight of the lessons which he attended, because they focused on groove with student-selected repertoire. In contrast, with the other added participants I filmed less, because I only wanted to capture the pedagogy of specific, delimited musical focuses, as I explained above. Therefore, with Students 3 and 7 I filmed only one lesson for each, and with Student 8 I filmed two lessons. I filmed five lessons of the groove workshop with a band setting, and five guitar group lessons (see above). In total, I filmed 65 lessons and thus gathered 44 hours, 23 minutes, and 7 seconds of video-material.

In alignment with Toom (2006: 90), I videotaped entire lessons rather than selected episodes. This was essential, since my purpose was to capture events as they occurred in a naturalistic setting and only afterwards decide what was interesting. This is in consonance with Rogers Hall (2007: 8), according to whom it is advisable to record continuously, especially when using only one camera. As the video-camera was constantly up and running during the semester with most of the students (Students 1, 2, 4, 5, 6, and 9; see explanation above), its presence apparently became rather unnoticeable. Previous research supports this notion; according to Barbara Rosenstein (2002: 25), when videotaping has lasted long enough (approximately 20 minutes), the participants' possible tensions abate, and the recorded behavior is an accurate representative account (see also Toom 2006: 95). Moreover, I positioned the camera so that it attracted minimal attention. In my guitar classroom, it was on a shelf that was inside a cabinet where I stored my sheet music and such. In the larger band classroom for the workshop lessons, the camera was on a table in the corner.

The video-camera that I employed was a Sony HDR-CX240E, which was certainly sufficient in video and audio quality, and it was mounted on a tripod. The sound was captured with the internal microphone of the camera instead of a bulky external microphone, which was beneficial in minimizing distractions during a regular lesson (see Rowe 2009). Before the commencement of the semester, I tested the quality of picture and sound, and decided on the optimal placement of the camera for the lessons. The visual perspective was facing the student (or the students in the band and group lessons), but it captured me entirely as well, mostly sideways, or occasionally from the back. In the testing, I concluded that this setting was beneficial for recall and reflection of the events, and I maintained it consistently throughout the process.

6.3.4 Preliminary Analysis of Video-Documented Lessons

As a preliminary analysis, I watched all of the video-documented lessons. I commenced this viewing on the latter half of the three-month period of filming (see Table 6.1, above). During the viewing, I wrote out detailed summaries of the events for all of the lessons, and I marked the timecode for each event. An inspiration for this was Toom's (2006) data handling, which I refer to further below. I did not keep a diary as such, but I suggest that these summaries, as well as the numerous notes, had a similar function. Later, the summaries of the lessons became important in my final analysis.

As I wrote the summaries of the lessons during this preliminary analysis of the data, watching the same events repeatedly was inevitable. According to Rosenstein (2002: 25), the viewing and reviewing of video-material can spring new insights from the observations. At the least, it clarified my assessment of which events were the most important in the learning processes, as I then selected the pedagogical episodes for the proper analysis. My main criterion for selecting an episode was that it exhibited the SCME approach as clearly as possible. In other words, I was interested in episodes that displayed an integration of student-centered features and my active input as a musical expert pedagogue. I emphasized episodes where students made progress, for example, in groove-related exercises, and especially when they practiced repertoire of their own choice. After I had selected the pedagogical episodes, I edited them into video compilations of each student separately. The durations of these individual compilations were on average 35 minutes. These compilations were to be the material for the stimulated recall interviews with each student.

6.3.5 Conducting the Video-Stimulated Recall Interviews

I conducted the video-stimulated recall interviews individually with all nine guitar students during the last two weeks of the fall semester, in December, after I had collected the video material in September – November (see Table 6.1, above). As Students 1 and 2 participated in the groove band workshop as well, I also interviewed them concerning the added episodes that involved a band setting. On the VSR-interview sessions, a student and I watched the video compilation of that particular student together. I paused the video after each episode that I had selected, and then asked an interview question. I discuss the interview questions in further detail below, but in general terms, I asked the student to reflect on the event we had just watched before moving on to the next episode.

Stimulated recall interviews can be either unstructured or structured (Toom 2006: 93). Relying on Rowe's work (2009), I conducted semi-structured interviews, which have been employed in many contexts. Colin Robson (1993) defines semi-structured interviews as follows: "the interviewer has clearly defined purposes, but seeks to achieve them through some flexibility in wording and in the order of presentation of questions". I selected this approach because of my conviction that I would acquire the best output from the students in

a setting that would feel informal. I was also their teacher, which could cause researcher bias, as I shall discuss finally in Chapter 9, but on the other hand I suggest that the similarity between the interview and the regular guitar lessons promoted a natural setting. From this perspective, watching the videos together at the end of the semester was also a pedagogical event that involved the students' self-assessment.

I did my best effort to ask such interview questions that would allow the students to associate freely instead of directing them. However, I wanted to acquire their thoughts about learning through the SCME pedagogical approach. Therefore, I avoided questions that they could answer "yes" or "no" and opted for questions that prompted the students to reflect and to describe their experiences. Thus, my planned interview questions were:

- "What thoughts do you have about this videoed event that we just watched?"
- "What developed your groove skills / your improvisation / your musical expression in the best way in that situation?"
- "How did you get your own voice heard in these studies?"
- "Was this difficult, easy, or something in-between?"
- "Describe your practicing concerning this matter".

I let the students talk as much as they wanted without restricting them. Although I had the interview questions for each pedagogical episode written out beforehand, the setting of the semi-structured interviews allowed me to "follow up unexpected lines", as expressed by Rowe (2009). Similarly, Toom (2006: 93) argues that this is a benefit of not following an entirely structured type of interview, and it is therefore suitable for stimulated recall interviews.

On occasion, the students would comment on the videos spontaneously even before I asked my question. I allowed this to happen, and I considered it a welcome feature, because it implied that the particular episode was significant for the student. Furthermore, I conducted all of the interviews in the same classroom as the guitar lessons. By doing so, I intended the situation to feel as natural as possible and hoped to aid the students in reflecting on their learning process. We watched the videos from my MacBook Pro laptop. The sound was connected to the stereo system in the classroom, thus allowing for a better sound than the internal speakers of the computer. In agreement with the participants, I recorded the interviews. As video was not needed for this, I collected only audio recordings of the interviews, using the GarageBand software on another MacBook Pro laptop and additionally a smart phone iPhone 6s for a backup recording. The average duration of the interviews was 60 minutes. The total duration of the nine recorded interviews was 9 hours, 7 minutes, and 17 seconds.

6.3.6 Data Handling, Categorization and Final Analysis

I entrusted a professional and confidential transcription company with transcribing both the video compilations of the guitar lessons and the VSR interviews.[36] I reckon that this saved considerable time, which enabled me to concentrate on analyzing the content sooner. As the lessons and the interviews were in Finnish, I translated the transcriptions into English after checking with the recordings that they were correct. As I did this task thoroughly myself, I am convinced that no details in the material went unnoticed.

The summaries and the notes that I had written when I revised the entire body of video-documented material (see above) evolved into further categorization as I continued the analysis. At this stage, I referred to Toom's (2006: 106–107) model of categorization, which relies on philosopher Charles Sanders Peirce's abductive logic. Table 6.3, below, presents an example of this categorization. First, Table 6.3 shows the relation between the transcriptions and the reductions of the videos. The main themes of the reductions constitute a category that Toom (2006) denotes as core ideas. In essence, the core ideas are the pedagogical intentions behind an episode. Relating this category to educationalist Pertti Kansanen's didactic triangle (see Kansanen 2014 [2004]: 79, 80; see also Kansanen & Meri 1999: 114), which I discussed in Chapter 4, the core ideas correspond to the didactic relation (which appears in the middle of the didactical triangle; see Subchapter 4.2.2, Figure 4.2). In other words, they are analyses of how my pedagogical action aims to facilitate a student's learning of specific musical content. After I had analyzed the core ideas of the video-documented episodes, I arranged them in larger groups, which in Toom's (2006) model constitute the final upper categories and their subcategories. The excerpt in Table 6.3 shows an example of the discussions that I had with each guitar student during their first lesson, when we planned the studies together.

[36] I entrusted the Finnish company Tutkimustie which offers, e.g., research and court transcription services.

Transcription	Reduction	Core Idea	Subcategory	Upper Category
I: So, your roots are in rock, right? Student 1: Yes, they come from there (--). I: Name your favorite guitarists and bands yet. S1: Favorite guitarists. Oh, for God's sake. I've liked some expressive players. Jimi Hendrix, John Mayer and…Stevie Ray Vaughan, Slash. I: Oh, that's wonderful. S1: Billy Gibbons. A little rougher guys who really give a rough ride [to the guitar] and have a lot of dynamics. Less performance-oriented and like that. Gary Moore, too. That kind. Mark Knopfler is one of the finest guys. I: Yes, he mixes some country in there in a nice way, yes. S1: That's right. Various [players]. Jeff Beck. I: Yes. S1: He's not like, the technical chops are not necessarily like… or of course, he does have great technique, but he's not a technique-oriented guitarist in the traditional sense, but when you listen to him, it's… I: Soulful. S1: Yes. I: Have you seen the DVD "Live at Ronnie Scott's"? S1: Yes, yes. I: It's wonderful. S1: [0:01:19] That's the kind of stuff I like. I: Yes.	Pedagogue (I) interviewing the student about favorite music (guitar players and bands). Pedagogue showing his appreciation for the student's favorite performers. Pedagogue joins discussing mutually favored guitarists.	Setting the initial focus on personally favored music, aiming to engage internal motivation and enforce a good relationship with music. The student is heard. Signalizing that as fans of music, pedagogue and student are equal. Collaboration.	Shared Planning as Student-Centered Commence-ment.	Implementing a personalized learning process.

Table 6.3. Categorization of a pedagogical event, applying the model of Auli Toom (2006: 106–107). Analysis of the commencement of studies with Student 1. Discussing the student's favorite music as an introduction to planning a personalized learning process during the first lesson.

However, as the analysis progressed, I reworked Toom's (2006: 106–107) categorization in order to adapt it to instrumental popular music pedagogy. In the final analysis, I decided not to employ the term Core Idea, and instead changed it to Musical and Pedagogical Intentions. During this phase, I selected the most salient comments from the students' VSR interviews and matched them with the corresponding video-documented episodes from the lessons.

The final analysis of the research material encompasses many levels. In the following, I discuss how this relates to Kansanen's (2014 [2004]: 97–98; see also Kansanen et al. 2000: 25) theorization of three conceptual levels in teachers' pedagogical thinking. An illustration of Kansanen's model appears below in Figure 6.2.

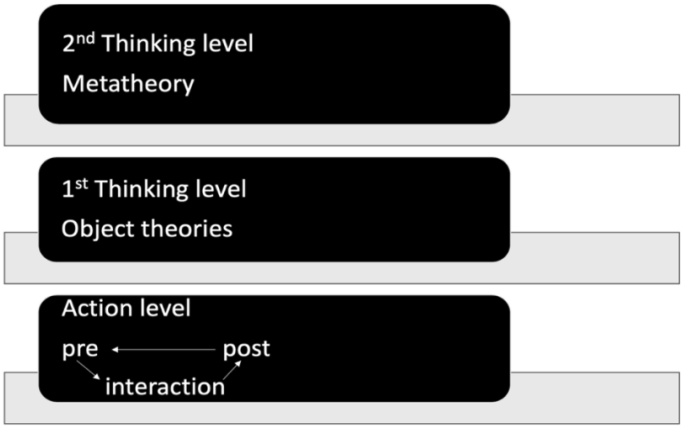


Figure 6.2. Conceptual levels of teachers' pedagogical thinking according to Pertti Kansanen (Kansanen et al. 2000: 25; Kansanen 2014: 97–98).

In Kansanen's model (Kansanen 2014 [2004]: 97–98; see also Kansanen et al. 2000: 25; see Figure 6.2 above), the action level comprises the teacher's pedagogical planning (pre), the learning events (interaction), and evaluation of the action (post). In this study, these levels can be conceived as follows. When I present my analyses of the videoed lessons in Chapters 7 and 8, I display my pedagogical plans (pre) by presenting musical notations of the exercises that we employed with the students. In this study, video-documentation enables detailed exploration of the learning events (interaction & post), which is crucial because of the common problem that student-centered pedagogy is unsatisfactorily implemented in practice (see Subchapter 2.1.7; Estes 2004; Hoidn 2017: 23; EUA 2019). According to Kansanen (2014 [2004]: 97–98; see also Kansanen et al. 2000: 25; see above), furthermore, the 1st level of teachers' pedagogical thinking structures the action level through what he calls object theories. In this study, I analyze the pedagogical practices through the theoretical framework that I constructed in Chapters 2, 3, and 4. Finally, Kansanen's (2014 [2004]: 97–98; see also Kansanen et al. 2000: 25) second level of pedagogical thinking involves metatheory, meaning the underlying values of the pedagogical practices. For example, as I have explored in Chapter 3, promoting a good relationship with music is a desired value in student-centered

pedagogy. By employing the material from the VSR interviews, I aim to explore the actualization of this value in the guitar studies. In other words, in addition to analyzing my pedagogical thinking, I extend Kansanen's (2014 [2004]; see also Kansanen et al. 2000: 25) model by including the perspective of the students' subjective experiences.

To finally present these analyses of the video-documented lessons and their corresponding VSR interviews comprehensibly, I have divided Chapters 7 and 8 into subchapters in accordance with their musical focuses. In the final phase of the analysis process, I concluded that the following themes, which appear in each subchapter, represent my research results most appropriately:

- Musical and Pedagogical Intentions
- Pedagogical Observations and Analysis
- Student-Centered Applications

I structure all of the subchapters consistently according to these themes. The only exceptions are the studies that involved student-selected repertoire exclusively, which, therefore, do not include a separate section called Student-Centered Applications.

6.4 Discussion on Reliability

As educational and methodological researcher Nahid Golafshani (2003) argues, the evaluation of reliability and validity stems from positivist sciences, and therefore it needs to be redefined in order to meet the requirements of qualitative research. For example, Nienke Nieveen (1999; see also Plomp 2013: 28–29) presents the following set of quality criteria for evaluation of Design-Based Research (DBR). She suggests the criteria of practicality, effectiveness, and validity. Practicality means that the intervention is utilizable in the settings for which it has been designed, and effectiveness denotes that it produces the desired outcomes. In this model, validity is further divided into relevance (also referred to as content validity) and consistency (i.e., construct validity). In essence, high relevance means that there is a need for the designed intervention, and that it relies on state-of-the-art knowledge. Consistency implicates that the intervention is logically designed.

In terms of the relevance of the present study, the Student-Centered Musical Expertise (SCME) approach clearly arises from a practical need. As I explored in Subchapter 2.1, although there is a widespread interest in student-centered pedagogy, it has not been properly actualized (EUA 2019), and thus domain-specific classroom research is urgently needed (Hoidn 2017). Concerning consistency, when I constituted the theoretical framework in Chapters 2, 3, and 4, I made every effort to rely on state-of-the-art knowledge and aimed at an internal logic. This refinement of this pedagogical design, the SCME approach, relies on this foundation. Therefore, I suggest that this study meets Nieveen's (1999; see also Plomp 2013: 28–29) criteria of validity; it can be considered relevant and consistent with the above

definitions. Nieveen's (1999) other criteria, practicality and effectiveness, should be simple to assess, as I gathered the research data in a naturalistic setting through Video-Stimulated Recall. Therefore, I shall discuss the utilization of the SCME approach further when I draw the conclusions in Chapter 9.

In a similar way, Barab (2014) admits that there is obvious difficulty in evaluating the reliability of DBR studies. He suggests that it should be handled firstly by simply accepting that it is problematic, secondly by utilizing triangulation (see also Cohen, Manion & Morris 2011: 141–144), and thirdly by employing standardized methods. Triangulation is defined by Neil J. Salkind (2010) as "the practice of using multiple sources of data or multiple approaches to analyzing data to enhance the credibility or a research study". According to Toom (2006; see also Lincoln & Guba 1985), Video-Stimulated Recall employs triangulation by producing a dual perspective on the pedagogical episodes through the observed video-documents and their corresponding interviews. Furthermore, Video-Stimulated Recall (VSR) is a standardized method in educational studies, as I discussed above. Therefore, I suggest that this research setting fulfils Barab's (2014) principles of reliable DBR.

From the perspective of Alvesson and Sköldberg's (2018 [2000]) reflexive methodology, I conclude that this research setting meets the criteria of good qualitative research. Alvesson and Sköldberg (2018 [2000]: 367) emphasize receptivity to diversity. According to Alvesson and Sköldberg (2018 [2000]: 367), this diversity is reached, for example, when the researcher and the research participants share power in constructing meaning, and consequently the number of interpretations is expanded. The Video-Stimulated Recall method agrees with this idea. Through such communication between the students and myself as the researcher, this research setting aims to enable "breaking away from fixed forms of subjectivity", which characterizes good qualitative research according to Alvesson and Sköldberg (see 2018 [2000]: 367). This setting aims to promote new meanings, new understandings, and action alternatives. Alvesson and Sköldberg (2018 [2000]: 369) argue that "strong feeling of the social reality under study" is an important criterion. From this point of view, I suggest that my prolonged engagement in guitar education as well as my double role as the pedagogue and the researcher are advantageous in this research setting. I discuss Alvesson and Sköldberg's (2018 [2000]) criteria of good research further from the perspective of this entire study in Chapter 9.

For a classic set of criteria, Lincoln and Guba (1985) emphasize credibility, transferability, dependability, and confirmability. As I discussed above, they suggest that prolonged engagement enhances credibility, which means that the researcher needs to be involved with a research context extensively (Lincoln & Guba 1985: 301). According to Lincoln & Guba (1985), another technique to establish credibility is persistent observation, which provides depth to the understanding of the research data. Above, I suggested that this was fulfilled during the preliminary analysis of my video-material, as I repeatedly viewed the lessons that I had also conducted as a pedagogue. Lincoln's and Guba's (1985: 316) second criterion,

transferability, is similar to Nieveen's (1999) criterion of practicality, and involves the utility of the research results in other contexts. As I mentioned above, I shall discuss the utility of the SCME approach in Chapter 9. This also relates to Lincoln's and Guba's (1985) third criterion, dependability, which involves consistency, meaning that the research results could be repeated. As argued by Lincoln and Guba (1985: 300), credibility and transferability together constitute their fourth criterion, confirmability. They define this as neutrality, the ideal that the research results are not shaped by researcher bias, motivation, or interest. As I discussed above, I firstly included all of the students with whom I was not familiar before the semester that I documented, and I suggest that I have thus avoided such a bias in this research setting. However, I acknowledge that, from this perspective, a risk for bias is that I have the dual role of the pedagogue and the researcher in this study. On the other hand, more recent pedagogical studies (e.g., McLaughlin, Black-Hawkins & McIntyre 2004; Hopkins 2008; Wyatt 2010; Leuverink & Aarts 2019) have contested the view that this would be a limitation for reliability. I shall return to this discussion when I draw the conclusions in Chapter 9.

7 Student-Centered Musical Expertise (SCME) in Practice I: Learning Groove

In this chapter, I analyze the results of learning groove when I employed the Student-Centered Musical Expertise (SCME) approach with the students. Each subchapter follows the same structure. First, I match the components of groove that I explored in Subchapter 5.1 with corresponding exercises. Next, under the heading of Musical and Pedagogical Intentions, I relate these practices to the pedagogical concepts I explored in Chapters 2, 3, and 4. Under the heading of Pedagogical Observations and Analysis I explore the video-documented pedagogical events and their corresponding VSR interviews. Overall, the approach that I employed in learning groove exemplifies Deductive SCME. It is the top-down configuration, meaning that I first presented the fundaments of groove and only then did we apply it to student-selected repertoire (see Subchapter 4.2.1). Therefore, the core interests of this study appear finally under the heading Student-Centered Applications.

As an introduction, there are two remarks concerning this entire material that may go unnoticed if the notated exercises are read hastily. Firstly, the students played all of the exercises in this chapter repeatedly as an extensive sequence, in other words by *looping the same few measures for a long time (several minutes) without interruption.* By doing so, a shared goal of all the following exercises was to guide the students' playing towards an actualization of the "continuous work", which aims at "locking the rhythm" in accordance with Anne Danielsen's (2006: 160) description of groovy performing (see Subchapter 5.1). Pedagogically, this can be related to, for example, David J. Elliott's (1995) as well as Elliott and Marissa Silverman's (2015: see e.g., 231, 434) praxial philosophy and concept of musicing, because the students are essentially positioned as active doers in a real-world musical setting. They played intensively in the lessons, and so did I together with them. Secondly, although the exercises may appear simple when only reading the notations, many of them are considerably challenging for advanced students and even professional performers. Practicing at extremely slow tempos (Exercise 3 in Table 7.2 below) is a prime example of this, according to my experience as a pedagogue. The students in this research material had practiced guitar very actively for 5–10 years prior to this study, and they had passed demanding entrance tests to vocational education.

7.1 Learning through Fundamental Timing Exercises

As I explored in Subchapter 5.1.2, a fundamental element of groove is timing, which I defined as rhythmical fine-tuning and implying a continuous beat. Below, I study the utilization of a three-step practice method that aims to develop both of those aspects of timing.

In essence, this exercise involves making the underlying rhythmical subdivision an ingrained part of the playing. As I discussed in Subchapter 5.1.2, in the main hard rock examples of the present study that subdivision is eighth notes, since it is the shortest utilized rhythm value. I referred to this as the density referent (see Danielsen 2006: 44), which everything else is in relation to (see Danielsen 2006: 349) and which can tie a band together, as it provides cohesiveness. Therefore, the following exercise endeavors to make the performer articulate the subdivision constantly, even during rests and long tones. Although rhythmical subdivision is a common feature in music theory studies, it appears that it is somewhat overlooked in learning material for instrumental studies, apart from percussion instruments. However, a Finnish learning book of basic level theory and solfège, Tohtori Toonika[37] (Heikkilä & Halkosalmi 2013a [2005]), guides the learner to audibly articulate eighth note and 16th note subdivisions during longer tones while performing rhythm solfège. During my guitar studies over 20 years ago, one of the book's authors, musician and pedagogue Vellu Halkosalmi, instructed me to practice timing with the guitar as presented below. After practicing this rigorously for several years, I started applying it in my pedagogical work.

Below, Table 7.1 shows this practice as a three-step exercise. To illustrate an example, I employ the guitar riff of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976), previously analyzed in Subchapter 5.1.2, and which we also studied as a primary timing exercise with the students who participated in this study.

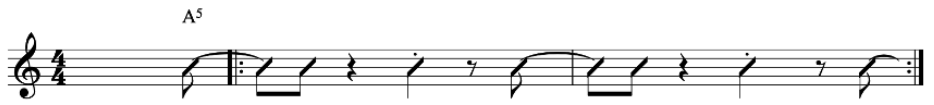
[37]Doctor Tonic (translation by the author).

Step 1. Practicing the subdivision with micro-rhythmical accuracy.

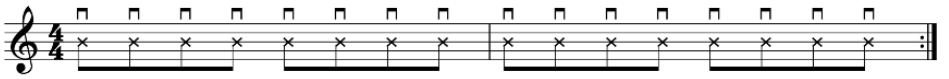
Step 2. Integrating the subdivision and the riff to be played by filling the rests and the long tones with the subdivision.

Step 3. Leaving out the filling tones, yet maintaining the continuous subdivision physically and mentally.

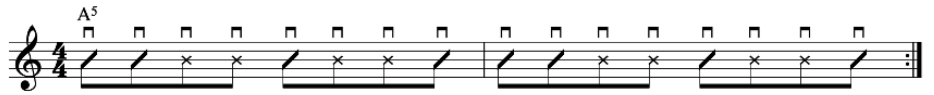
This is applied to student-selected repertoire. For example:



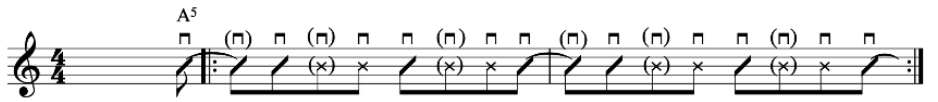
The basic version of the riff in AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll).



Step 1 (above). Playing the illusionary hi-hat on the guitar as muted notes. When practiced with a metronome or a drum machine, the goal is micro-rhythmical precision, evenness, and relaxation.



Step 2. Filling all long tones and rests in the riff with the eighth note subdivision as muted notes. Through this procedure, the eighth note subdivision of Step 1 is imported into the riff. This integration lays the foundation for a percussive and cohesive performance of the riff.



Step 3. The result. Leaving out the filling muted notes of Step 2, yet maintaining the continuous eighth note subdivision both physically and mentally. The notes in parentheses are not strummed on the guitar strings, yet the picking motion is physically done without hitting the strings. The muted notes without parentheses are played audibly as Rhythmical Support Notes. Thus, the player implies the continuous beat and performs the riff in a rhythmically cohesive way.

Table 7.1. A fundamental timing exercise. As with all of the following exercises, it is also applied to student-selected repertoire.

In Step 1 of this exercise (see Table 7.1 above), the eighth note continuum is practiced by playing it as percussive, muted tones, as if playing the hi-hat cymbal's part of a drumbeat. This should be done with a metronome or a drum machine in order to acquire maximal micro-rhythmical accuracy. In order to incorporate this into an actual musical part such as the riff of "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)", in Step 2 all of the rests and the long tones are filled with muted tones that imply the eighth note subdivision.

Finally, when a student has internalized the active production of this subdivision, in Step 3 the filling tones are left out of the actual sounding performance. However, the crucial point is that they are to be *retained in the continuous physical movement of the picking hand as well as in internal hearing,* for example through imaginary singing. Therefore, Step 3 is the final version of the actual performance rather than an exercise.

Pedagogical and Musical Intentions

According to my experience, even advanced students easily overlook the importance of maintaining a continuous pulse during rests and long tones. Such rhythmical passivity can hinder their groove. In contrast, ingraining the subdivision through the three-step exercise which I presented above aims to develop the learner's performances into a percussive expression of "the continuous work" that aims at "locking the rhythm", to employ Danielsen's (2006: 160) terms. I intend these to be the primary steps towards "striking a groove" (Berliner 1994: 345) and accomplishing an "unfailing" sense of the beat (Berliner 1994: 157). The muted filling tones, which are left out in Step 3 (see Table 7.1, the x-noteheads in parentheses) but should be retained silently, crucially aim to actualize Danielsen's (2010: 20) notion of "not sounding events" that importantly produce an underlying basic beat. As I explored in Subchapter 5.1.2, such continuous rhythmical activity is, in turn, exactly what produces a bodily and physical reaction such as, for example, the urge to stomp one's feet and move to the music's rhythm (see Danielsen 2010: 20). As John M. Chernoff (1979: 48–49) argues, this physical response to the music is central to the pleasureful effect of groove. Therefore, I intended this exercise to affect a fundamental component of the research participants' groove skills.

Furthermore, the muted tones that do remain audible even in the final version serve several purposes (see Table 7.1, Step 3). They are indicated by the x-noteheads that are not in parentheses, and appear on the upbeat eighth note of beat two and the downbeat eighth note of beat four. Firstly, I denote them as Rhythmical Support Notes as their function is to help the learner to hit the ensuing chord with micro-rhythmical accuracy, especially in syncopations. This relates to Paul F. Berliner's (1994: 316) notion of jazz musicians' utilization of "ghosted or indeterminate pitches whose effects are predominantly percussive". Secondly, I intend this articulated percussiveness to prepare a learner for communicating the pulse with other band members when they perform live. This addresses the notion mentioned in Subchapter 5.1.2 of "communicating a uniform temporal reference for the rest of the band" (see Butterfield 2011: 16), which is crucial in producing a groove collectively, as the mutual aim is a "shared sense of the beat" (see Berliner 1994: 349). Thirdly, they provide dynamics, which I explored in Subchapter 5.1.2 as aiding the groove by potentially increasing a sense of forward motion as well as tension and release (see Butterfield 2011; see also Berliner 1994: 67, 316). Finally, as can be seen by comparing Step 3 in Table 7.1 with Figure 5.3 in Subchapter 5.1.2, these audible percussive notes are exactly the same ones as in the original recording of "It's a Long Way to the Top (If You Wanna

Rock 'N' Roll)". This suggests that this exercise can aid in acquiring the same groove as on the record and, conversely, that the aforementioned goals are probably the aims of Malcolm Young's original performance as well.

Pedagogical Observations and Analysis

As an introduction to groove studies, I employed guided listening with each student. From the original recording of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage*, 1976), I indicated the muted tones between the chords that would then serve as Rhythmical Support Notes in the timing exercise. As I told the students what to listen for, this practice could remotely resemble the music appreciation movement (for a discussion, see Green 2008: 11) and Bennett Reimer's (1972) aesthetic education, which I discussed in Chapter 4. However, this approach was essentially different, in that I did not aim to indoctrinate the students with what music is good, but to discern a quality that they could apply to their favorite music. In other words, I did not attempt to make them like AC/DC, but rather suggested that they could practice it first in order to learn certain common features of groove. For example, Student 3 studied these components and applied them to the music of Extreme, which was one of his favorite bands, as I discuss further below. Therefore, this practice of guided listening is rather in alignment with the tradition of aural learning of popular music that I discussed in Subchapter 2.2. Another practice that I employed with all of the students in order to demonstrate timing was to perform two comparative versions of the same riff on my guitar. I intended one version to be as groovy as possible, and the other one deliberately un-groovy, meaning a performance where I did not imply the beat, and which was somewhat inaccurate in terms of micro-rhythm.

To present my pedagogical material, below I exhibit the transcription of an episode with Student 3 that illustrates the aforementioned practices. Thereafter, I do not include entire transcriptions for the sake of brevity. Instead, I describe the observations and select the most significant citations from the transcriptions. This decision appears natural in the present research, as the objects of study are how learning processes in the SCME approach can be implemented, what the learning results are, and how the students experienced them. When I analyzed the whole body of my research material, I became convinced that for my research questions, the outcome of the practices from a longer time-perspective is more salient than the dialogues on the lessons. Nevertheless, for demonstration purposes, the following excerpt serves as an example of a pedagogical event.

Student 3 and I listen to the intro of "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" on the original recording.

I: Listen also to what happens there in-between [the chords].

Student 3: True.

I: There's quite a bit happening all the time. Then, listen to how it locks in… [*on the recording, the band comes in at 00:16*]. Then the whole band comes in. It drives forward. A forward-moving power.

I stop the record. By playing guitar, I demonstrate the riff without implying the eighth note subdivision, i.e., "the un-groovy way", without the constant eighth note motion in the picking hand and without Rhythmical Support Notes.

I: What is the difference between that and then this.

I demonstrate the riff, but now implying the eighth note subdivision, *i.e., "the groovy way", doing the constant eighth note motion with my picking hand and playing the Rhythmical Support Notes.* [*playing 17 s.*]

I: Next, I'll play it as un-groovy as possible, even though I'm playing it correctly.

I perform both versions again.

S3: That one ["the groovy way"] breathes more.

I: Yes, it breathes more, exactly. I played it so that I was thinking that a guitarist's right hand is like a [drummer's] hi-hat hand. And now I'm just going to blend in with that hi-hat. That's the goal. It starts off on the latter eighth note of beat four [*I play the riff*]. So, the second stage is that we fill all the rests and the long tones with that hi-hat, so it would be [*I play Step 2*].

I demonstrate Step 2 of the timing exercise (see Table 7.1 above) by playing guitar. Consequently, I demonstrate Step 3.

I: In a way, we keep that physical movement going. Now we just play in the air the eighth notes that are left out. In the mind it goes on, that even if we played "daa-da-da", we think of it as "da-a-da-(m)-(m)-da-(m)-(m)". We have this eighth note thing going all the time. Then if there remain some [audible muted tones] traces of that hi-hat, it's OK. Let's not play them all, but let's do at least the eighth notes that precede the chords [*I play*]. If they can't be heard, that is OK, and if there are louder ones then that is OK, too.

S3 and I play in unison Step 1 along with a drum machine.

I: Play it really even.

S3 and I play in unison Step 1 along with the drum machine and move on to Step 2.

S3: Yes, and then…

S3 and I play in unison Step 3 along with the drum machine. The playing stops.

S3: It's difficult to keep it up at the same time.

I: Let's take it at a slower tempo for a change, so it is easier.

S3: So, it [the picking hand motion] is there all the time anyway, but it doesn't hit the strings.

I: Exactly.

S3 and I play in unison Step 3 along with the drum machine, at a slower tempo. With both players, the continuous eighth note movement in the picking hand is clearly visible. The playing stops. Note that in the following, S3 comments on his discovery of the Rhythmical Support Notes (see above, Table 7.1).

I: What's the difference? Did it feel different to play?

S3: Yes, it's got that pulse all the time, so it makes it a lot easier. You get into it more when you keep it up, somehow. Those have a really big meaning, even those muted notes just before the chords.
I: That's right, they give support.
S3: They give support, yes.
I: Do you think it's harder to play like this? [*I play "the un-groovy way", i.e., without the muted Rhythmical Support Notes].*
S3: Yes. It's somehow naked.
I: To you, does it feel better, worse?
S3: Uncomfortable.
I: Uncomfortable to play, so that one ["the groovy way", with the muted Rhythmical Support Notes] is nicer too.
S3: Yes. And when you didn't have to think about it anymore, then it's really good.
I: Does it feel like it locks in better?
S3: Yes.
I: Well, exactly, that is the starting point for everything.

With Student 3, we commenced the VSR interview by watching the above episode. Apparently, the practice of performing two contrasting versions of the same riff succeeded in concretizing what timing is. As noted by Student 3, "the difference is very obvious, it makes it clear". This practice could be interpreted as a form of Albert Bandura's (1971) social learning, since Student 3 first acquired the knowledge through observation. In essence, instead of imparting what timing is, I asked Student 3 what the difference was between the two performances. Such guided discovery can be seen as an application of constructivist learning (see Subchapter 2.1.2; e.g., Tynjälä 1999: 365; Hoidn 2017: 21, 554), as Student 3 constructed new knowledge by articulating his own perception of the two versions instead of being a passive receiver of instructions. According to Student 3, it was important that I pointed out the percussive muted notes on the original recording by demonstrating them on my guitar. He argued that they would have remained unnoticed without such guidance: "If you listen to a record, you may not realize that it's done like that if someone doesn't show it as clearly as that".

Over time, the entire three-step exercise of timing (see Table 7.1) increased percussiveness in the performances of Student 3 and Student 5, as they were both new to timing and groove. Student 3 commented that the exercise facilitated learning timing because "it makes it much more accessible that there are levels for that exercise". As I shall discuss further below, both Student 3 and Student 5 requested that we play the exercise in unison initially.

Even with the students who were initially more advanced with timing, the three-step timing exercise served as an efficient introduction to groove studies. In his VSR interview, when Student 6 saw and heard the video of himself applying this exercise on "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)", he noticed how closely his physical movements were related to the quality in his groove: "You could see the rhythm coming better into the

body. […] When that movement wasn't in the body, it didn't groove either". It appears that Step 3 of the above exercise, which induces continuous movement of the picking hand, guides a learner towards complete physical engagement in the music. As Student 6 pointed out, the importance of physical movement concerned the entire body and not only the picking hand. Student 1 made a similar observation. Overall, such physical engagement in performance promoted all-encompassing devotion to musical expression, as described by Student 6: "I don't focus so much on that I play the right notes, but focus on the feel of the music, not just the notes". This corresponds to the definitions of groove inducing bodily movement in the listener (see Subchapter 5.1; e.g., Danielsen 2010: 20) as well as Tia DeNora's (2004 [2000]: 99) focus on embodied experience in music. Additionally, Student 6 noted that the muted ghost notes that served as Rhythmical Support Notes also provided dynamics that enhanced his groove: "It looks and sounds a lot more natural when you don't beat [hard] every eighth note […] it clearly has dynamics".

Student-Centered Applications

In order to initiate groove studies in a student-centered manner, in the guided listening I also included recordings that related to the students' personal preferences. The most distinctive example occurred with Student 5, who was getting increasingly interested in classical piano music in addition to his electric guitar studies. Therefore, I played a record of Olli Mustonen's (1996) performance of parts 4 and 5 of Sergei Prokofiev's "Vision Fugitives" as an example of impeccable timing. By doing so, I intended to indicate to Student 5 that strong rhythmical skills relate to classical piano and rock guitar performances alike. I asked Student 5 to think of an example from his currently favorite music that would feature such a strong rhythmical statement. He chose Valentina Lisitsa's (2010) rendition of the third part of Ludwig van Beethoven's Piano Sonata 23 "Appassionata", which we then listened to. In his VSR interview we watched this episode and Student 5 commented that "it was a nice gesture that we listened to a song that I suggested".

After practicing the three-step exercise in Table 7.1 with AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" as a primary example of timing, the students' task was to apply this learning to their favorite music. This order of proceeding implemented the Deductive SCME approach. As I mentioned above, Student 3 applied the three-step timing exercise to Extreme's "Get the Funk Out" and "Pornograffiti" (both on *Extreme II: Pornograffiti*, 1990). Extreme's guitarist Nuno Bettencourt had been an inspiration for him for a long time. He credited this exercise with revealing to him how his favorite riffs should be performed properly: "Extreme's Nuno's playing is so percussive, it's funny that I've liked that percussive playing so much, but I haven't known how to do it". This exemplifies the aim of the SCME approach: a pedagogue's musical expertise integrated with student-selected repertoire enables learners to realize their personal ideals musically in ways that they had not been able to do on their own. As the students continued practicing groove with

student-selected repertoire, we employed more advanced timing exercises as well. Therefore, I return to these student-centered applications in the following subchapters.

7.2 Applying Intermediate and Advanced Timing Exercises

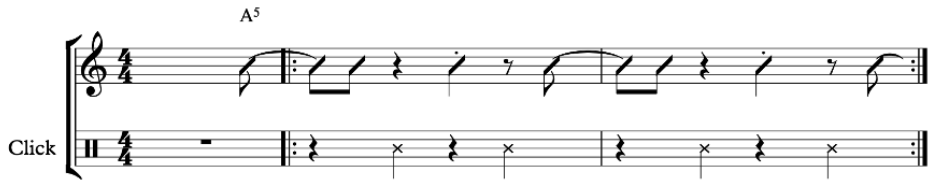
The exercises in this subchapter aim to guide students towards implying the continuous beat even more steadily and acquiring more accurate rhythmical fine-tuning than above. These exercises, or variations of them, are commonly practiced by popular musicians, and they essentially involve utilizing a metronome. Ed Friedland (1999), for example, presents this in his article "Get Great Time!" in *Bass Player* magazine. In accordance with Friedland (1999) and guitarist Wayne Kranz' (2012) statement in a *Guitar World* instructional video, I emphasize that this study does not suggest that all music should be in a metronome-like timing. Instead of setting a goal that each performance should strictly follow a metronome, the ability to perform with a metronome is rather a skill that aids the development of temporal accuracy generally. In this study, I elaborate on this set of exercises by utilizing it as a student-centered pedagogical tool and by applying it to hard rock. Below, Table 7.2 presents three essential timing exercises that I employed in this study.

Exercise 1. Practicing a rhythm figure with the metronome on beats 2 and 4.

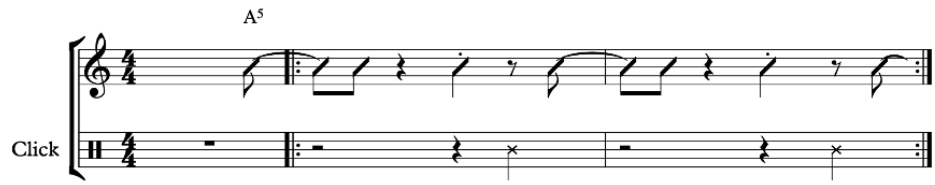
Exercise 2. Practicing a rhythm figure with the metronome only on beat 4.

Exercise 3. Practicing a mid-tempo rhythm figure at very slow tempos, e.g., 40 bpm.

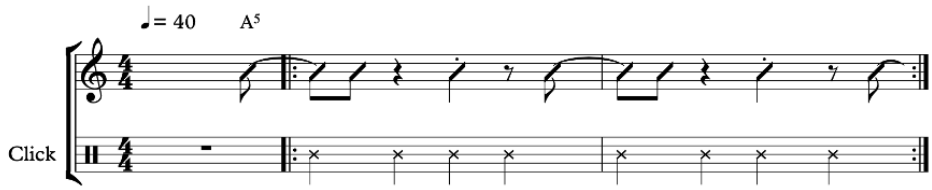
This is applied to student-selected repertoire. For example:



Exercise 1 (above). Practicing the riff of AC/DC's "It's a Long Way To the Top (If You Wanna Rock 'N' Roll) with the metronome on beats 2 and 4. Having the click on the backbeat is intended to provide the practicing musician a sense of forward motion, which is a defining feature of groove.



Exercise 2. Practicing the riff with the metronome only on beat 4. The practicing musician is required to take rhythmical responsibility and maintain a steady pulse independently. The intention is to strengthen the practitioner's internal timing.



Exercise 3. Practicing the riff at a very slow tempo. The original tempo is 132 bpm. By practicing with a quarter note click at 40 bpm, micro-rhythmical accuracy is developed. The focus is on relying on a steady eighth note subdivision, precise note durations, and avoidance of rushing.

Table 7.2. Three essential timing exercises.

Musical and Pedagogical Intentions

Of the selection of exercises above (see Table 7.2), Exercise 1 is the most common in popular music and jazz. It involves having the metronome on beats two and four, and therefore it relies on the notion that the backbeat is an essential starting point in all African American music (see Subchapter 5.1.1; e.g., Abel 2014: 49–59). My pedagogical experience has shown

that nearly all learners initially perceive a click as beats one and three. Therefore, my first aim with this exercise was that the students would learn to reverse the rhythm independently so that they would perceive the click as beats two and four. I particularly intended it to further the students' internalization of music, as they had to employ audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) in doing so. In other words, they would need to hear the music internally in order to reverse the beats. Most importantly, my intention was that by becoming accustomed to performing with the click on beats two and four, the students would experience the forward motion that the backbeat in its very essence induces (see Subchapter 5.1.1; Berliner 1994: 148–149; Abel 2014: 49; cf. Butterfield 2011). Since forward motion is commonly agreed to be a defining feature of groove (see Subchapter 5.1.1; Schuller 1968: 7; Butterfield 2010: 1), this exercise is understandably a classic among practitioners of popular music.

Exercise 2 (see Table 7.2) is considerably more demanding, as the metronome is set only on beat four. I have employed this exercise with students on various levels for several years. Even with advanced students, accomplishing an errorless performance requires extensive practice, let alone a convincing, precise, and relaxed performance. I intended this exercise to develop the students' internal sense of timing, since mastering this exercise requires greater rhythmical independence. Being synchronized with the click on beat four appears to demand a reliable internalization of the beat, which must be externalized in a well-articulated manner (see Subchapter 5.1.2 for my suggestion for a definition of musicianship). Therefore, my intention with this exercise was that the students would develop an "unfailing" beat, which Berliner (1994: 157) considers a central component of groove. By doing so, I aimed this exercise to serve as a groundwork for playing in a band where each musician communicates the pulse and provides a "uniform temporal reference for the rest of the band" (see Butterfield 2011: 16; see Subchapter 5.1.2). This intention aligns with Berliner's (1994: 349) statement that a "shared sense of the beat" is crucial in a band's joint endeavor to produce groove.

Lastly, Exercise 3 (see Table 7.2) requires yet more rhythmical precision, as it involves practicing in tempos that are drastically slower than the original performance. The students practiced the riff of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" at the tempo of 40 bpm (i.e., beats per minute) although it is originally in 132 bpm, approximately. According to my experience, this exercise is seriously challenging even for the most advanced students, and mastering it requires diligent practice over a long period of time. Firstly, I intended this exercise to correct potential rushing and other inaccuracies in the students' timing. This relies on Krantz's (2012) statement that there is obviously more room for temporal deviation at slower tempos, thus rendering them more demanding than mid-tempos. Secondly, I intended this practice to elevate the students' focus on note durations. As Subchapter 5.1.4 revealed with AC/DC's "Hell Ain't a Bad Place to Be" (*Let There Be Rock*, 1977 and *If You Want Blood…You've Got it,* 1978), control over the note durations plays a significant role in constituting different grooves. Overall, I intended this

exercise to fundamentally contribute to the students' internalization of the eighth note subdivision.

Pedagogical Observations and Analysis

When we commenced practicing Exercise 1, as shown in Table 7.2, I gave the students a set of general advice on learning to perceive that the click that they were hearing was on beats two and four. Firstly, I asked them to participate in the quarter note pulse physically by, for example, stomping their feet. Secondly, I advised them to utilize measure words for counting, so that "two" and "four" would be synchronized with the click. Thirdly, I aimed to engage the students' audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) by encouraging them to associate the click with a drumbeat where the snare drum is on beats two and four. Lastly, I encouraged them to sing the riff of "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" silently in their minds in time with that imaginary drumbeat. As I discuss below, there was variance in what type of aid different students considered to be the most important in inversing the click.

In his VSR interview, Student 1 reported that the imaginary sound of the drumbeat was especially important for learning Exercise 1 (see Table 7.2): "The drumbeat is definitely the magic word, in my case, very clearly. […] Just thinking about them [the clicks on beats two and four] like the snare drum, that helped me hearing the click the right way in my head". As his VSR interview further confirmed, hearing the click as a representation of the snare drum also helped Student 1 when we proceeded to playing with the click only on beat four (see Exercise 2, Table 7.2): "Even with that, thinking about the drumbeat helps. […] It's just kind of one hit on the snare drum that is taken off from that support". In alignment with these comments, Student 1 describes that when practicing this way, "internal hearing" supported the development of his groove in the best way. In other words, this material suggests that these exercises have the potential to develop audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). As I explored in Subchapter 2.2.2, audiation is widely regarded as an essential skill in learning to perform with high musical quality. In the context of practicing groove, Student 1 describes audiation as follows: "That you can hear, or think, even more in your head what this groove should sound like in relation to the music that is playing in the background, or the click that's in the background". This implies, furthermore, that these exercises may contribute to the skills of interplay, as it promotes perceiving the relation of one's own instrument with the rest of the band. Such an understanding of the entirety of an ensemble reflects the joint endeavor of its members to generate consistent timing (see Berliner 1994: 157, 349–350) and their continuous micro-rhythmical work on "locking the rhythm" (see Danielsen 2006: 160). Overall, Student 1's vivid association with the drumbeat may be due to his relatively extensive experience in performing live with a band.

The variety in the backgrounds of the students caused different learning experiences when they first commenced the timing exercises in Table 7.2. In comparison to Student 1, the most contrasting example occurred with Student 5. In learning to perceive that the click was on beats two and four (Exercise 1, Table 7.2), we clapped a basic drumbeat on our laps. My object was to demonstrate the connection between the click and the snare drum in this rhythm part, which had been revealing for Student 1. Contrary to my assumptions, Student 5 did not consider the drumbeat important in accomplishing the skill. This was somewhat surprising, while on the other hand it also suggests that, generally, different learners perceive timing and groove in individual ways. This variance may be due to Student 5 having less prior experience of performing with a band. Student 5 reported that employing the muted Rhythmical Support Notes on his own instrument was more important than clapping. In any case, this finding suggests that *a pedagogue crucially needs a variety of methods and references when teaching timing and groove.* Embedded in this thought is the premise that it is the pedagogue who needs to adapt to the students' needs, and not vice versa.

Nevertheless, with all the students I decided to let them inverse their perception of the click to being on the backbeat (Exercise 1, Table 7.2) and beat four (Exercise 2, Table 7.2) as independently as possible. This applies constructivist learning (see Subchapter 2.1.2; e.g., Tynjälä 1999: 365; Hoidn 2017: 21, 554), since it prompted them to reconstruct the music in their minds through audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) before playing it. The opposite approach would have been to count the rhythm for them. Then, in contrast, the students would not have done the work, and this may have led to lesser results or no learning at all, since, as expressed by Terry Doyle (2011: 7): "the one who does the work does the learning". However, as they struggled, I gradually gave them the advice to feel the beat physically, to utilize measure words for counting, to imagine the drumbeat, and to sing internally in order to inverse their perception of the click. If they still had difficulties in perceiving the beat in the correct way, I played the beginning of the exercises in unison with them. These procedures are aligned with scaffolding (see Subchapter 2.1.2; Wood, Bruner & Ross 1976: 90; Elliott & Silverman 2015: 434; Hoidn 2017: 72), as they helped the students to reach beyond their current ability and work towards the skill of independent performing. With Students 3 and 5, who had less prior experience, I employed such scaffolding to a greater degree. When Student 5 watched this in his VSR interview, he confirmed that "it was quite helpful that we played together. And also, it was good that [when playing] alone, one notices those areas for development". In terms of learning to play the exercises independently, Student 5 emphasized the importance of getting instant and concrete feedback while playing in order to adjust his timing. Regarding such instant guidance, he also considered mental images helpful: "'think that you are playing looser' or something like that, sort of 'relaxed' […] or 'tighter' or 'more vigorously'. […] It helped [in knowing] what it feels like when you play in time".

Once the students had acquired the skill of performing exercises 1 and 2 (see Table 7.2) independently, they noticed that in addition to improving micro-rhythmical precision, these exercises had further benefits. Rhythmical accuracy required that the students continuously

implied the subdivision. This was facilitated by the increasingly active physical engagement of their picking hand. This, in turn, appeared to induce musical forward motion in the students' performances, which is a fundamental feature of groove (see Butterfield 2010; Schuller 1968: 7). For example, in his VSR interview, Student 3 reflected on his learning by saying that "if the [picking] hand doesn't go with you all the time and you only try to hit those beats, then it's like you're trying to keep up with that song, but if you keep your hand moving all the time, it's like you're taking that song forward." According to Student 3, having the click on beats two and four (Exercise 1, Table 7.2) supported the development of his groove the most. He even stated that "it somehow forced me to play better". Apparently, this exemplifies the importance of the backbeat in African American music (see Subchapter 5.1; see Abel 2014). Moreover, Student 3 felt that having the click only on beat four (Exercise 2, Table 7.2) is an effective meter of micro-rhythmical consistency: "because if [the timing of the performance] stays consistent all the time, you'll automatically hit beat four when you're supposed to. [Then,] you don't have to think about it". This suggests that Exercise 2 (see Table 7.2) enhances the development of an "unfailing sense of the beat" (Berliner 1994: 157). Overall, Student 3 recognized that practicing these exercises individually had even developed his skills of playing in a band: "I have started to pay more attention that my own playing locks in with the band better".

In terms of practicing at very slow tempos (Exercise 3, see Table 7.2), the development of Student 1 especially exemplified its benefits. This exercise provided him with a realization of what relying on the eighth note subdivision means on a more profound level. As he was an advanced player even when we commenced, we could notice the improvement already in his second lesson, when he had practiced the exercises in Table 7.2 for a week. Nevertheless, the tempo of 40 bpm was initially difficult. What helped him to accomplish it was, in essence, that he discovered thinking about the silent eighth note that follows a syncopation. In this case, such a Rhythmical Support Note in "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" was the downbeat eighth note of beat one, because the preceding syncopated note is the upbeat eighth note of beat four (see notation above). Student 1 described that for the development of his timing overall the most effective realization was "finding the correct length of the eighth note and reducing the rushing of the eighth notes in the sense of allowing it to sound to the end". This suggests that impeccable timing, which implies the beat, relies *not only on the precise commencements of the tones but also on their accurate endings*. Furthermore, Student 1 analyzed his learning as follows: "I got the concentration better perhaps, and then, of course, I brought in those [muted] ghost notes as well. And when it was combined with playing it in one's own style, it sure did improve the groove". Perhaps corresponding to this, Student 1 started doing a dancing movement with his guitar when he empathized with a groove during these exercises. As it appeared natural to him, I commented that it "should never be eradicated". This aligns with student-centeredness, as it showed acceptance of the student's "individual factors" (see McCombs 2008: 2). Referring to Chapters 3 and 4, this aimed to support his growth into his musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]), to consolidate his musical identity (see Hargreaves et al. 2002), and to support his bodily engagement in music (see DeNora (2004

[2000]: 99). When we concluded that he had achieved the ability to play in 40 bpm, we jammed together at the original tempo (132 bpm). We played without a click or a drum machine, and instead enjoyed the feeling of totally locking in together.

Somewhat similar experiences of "striking a groove" (see Berliner 1994: 349) by practicing at slow tempos occurred with all of the students, even with the ones who had less prior experience of practicing timing. Confirming the assumptions that I presented above, the students consistently expressed that one benefit of this practice was that they detected rushing and consequently corrected it. They reported that all of the timing exercises were quickly productive, although practicing at slow tempos, especially, was very demanding initially. For example, Student 3 noticed that the reduced rushing transferred quickly to the original tempo: "I noticed that I've had a rushing problem. […] That [tempo] 40 has felt uncomfortable. It almost feels like you're getting physically unwell when trying to stay in that [tempo] 40. But then you are rewarded. […] Because the difference is so massive, compared to when you hadn't done this yet." More precisely, Student 6 commented in his VSR interview that one advantage of the click was that it provided concreteness in temporal accuracy: "The endings of the notes, that you stop the notes at the correct time, […] the click illustrates it […] Otherwise you may not realize to pay attention to it".

In conclusion, Student 1's mention above of "playing in one's own style" is most interesting concerning this study's focus on student-centered pedagogy in popular music. It implies that these exercises, *despite being demanding, allow creativity and personalization* that relate to the student-centered applications that I explore below. It appears that the timing exercises in Table 7.2 are essentially open, in the sense that they can be applied to virtually any repertoire. The exception is, however, Exercise 3; songs that employ clearly swinging phrasing are not as natural to practice at extremely slow tempos, because the phrasing is excessively affected by altering the tempo. Taking this into account, we applied the above set of timing exercises to student-selected repertoire as follows.

Student-Centered Applications

After the students had familiarized themselves with the concept of timing by practicing the riff of AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)", they moved on to applying these exercises to songs of their own choice. Therefore, this process represents Deductive (top-down) SCME pedagogy: it commenced with me, as the pedagogue, presenting a concept from my musical expertise, and it then progressed to applying it to the students' favorite music (see Subchapter 4.2.1).

In the case of Student 1, the student-selected repertoire for practicing timing consisted first of Porcupine Tree's "Blackest Eyes" (*In Absentia,* 2002) and Fleur East's "Sax" (*Love, Sax and Flashbacks,* 2015). These selections were practical, since they were songs that he regularly performed live with his bands. Importantly, he also chose Van Halen's "I'm the

One" (*Van Halen,* 1978), which represented his most favorite music and appealed to him as being particularly groovy.

As "Blackest Eyes" features 16th note syncopation, practicing in 40 bpm (see Exercise 3, Table 7.2) turned out to be an efficient exercise for finetuning timing. This was certainly effective when I asked Student 1 to sing the riff percussively while playing it. With "Sax" and "I'm the One", we noticed how systematic picking directions, and the utilization of muted ghost notes as Rhythmical Support Notes, finetuned timing and affected the groove. Concerning both songs, Student 1 commented during a lesson that the percussive muted notes "help the groove very much". With "I'm the One", specifically, we made an alteration in Student 1's technical approach so that he started systematically employing downstrokes on downbeats and upstrokes on upbeats.[38] This was ultimately a turning point in making his timing lock in. As he commented at the end of the lesson: "On the record it sounds so good, but almost every time when someone else plays it, there's always a little bit of something, like it's not quite there. This was really a significant step".

Concerning the student-centered approach in particular, Student 1's comment below suggests that inspiring studies that rely on very familiar and student-selected repertoire can nevertheless be detailed and efficient as well:

> I was really thrilled about it. What could be better than getting to play Van Halen? It's always been one of the greatest inspirations anyway. And that song has been a favorite guitar playing-wise for quite a while, too. And we got a lot out of that, still, zooming in on it with really new eyes and so.

In other words, Student 1's studies revealed new aspects of his favorite music, for which he was intrinsically motivated (see Deci 1975: 23). Evidently, this process actualized such student-centered learning where the pedagogue is not passive, as prescribed by, for example, Sabine Hoidn (2017: 24), and as I mapped out in Chapter 4. On the contrary, I was an active participant; I unfolded a new level of groove by analyzing Student 1's favorite music, although he already had considerable prior knowledge of it. This exemplifies constructivist pedagogy in popular music education (see Subchapter 2.1.2; e.g., Tynjälä 1999: 365; Hoidn 2017: 21, 554). Moreover, such an active role for a pedagogue exemplifies how the SCME approach is different from Lucy Green's (2008: 31) study, wherein the teachers' "standing back" was purposeful in order to allow the students' bands to start playing their favorite music.

Most interestingly, when Student 1 heard his playing on the videos, he noted that these exacting timing exercises had not suffocated his musical identity (see Hargreaves et al. 2012): "I think it can be heard in this previous clip that it does sound like me. Only it's more accurate". This comment touches upon the purpose of SCME pedagogy: *the learner*

[38] I present an example of this approach concerning picking directions in Subchapter 7.5.

becomes, or retains being, themselves, while they become more proficient in their musical expression through the interaction with a musical expert pedagogue. To paraphrase the above comment of Student 1, the ultimate goal of the studies is, then, that a learner becomes an enhanced version of themselves. This corresponds to eudaimonia; I discussed in Subchapter 2.2.4 that Marissa Silverman (2020: 31) describes such human flourishing as a person being "the 'best' version of themselves". Importantly, this episode can be interpreted as the development of a musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]), which I explore further below.

Student 4 chose to bring songs by Led Zeppelin and Deep Purple to the guitar lessons. I explore his studies in greater detail in Subchapters 7.3 and 7.5, which focus on phrasing and applying groove in improvisation, respectively. Concerning timing, nevertheless, he importantly revised his picking directions and started systematically following a principle of having downstrokes on the downbeats and upstrokes on the upbeats[39]. In accordance with Student 1, the utilization of student-selected repertoire retained Student 4's intrinsic motivation (see Deci 1975: 23): "It was very natural, of course. I feel it helps in getting motivated to develop oneself and learn when it is done through material, which is also very important to oneself as a listener". As we had mutually planned a personalized learning process for him, Student 4 expressed that his personal preferences had been heard: "It was clearly thought about, what I would be interested in and what would be worthwhile to focus on this autumn". Interestingly, however, Student 4's comments also imply that student-centeredness is not the sole ideal: "It was also very nice that you've been there a little bit, sort of meeting me halfway, and I don't need to know specifically what I want to do, but you've had suggestions like 'okay, to develop this thing we could try such and such'".

Importantly, the students evaluated the utilization of student-selected repertoire as efficient work. Student 4 commented on choosing representative examples of groove from his favorite music for the guitar lessons as follows: "I'm sure that what we're trying to study here is also internalized better when you need to think about it more actively and justify what you think". This implies that activating a student by assigning them to select repertoire promotes deeper learning. This aspect is aligned with Hoidn's (e.g., 2017: 554) and Doyle's (2011: 7) arguments that I discussed in Subchapter 2.1.3. Clearly, student-centeredness does not involve passivity in this case.

Furthermore, student-selected repertoire provided a clear auditory guideline during the studies, as described by Student 4: "It is very quickly rewarding, that is, if something falls in its right place, you notice immediately that 'this sounds just like this thing that I have thought is really cool for a long time'". Similarly, Student 1 experienced a development in utilizing audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Most interestingly, it had even further meanings for Student 1. Emphasizing audiation in this student-centered approach clarified his personal long-term musical goals: "Inner

[39] As mentioned, I present an example of this approach to picking directions in Subchapter 7.5.

hearing has at least improved. […] I see my goal in this thing even better, like 'that's what I want to sound like'. I have a clearer vision of what this should sound like". This comment suggests the joint actualization of audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) and a musical true self (see Subchapter 3.4; see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]).

To summarize the students' comments above, they can be viewed as being examples of intrinsic motivation (see Deci 1975: 23), the development of a musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]), and audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). As these phenomena occurred jointly, they imply the actualization of the Intrinsic Triumvirate of Learning Music that I presented in Subchapter 4.3. I explore this further in the following subchapter, which focuses on Moderate Swing Phrasing, as it required even more intricate skills of audiation.

Pedagogically, it appears important that the above exercises address common musical components that affect timing and thereby also groove. Working in this way, even though I was not initially familiar with all of the songs that, for example, Student 1 chose to study (cf. Green 2008: 35), my awareness of the components of groove *on a general level*, and their corresponding exercises, enabled this learning process. The applicability of such exercises was useful in the students' independent practicing as well. As expressed by Student 3: "It was quite fun to see how the same principle applies to riffs of so different styles".

Overall, although practicing the students' favorite music was favorable and motivating, the timing exercises in Table 7.2 were still challenging for all of the students. They become easier only after applying them to several song examples, which is typical in my experience. These learning processes relied on the students practicing diligently between the weekly lessons and choosing the repertoire. This implies that instrumental studies can be encouraging and personal yet demanding and effective when the SCME approach integrates student-centeredness with a pedagogue's musical expertise.

7.3 Practicing Implied Moderate Swing Phrasing in Hard Rock

As I discussed in Subchapter 5.1.3, a common feature in funk is the phrasing of 16th notes so that it is in-between even and swing phrasing (see Danielsen 2006: 71, 77, 80, 83). In Subchapter 5.1.3 I explored this phenomenon through The Meters' "Hey Pocky A-Way" (*Rejuvenation,* 1974) and presented the term Moderate Swing Phrasing. As the study on the live version of AC/DC's "Hell Ain't a Bad Place to Be" (*If You Want Blood…You've Got it,* 1978) in Subchapter 5.1.4 (see Figures 5.8 and 5.10) suggests, similar features can be found in hard rock groove as well. As this phenomenon is more subtle in hard rock, I termed it Implied Moderate Swing Phrasing. Therefore, in Table 7.3 below I present an exercise for practicing it initially in funk, where it is more obvious. As the exercise proceeds rather logically, I would not be surprised if similar approaches have been employed by other

pedagogues as well, although I have not encountered them elsewhere. Consequently, I present another exercise for importing Implied Moderate Swing Phrasing from funk to hard rock.

Step 1. Practicing a rhythm figure by employing even 16th note phrasing.

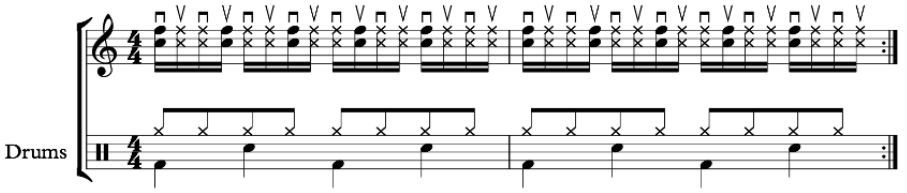
Step 2. Practicing the same rhythm figure by employing swinging 16th notes.

Step 3. Practicing the rhythm figure by employing phrasing that is in-between even and swing, i.e., Moderate Swing Phrasing. NOTE that the drumbeat does not affect the 16th note phrasing.

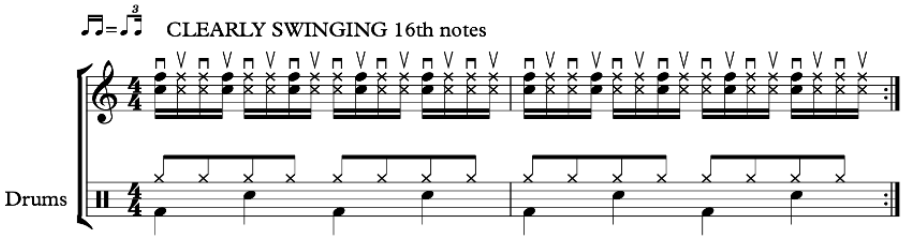
This may be applied to student-selected repertoire when stylistically appropriate.

For example:

EVEN 16th notes



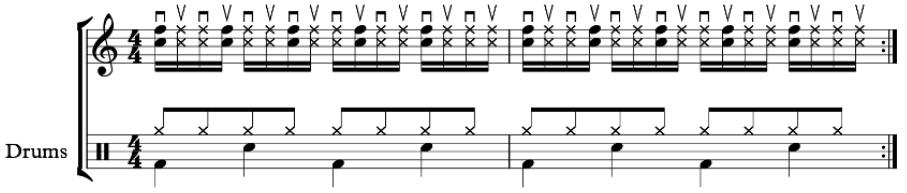
Step 1 (above). A funk rhythm pattern from Red Hot Chili Peppers' "If You Have to Ask" is practiced by employing even 16th note phrasing. The drums are deliberately simplified (see text).



Step 2. The same rhythm pattern is practiced by employing swinging 16th note phrasing.

In-between even 16ths and ♬=♫

i.e. MODERARELY SWINGING 16th notes



Step 3. The pattern is practiced by employing Moderate Swing Phrasing, i.e., the amount of swing is in-between steps 1 and 2. The practitioner searches for a natural amount of swing by feeling. ***After these steps, the rhythm figure is practiced along with the original recording in order to fine-tune the amount of swing through imitation.***

Table 7.3. A three-step exercise for practicing Moderate Swing Phrasing in funk.

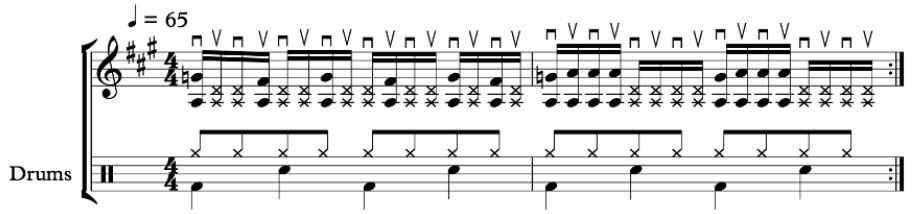
As Table 7.3 (above) illustrates, a rhythm pattern similar to Red Hot Chili Peppers' "If You Have to Ask" (*Blood Sugar Sex Magik,* 1991) can be practiced by employing different forms of phrasing. Similar rhythm parts can be found in several funk songs, for example James Brown's "Hot Pants, Part 1" (1971). In step 1, the rhythm pattern is first played by utilizing even phrasing. In Step 2, the same part is played by employing clearly swinging phrasing. In Step 3, the part is performed with phrasing that is in-between the two previous ones. Step 3 thus represents a variant of Moderate Swing Phrasing. Importantly, after this is done, a learner needs to practice the part by playing along with the original recording. In doing so, the focus is to imitate the phrasing of the recording as closely as possible.

Musical and Pedagogical Intentions

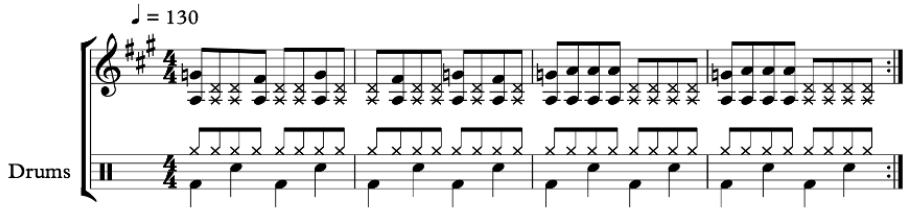
My hope was that once the students had practiced phrasing by taking the amount of swing to both extremes, their aural perception and technical control of the phenomenon would increase. I expected the imitations of the recordings to be more precise thereafter. In other words, this three-step practice routine may be regarded as a technical tool with which I wished to guide the students towards absorbing these finer nuances. Such finer nuances of phrasing are, in turn, a form of artistic expression. In essence, the three-step exercise would be too mechanical as the sole source of learning phrasing. On the other hand, playing along with records does not guarantee that a learner directs their attention to the fine-tuning of phrasing to a sufficient degree. According to my experience, most students need guidance in detecting the more intricate nuances and develop them gradually. Therefore, I intended the three-step phrasing exercise to function as an "ear opener" (see Green 2002: 214–215) that would help the students discover the appropriate feel of a particular groove. The last phase of the learning process, finetuning through imitation, is in accordance with the informal popular music learning practices explored in Subchapter 2.2 (e.g., Green 2008: 6, 10; Berliner 1994: 95–99).

In order to import this to hard rock groove, I present an exercise where a hard rock riff is practiced initially as a funky variation, thus importing Implied Moderate Swing Phrasing from funk to hard rock. Table 7.4 illustrates this below.

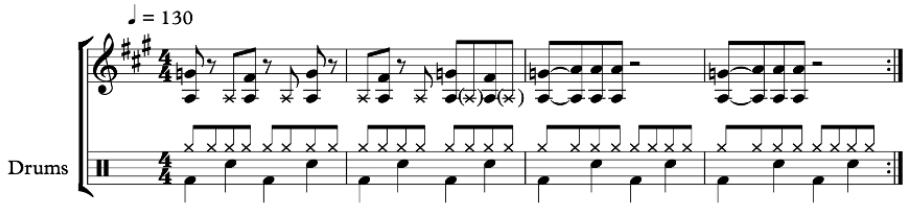
EXERCISE FOR IMPORTING IMPLIED MODERATE SWING PHRASING FROM FUNK TO HARD ROCK:



Steps 1a–c (above). *A funky variation of the riff of AC/DC's "Hell Ain't a Bad Place to Be" is practiced by employing a) even, b) swinging, and c) Moderately Swinging 16th notes – identical to the way "If You Have to Ask" was practiced previously (see Table 7.3). This is done over a drumbeat that employs a half-time feel. Thus, the guitar appears as 16th notes (N.B. the tempo is 65 bpm).*



Step 2. *Once Moderate Swing Phrasing is acquired, the drums are taken back to the feel of the original tempo (i.e., NOT with a half-time feel anymore).* ***The guitar maintains the Moderate Swing Phrasing.*** *Note that the guitar is performed exactly at the same pace as in Step 1 (the 16th notes at 65 bpm equal 8th notes at 130 bpm). Thus, Moderate Swing Phrasing is* ***imported to the eighth notes*** *of the original tempo.*



Step 3. *Excessive funkiness is reduced by leaving out most of the muted filling notes. Ultimately, the Implied Moderate Swing Phrasing appears as extended downbeat eighth notes in bars 1–2 and consecutive eighth notes in bars 3–4. Subsequently, the minutely rushing upbeat eighth notes in bars 1–2 (see Subchapter 5.1.4) is absorbed by playing along with the record.*

Table 7.4. Importing Implied Moderate Swing Phrasing from funk to hard rock.

Table 7.4 (above) employs AC/DC's "Hell Ain't a Bad Place to Be" as an example to illustrate how a hard rock riff, the subdivision of which is eighth notes, can be initially practiced over a drumbeat that employs a half-time feel. In other words, the guitar riff is played exactly at the same pace, but now over a drumbeat that appears twice as slow. When comparing steps 1 and 2, the eighth notes of the original tempo (130 bpm) appear as 16th

notes over the drumbeat in half-time (65 bpm). Through this operation, the three-step phrasing exercise for practicing Moderate Swing Phrasing in Table 7.3 is applied. In Step 1, a funky version of "Hell Ain't a Bad Place to Be" is practiced in three ways: first evenly, secondly as clearly swinging, and thirdly by employing Moderate Swing Phrasing. Step 2 presents the new feature of this exercise: once the Moderately Swinging version is acquired, the drumbeat is changed back to the original feel. The essence is that the guitar should play exactly as in Step 1 c), only the drumbeat changes. Consequently, the phrasing of the guitar's eighth notes is now Moderately Swinging. My intention was that the students would thus learn to perform the extended note durations of the downbeat eighth notes and the Moderately Swinging consecutive eighth notes (see Subchapter 5.1.4). In Step 3, excessive funkiness is reduced by leaving out the muted notes except for the ones indicated, which serve as Rhythmical Support Notes.

Exactly as with the funk example in Table 7.3, the fine-tuning of the phrasing is, finally, accomplished by playing along with the recording, in this case the live version of "Hell Ain't a Bad Place to Be" (*If You Want Blood…You've Got it,* 1978). As the exploration in Subchapter 5.1.4 revealed, the upbeat eighth notes in bars one and two of the riff in "Hell Ain't a Bad Place to Be" are performed in a rushing manner. Obviously, the exercise above does not address that. This anticipation is so minute that it is most naturally absorbed by being aware of the urgent character of the upbeat eighth notes and adjusting one's performance with the record.

Thus, my intention was that the students would acquire access to the expressive variations and idiomatic variations (see Bengtsson & Gabrielsson 1969: 95–96) that essentially constitute a significant groove (see Danielsen 2010: 4), as I discussed in Subchapter 5.1.4. By learning to perform "Hell Ain't a Bad Place to Be", both with Implied Moderate Swing Phrasing (as in the live version on *If You Want Blood…You've Got it,* 1978) and without it (as in the studio version on *Let There Be Rock,* 1977), I intended that the students should acquire the ability to perform the same riff with *different grooves*. This relates to Danielsen's (2006: 40) notion of different performances being analogous to interpreting the same sentence with various gestures (see Subchapter 5.1.4). As with the previous timing exercises, I regard this exercise as an open frame that can be applied to student-selected repertoire.

Pedagogical Observations and Analysis

When I guided the research participants in practicing the introductory funk example in Table 7.3 (see above), I introduced the different forms of phrasing by associating them with musical references, and I also mimicked the desired phrasings by singing. For a reference outside funk, Toto's "Rosanna" (*IV,* 1982) exemplified a clear 16th note shuffle. By doing so, my intention was to direct the students' focus towards what the different phrasings sounded like, instead of theorizing about the phenomenon excessively. As an introduction, we also played in unison in order to concretize the different phrasings. After the students

had practiced the three different phrasings separately, I asked the students to play them consecutively, looping a cycle that included four bars of each phrasing. My intention was that especially the minute difference between the even and Moderately Swinging phrasings would become as clear as possible when they were performed in succession. Overall, my hope was that there would be as much playing and as little talking as possible in the lessons. Therefore, I often guided the student simultaneously as they repeated the exercise without interruption.

As Student 1's favorite musical genre was hard rock, it was suitable to subsequently import this skill from funk to that style. He was already familiar with AC/DC's "Hell Ain't a Bad Place to Be" and liked it. We approached Implied Moderate Swing Phrasing by listening to the same two versions of "Hell Ain't a Bad Place to Be" that I explored in Subchapter 5.1.4 (i.e., the studio version on *Let There Be Rock,* 1977, and the live recording on *If You Want Blood…You've Got it,* 1978). After analyzing their differences briefly, we played the exercise in Table 7.4 (see above) in unison, in order to import Implied Moderate Swing Phrasing from funk to hard rock. Finally, Student 1 played along with the live recording of "Hell Ain't a Bad Place to Be". Student 1's comment on watching the video-documentation of such an episode suggests that practicing the extreme forms of phrasing helped in adjusting to the amount of swing on the recording: "It helped perceiving better what there might be in-between. And then when playing along the record you heard what it was like in this song originally, and that helped finding it by ear". Similarly, Student 4 recognized that this practice helped in absorbing such an intricate component of hard rock groove: "Looking for it via the extremes like that makes it so much easier to hear such small nuances". Moreover, Student 1 commented that learning to vary the amount of Moderate Swing Phrasing was revealing, even if he was well-familiar with "Hell Ain't a Bad Place to Be" already before this study. As formulated by Student 1: "Conscious thinking of what actually happens [in the song], how even or how swinging [the phrasing is] and varying it really with the help of their extremes, it's been somehow eye-opening".

An expected similarity among the students who studied groove was that they would all experience playing along with a record as important. However, there was variation among the students in how they perceived and absorbed Implied Moderate Swing Phrasing. In his VSR interview, Student 1 reported that listening to musical examples were central, while mental images were not as effective with him: "Listening is extremely good. And having examples. I would not necessarily look at it from that verbal perspective as such. When we first thought about some adjectives [that describe] what it sounds like, it might not help with the groove. Or in my case it wasn't the thing, but it's the music hearing". In contrast to Student 1, Student 6 recognized mental images that describe music verbally as a helpful reference for constituting the desired kind of groove: "I started thinking when you said that 'relaxed' and 'round', then that mental image helped me more maybe [than the term swing]".

In further detail, the learning process of Student 6 somewhat contrasted with the other students, and with my prior experience. An interesting and important finding was that he

was confused by the term swing, as in Moderate Swing Phrasing. In his performance, he started overdoing swing phrasing initially. As he described, "I was a little distracted by swing, so I kind of left it away and I thought about the roundness, then that maybe opened up a little bit what it should be like. And from there it started slowly getting better". This distraction was most probably related to Student 6's extensive background in jazz, as he reported associating the term with a larger amount of swing. He mentioned thinking about a shuffle, meaning a triplet feel (the SPS of 0.667, see Subchapter 5.1.3), which clearly exceeds the amount of swing that we strived for in "Hell Ain't a Bad Place to Be". Comparing Student 6's experience with Student 1's and Student 4's comments on perceiving this phenomenon suggests an important pedagogical aspect: the phrasing that a learner with a rock background considers as swing may not be regarded as swing by a jazz student. A jazz-oriented musician may expect a larger amount of unevenness if the term swing is utilized. For a learner accustomed to rock or heavy metal, in contrast, the difference between Implied Moderate Swing Phrasing and strictly even phrasing may appear more radical. The saliency of this notion is that *a pedagogue evidently needs to have a variety of ways to describe this phenomenon, as it appears to be sensitive to learners' musical backgrounds.* This finding also contributed to my decision to finally term this element of rock music Implied Moderate Swing Phrasing, as it underlines that the phrasing only *implies* a minute proportion of swing and should not be confused with a triplet feel (see Subchapter 5.1.4). In his VSR interview, finally, Student 6 concluded that the term swing may be the correct way to express an element in this groove, although it was confusing for him at first: "In a way it's the right way to express it. Maybe I just overdo it". Interestingly, Student 6 also associated playing laidback with practicing the groove of the live version of "Hell Ain't a Bad Place to Be". Although he perceived it differently than the other students, Student 6 acquired the same groove and felt that it was suitable to import from funk to hard rock: "It comes naturally in that style, so it's a pretty good way. It's clear through groovy funk because you hear a lot of it in that music".

Although Student 6 absorbed the desired groove well, his initial confusion exhibits an interesting aspect of student-centered learning. Student 6 had not listened to classic rock extensively, and therefore wanted to study it in the guitar lessons to broaden his ability. In other words, his learning process was not built on his musical background but instead served as a contrasting example in this research material. When he watched his lessons in the VSR interview, he observed that he had experienced uncertainty over what the desired groove should sound like: "There it can be seen that I'm not sure how much it should…that I don't have that base of hearing yet, what it should sound like. But yes, it's good to look for it like that". This suggests that his learning was at that point challenging because he could not rely on audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). This, in turn, suggests that *learning groove comprises such intricate nuances that it should crucially include the utilization of student-selected repertoire.*

Student-Centered Applications

After practicing the introductory example of "Hell Ain't a Bad Place to Be", the students' task was to detect Implied Moderate Swing Phrasing in personally favored music, or to choose songs where it could be applied. In this process, Student 4 noticed that some of his early favorite bands, Led Zeppelin and Deep Purple, utilize Implied Moderate Swing Phrasing frequently. Therefore, we continued studying this phenomenon through Led Zeppelin's "Whole Lotta Love", "Bring it on Home" (both on *Led Zeppelin II,* 1969*)*, and "Out on the Tiles" (*Led Zeppelin III,* 1970), and Deep Purple's "No No No" (*Fireball,* 1971), among others. We were both already very familiar with the music of Led Zeppelin and Deep Purple before this learning process began. Overall, the studies with Student 4 could be described so that we, the student and the pedagogue, *actively researched music together.* I suggest this setting as a fundamental characteristic of the SCME approach. Instead of imparting knowledge, my approach was rather to ask Student 4 to describe what he heard on the records that we listened to together during the lessons. In brief, the following exemplifies this approach:

> *[Student 4 and I listening to "Out on the Tiles" by Led Zeppelin. I pause the record.]*
> I: So, what does that phrasing make you think?
> Student 4: There you can hear the roundness very clearly, even on the guitar.

This approach contrasts with formal instruction that is driven by an authoritarian teacher (see Schweisfurth 2013a: 13). Here, the role of the pedagogue is essentially that of a co-worker (see Weimer 2013: 59–62), a more experienced musical colleague (see Berliner 1994: 41), and is still more active than merely being a facilitator (see Biesta 2012). As such, a musical expert pedagogue is thus an authority (cf. Schweisfurth 2013a: 13) who promotes students' learning and guides them to discoveries by asking questions instead of lecturing. This view relates to Karin S. Hendricks' (2018: 7–9) view of compassionate music teaching, which I discussed in Chapters 3 and 4.

Student 4 commented on this way of working in his VSR interview as follows: "One very important part is most certainly to examine very carefully the original recording, how it has actually been played". He went on to express that the input of a pedagogue is desired in order to make the studies concrete and efficient: "And it has always been good that you have had very concrete advice or suggestions to give concerning how to get closer to some aim, or what could be tried at least". As an example of such concreteness, we mimicked the groove of "Whole Lotta Love" by singing the rhythm part together in addition to doing the exercise in Table 7.4 (see above) and playing along with the original recording. Similar applications of rhythmical solfège in learning groove has been suggested by, for example, Friedland (1999). Student 4's comment in his VSR interview imply that it even enhanced his all-encompassing musicianship: "It feels like a useful thing, too. I think playing happens in the best way when it's somehow holistic or all-encompassing, […] the better you can feel it".

Overall, Student 4's comments suggest that even working with student-selected repertoire can be exacting and goal-directed.

Fundamentally, for Student 4 the saliency of learning Implied Moderate Swing Phrasing was that he discovered a new subtlety in his musical roots. He now heard the music of Led Zeppelin and Deep Purple with fresh ears. He reflected on his learning process as follows.

> I've learned how these specific, concrete things in the way of playing affect the end result. And so, I have a better idea of through what kind of things one can concretely move towards the sound one would want. […] For example, those songs that have been listened to and played [in the lessons], why do they sound like they sound.

This realization can be rephrased so that Student 4 discovered a new aspect of why his favorite music initially sounded so good to him. Therefore, this learning process provided a *deeper awareness of what had primarily been personally inspiring in music*. Such musical self-awareness aligns with David J. Elliott and Marissa Silverman's (e.g., 2015: 380) praxial philosophy of music education, and it applies Carl Roger's (e.g., 1994: 56–57) humanist view of self-discovery being central to meaningful learning.

The above studies with Student 4 can thus be regarded as an actualization of *the Intrinsic Triumvirate of Learning Music* that I presented in Subchapter 4.3 and Table 4.1. In other words, as Student 4 had a background of favoring listening to Led Zeppelin and Deep Purple, he was intrinsically motivated (see Subchapter 2.1; Deci 1975: 23) and, potentially, this supported the development of his musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]). Through his background in listening to the songs that we studied, he was able to utilize the audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) that the intricate details of Implied Moderate Swing Phrasing required.

The learning process of Student 1 was similar, but it also had further applications. His first suggestion for student-selected repertoire was Van Halen's "Panama" (*1984,* 1984). We examined the groove of the song's chorus riff carefully, and Student 1 practiced applying Implied Moderate Swing Phrasing in it. As a result, we agreed that Student 1 had gotten closer to the authentic feel of the original recording. As a second song example, Student 1 brought a song to the lesson that he had written for his own band.[40] I suggested that Student 1 could experiment with Moderate Swing Phrasing for a funkier groove in his own song. Instead of teacher-directed instruction, this may be seen as the advice of a more experienced colleague, resembling the "exchange of knowledge" that Berliner (1994: 41) describes as an informal learning practice among jazz musicians. Later in the semester, Student 1's band recorded and released that song. Consequently, Student 1 reported that Moderate Swing Phrasing had been helpful in the studio work as a consciously applied musical tool. In his VSR interview, Student 1 described that studying his own song was both pleasant and

[40] Neither the name of the song nor the band is mentioned here due to anonymization.

efficient: “It was very fun to look into it with someone who has a vision. You might try [the song] a different way, a little more analytically, would it be even better and so on. So that is always appreciated, definitely. […] I think the groove of that riff has improved”.

Importantly, we were exacting with musical detail even when we applied student-selected repertoire. In contrast to the criticism that student-centered pedagogy has received (see Subchapter 2.1), both Student 1 and I worked actively. Consequently, Student 1’s VSR interview confirmed that the studies had substantial musical results. He expressed that the development of his musical ear through these exercises was “one of the biggest things” in this learning process. When he described his progress, he mentioned that he had started perceiving more accurately “for example, the amount of swing, [and] the durations of the tones at a microscopic level in [his] own playing”. According to Student 1, such an improvement in monitoring his own performance also helped him when working with a band: “In band playing, too, it's always hard to hear the entirety as it is […]. In the moment of playing, you get a more realistic impression of what it actually sounds like [after this learning process]”. Furthermore, the comments of Student 1 suggest that practicing Implied Moderate Swing Phrasing is applicable to various repertoires and useful in individual learning: “It gave an impulse to think about other riffs along these lines, too”. It inspired him to finding different interpretations of a song by varying the amount of swing in his phrasing: “You can play the same riff in so many ways, even if you play it correctly as written”.

In conclusion, Student 1 became aware of a new approach to both his favorite music, Van Halen, and his own compositions by applying Implied Moderate Swing Phrasing. As above with Student 4, this emphasis on self-actualization and self-awareness implemented Elliott and Silverman’s (e.g., 2015: 380) praxiality and it can be regarded as a musical actualization of Roger’s (e.g., 1983: 52) humanist approach. More precisely, the finetuning of phrasing firstly involved audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) that relied on Student 1’s background in listening to Van Halen intensively. Secondly, he was intrinsically motivated (see Deci 1975: 23), as it was music that he wanted to learn, primarily for the music’s own sake instead of extrinsic rewards. Thirdly, as the music felt very personal to him, the learning process apparently even actualized his musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]). This was likely especially when we utilized his own composition in discovering new musical possibilities. To summarize these key aspects, Student 1’s studies may be seen as actualizing the Intrinsic Triumvirate of Learning Music. This exemplifies the purpose of the SCME approach to a large extent. Overall, these results suggest that when the SCME approach is implemented through these exacting yet applicable practices, student-centered pedagogy can be musically ambitious and effective instead of passivating.

7.4 Time-Feel and Interplay in the Band Class

In this subchapter I analyze learning groove in a workshop that involves an entire band setup consisting of a drum set, electric bass guitar, electric guitars, and keyboards. This perspective is essential to include in the present study since interplay within a band is of key importance in groove, as I explored in Subchapter 5.1.5. Therefore, focusing only on individual guitar instruction would appear to be insufficient. According to my experience, it is far more natural to practice time-feels and participatory discrepancies in a band setting than by utilizing a metronome in isolation. All of the pedagogical observations below are derived from one lesson. The object of this band workshop that I had designed was not to rehearse repertoire, but to concentrate specifically on the production of different grooves.

Musical and Pedagogical Intentions

In essence, I conducted a pedagogical experiment in which I tested the suggestions I made in Subchapter 5.1.5. In alignment with Matthew W. Butterfield (2010: 166, 168), I do not treat time-feels and participatory discrepancies as the primary components in constituting groove overall (cf. Keil 1966: 341; Keil 1987: 277; Keil & Feld 1994: 155, 171; see also Butterfield 2010: 157–158). Instead, I attempt to apply them as a source of the characteristics of *different* kinds of grooves, for example hectic or heavy ones. As I discussed in Subchapter 5.1.5, these phenomena concern asynchronous timing of minute proportions, for example 20–30 milliseconds. In accordance with Butterfield's (2010: 158) view, my experience with different time-feels and participatory discrepancies have convinced me that they are mainly experienced as emotive impressions and not necessarily perceived as asynchronous events. I presume that the reported disagreements on these phenomena are caused by different individuals perceiving them differently, which is, in turn, due to the fact that they deal with such diminutive proportions. Considering all of the aspects above, in the following pedagogical episode I concentrated my guidance primarily on aural imitation and only secondarily on theoretical understanding. Nevertheless, along with the students we also analyzed these phenomena and consciously exaggerated them. By doing so, I aimed for maximal concreteness, as I shall explain further below. Table 7.5 illustrates the conceptions that we employed with the students. Note that piano does not appear on the original recordings that I refer to, but it was featured in the pedagogical material of this study.

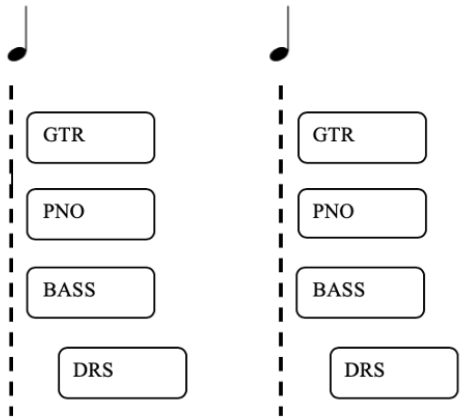


Illustration 1 (above). A laidback time-feel and Participatory Discrepancies. All instruments play with a heavy feel and appear after the illusory beat (to the right of the dashed line). The drums are more laidback than the other instruments. A similar mental image was utilized pedagogically when studying Black Sabbath's "Sabbath Bloody Sabbath".

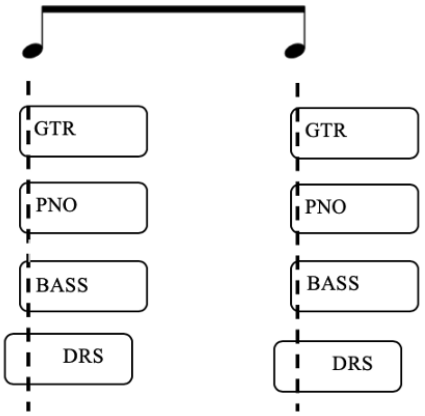


Illustration 2. An ahead of the beat -time-feel and Participatory Discrepancies. All instruments play with a rushing feel and appear before the illusionary eighth note (to the left of the dashed line). The drums, particularly the hi-hat, are ahead of the other instruments. A similar mental image was utilized pedagogically when studying The Police's "Next to You".

Table 7.5. Illustrations of utilized Time-Feels and Participatory Discrepancies.

As the first practice to be implemented, I intended to guide the students to detecting these rhythmical nuances by listening to original recordings together during the lesson. This applied the traditional practice of popular (and jazz) musicians learning informally by imitating records (e.g., Berliner 1994: 95–99; Green 2008: 6, 10; see Subchapter 2.2.2). In this case, however, the focus was not on studying individual parts, for example transcribing solos (cf. Berliner 1994: 95), but on imitating the rhythmic feel of an entire band. In the analyses of these nuances, I primarily aimed at encouraging mental images that describe the

feel of the song examples, as inspiration for the students' own performance. This actualized Butterfield's (2010: 158) remark (see Subchapter 5.1.5) that the lateness or earliness may not always be audible, but rather that the recognition of their expressive effects is of primary importance. Essentially, I expected the learning to happen through intensive playing, meaning that the students would repeat a rhythm part continuously while trying to imitate the rhythmic feel that we had detected.

On the other hand, I also aimed to concretize these phenomena by addressing the asynchronous timing through technical means. In order to do so, my pedagogical experiment with the students' own performances was to guide the students to initially exaggerate the desired time-feels (see Table 7.5) and then to gradually adjust their discrepancies towards the appropriate proportions. In other words, I intended the students to perform the tones initially as late as possible in order to achieve a laidback time-feel, and conversely to perform the tones as early as possible when striving for an ahead-of-the-beat time-feel. Thus, this practice actualized Danielsen's (2010: 29) concept of broadening the beat bin (see Subchapter 5.1.5.2), with the intention of increasing the students' "rhythmic tolerance" (see Subchapter 5.1.5.2; Danielsen 2010: 29; Johansson 2010: 76). In this, my hope was to subsequently guide the students to performing the discrepancies with the realistically minute proportions. More specifically, as I applied this to specific instruments in proportion to the rest of the band, I fundamentally approached the band as having multiple layers and individual instruments as having different functions. This implemented Danielsen's (2010: 33) view of a band as comprising different "pulse locations suggested by the different layers", and the disparity and tension between these layers (Danielsen 2006: 88, 90). I believed that this was possible, since the students had already extensively practiced accurate timing and were on the advanced level of vocational education. I would suggest that playing out of time deliberately should only be done with experienced learners, in order to avoid confusion with unintentional inaccuracy (see Subchapter 5.1.5; Johansson 2010: 78).

Pedagogical Observations and Analysis

We commenced the lesson by studying the riff part of Black Sabbath's "Sabbath Bloody Sabbath" (*Sabbath Bloody Sabbath,* 1973). First, we listened to the original recording together. I asked the students to describe the feeling of the riff's groove. They characterized it as heavy and dragging. Consequently, achieving a similar feel in the students' performance became the first goal of this lesson. The following excerpt demonstrates this dialogue.

> *The students and I listen to the riff part of the original recording of "Sabbath Bloody Sabbath".*
> I: What do you think, what is the feeling in that, how would you describe it? Don't analyze the music, but really your feeling, what kind of mood is there?
> Student X: That's kind of heavy.
> Student Y: Heavy.

I: Do you agree?
Student Z: Kind of dragging somehow.
I: Dragging. Agreed. Well, then let's analyze a little. What could cause it?
Student X: Let's just play a little laidback.
I: Right. What does that mean?
Student X: That if the grid is here, then that beat isn't exactly there, but it's elsewhere.
Student Z: They have been played about as late as can be played.

As the above excerpt shows, some of the students were able to identify that the laidback time-feel is the source of the heavy and dragging impression. Because a theoretical understanding is not enough for performing accordingly, I asked what they meant by that term. This relates to Tiger Roholt's (2014: 2) statement that understanding a groove is not to apprehend it intellectually, but that it must be felt (see Subchapter 5.1).

As we moved on to the students' own performance of the riff part in "Sabbath Bloody Sabbath", I employed mental images (e.g., "heavy", "dragging") as a manner of guidance. Thus, I intended to encourage the students to empathize with the feel of the groove and to plunge into it freely. I believed that it is especially important in learning participatory discrepancies, because playing minutely out of time with each other contrasted with the metronome-like precision that we had practiced previously (cf. Subchapter 7.2). Since we agreed that this laidback time-feel especially concerns the drums (see Table 7.5), I prompted the drummer to initially exaggerate the amount of lateness. Student 2, who is a guitar student, exceptionally played drums during this lesson due to the absence of the regular drummer. As the following excerpt shows, I encouraged him to let go of the mindset of being a professional musician or a serious music student. Instead, I applied a different mental image, as well as humor, with which I wished to promote a playful attitude and thereby enhance creativity.

I: Now forget that you are studying at the conservatory and that you want to be a worthy professional. No, that's not the mental image. Let's think that you're a car thief who's been given drumsticks in his hand. A car thief puts [the notes] wherever he wants. A drummer puts them in place, but that's not it at all. Now, let's make some music. One, two, three, four.
[The whole band plays the riff of "Sabbath Bloody Sabbath", looping for several minutes.]

The students then played several extensive takes of the riff part in a looping manner. As I had requested, Student 2 played drums clearly out of time initially, and then gradually decreased the lateness. During the playing, I guided the drummer to adjust his timing until we found a feel that corresponded to the Black Sabbath recording. In the VSR interview, he comments on the utilization of mental images as follows: "It helped. I came to think of the first bands in junior high. […] Back then there was no such idea or concept as 'laid back', everything was 'heavy' […] In my mind it describes it better than laidback". This suggests

the importance of employing descriptive terms for a groove to be performed instead of technical terms. As expressed by Student 2 above, the word heavy described the mood of Black Sabbath and it aroused personal associations that facilitated his performance, whereas he associated the term laidback with different music and perhaps perceived it as more remote.

When the students had achieved the laidback time-feel, I also asked them to perform without any manipulation of timing, in a metronome-like manner, for comparison. My intention with this neutral reference version was that the students would notice, through their own performance, the drastic effects of the intricate time-feel and participatory discrepancies. There appeared to be a mutual agreement in the classroom that the non-laidback version sounded unexciting in comparison. As Student 2 commented in the VSR interview, performing the contrasting versions succeeded in illuminating how time-feels and participatory discrepancies affect groove: "It was possible to play it even surprisingly behind the beat. There was a very noticeable difference in the way it sounds and grooves, whether you play it on the beat or a little laidback". Supporting the discovery of these nuances through the learners' own experience is in alignment with, for example, John Dewey's (1988 [1938]: 11) fundamental view, which I discussed in Subchapter 2.1.2.

As the second topic of the lesson, we studied the dramatically contrasting groove of The Police's "Next to You" (*Outlandos d'Amour,* 1978). We applied the same pedagogical procedures as above. When we listened together to the original recording, the students described the song's feel as hectic, energetic, and rushing. They agreed that mostly the drums, especially the hi-hat, created this feel (see Table 7.5). Consequently, the students played the verse and chorus parts as a loop, constantly aiming for an ahead-of-the-beat -time feel. I guided Student 2 to play the hi-hat with even dynamics. To prompt fearless experimentation, I encouraged him to initially play so ahead of the beat that the hi-hat would be out of time. We adjusted the hi-hat gradually towards the correct beat, until we agreed that he had reached a similar feel as on the recording. Subsequently, I asked the students to play a neutral version without an ahead-of-the-beat -time-feel for reference. When we watched this in his VSR interview, Student 2 observed that the two comparative renditions clarified what the significance of the ahead-of-the-beat -time-feel and the participatory discrepancies are: "You noticed really clearly that 'that's what it is supposed to sound like'". He explained that while both versions are correct, the rushing feel is ideal in this song, and that it also made the band play in a different way, even in a dynamic sense.

Student 1 participated in the workshop as well. In the VSR interview, he commented on the above episodes in their entirety. His comments suggest that the initial exaggeration is a good practice, and that it is important to have clear song examples: "They were good exercises. And when it's taken to the extremes like that, you really must concentrate on it and really internalize it. […] And the song examples were very good. It was fun that we played together like that, and it was very rewarding". Student 1 commented the level of difficulty as follows:

> I would not say difficult, but it's not easy either, on the other hand. It was such a pleasant challenge. There was no such despair like 'we're not going to accomplish this at all'. We had something to get a hold of right away when we sort of knew what it is all about.

This suggests that the above practices succeeded in providing concreteness to these phenomena, which may otherwise appear abstract. Apparently, this concreteness facilitated the students' learning. Overall, Student 1's comments suggest that this pedagogical approach appeared natural for learning this debated subject. This may, in turn, imply that time-feels and participatory discrepancies have been over-complicated previously. I would suggest that the opposite pedagogical approach to what was taken here, which would emphasize theoretical terminology and technical analysis instead of listening examples, mental images, and experimentation, would feel difficult and unclear. This is, again, in accordance with Roholt's (2014: 2) statement that understanding a groove is not to apprehend it intellectually, but that it must be felt (see Subchapter 5.1).

Student-Centered Applications

Towards the end of the workshop lesson, I asked whether the students came to think of song examples from their favorite music that could possibly feature similar manipulation of timing. Student 1 suggested John Mayer's "Slow Dancing in a Burning Room" (*Continuum,* 2006) as an example of a laidback time-feel. We listened to it, and the students played an excerpt of the song with the desired time-feel. Moreover, several students associated the ahead-of-the-beat -time-feel with the punk rock band The Ramones. They played the intro of The Ramones' "Blitzkrieg Bop" (*The Ramones,* 1976) and applied a rushing time-feel to it, although it is not a prominent feature in the original recording of that particular song. Applying the practiced skills in time-feel to student-selected repertoire thus presented a student-centered component. Therefore, the entirety of the process exemplifies Deductive SCME, working in a top-down manner (see Chapter 4).

Finally, we discussed how the students would continue practicing time-feels individually. This appeared to be important, because according to my experience these skills typically develop over a long period of time. Realistically, lessons like this one can serve to begin such a learning process. To achieve mastery of this vast skill requires much more practice. Therefore, I suggested playing along with records. To set an example, we listened to Black Sabbath's "Wheels of Confusion" (*Vol. 4*, 1972). The students agreed that it is laidback. Then, taking turns, the students played individually along with the record during the rhythm part of the verse [00:20–01:09]. As above, I instructed them to initially exaggerate the laidback time-feel and then adjust it with the record. For individual studies, I advised the students to try to detect different time-feels in their favorite music and then to imitate them by playing along with those recordings, as we had done during the lesson.

Overall, this pedagogical episode supports the view of time-feels and participatory discrepancies that I discussed in Subchapter 5.1.5. The deliberate and minutely asynchronous timing between the different instruments in a band indeed appears to be a salient phenomenon, although it is unlikely the sole source of groove (cf. Butterfield 2010: 166, 168). Rather, the above episode suggests that these components can function, at the least, as a means of creating various characteristics and expressive effects in different grooves, for example heavy or hectic impressions. Then, the question is not dichotomously whether a performance grooves or not, but instead what characteristic the groove in a performance has. This relates to Philp Tagg's (2012: 296–297) and Carl Waadeland's (2016: 169) statements that different forms of music groove in their own unique ways. The observation that interplay within a band is specifically responsible for constituting various characteristics of groove corresponds to Berliner's (1994: 351) account of musicians looking for "a certain sound" that they can produce together. In the entirety of this study, then, this pedagogical material contributes to the musicological exploration of groove in Subchapter 5.1. This exemplifies the benefits of the multi-layered approach of reflexive methodology (see Alvesson & Sköldberg 2018 [2000]; see Subchapter 1.3.1), where new knowledge is generated by reflecting different research traditions onto each other.

Most importantly, the above episode suggests that time-feels and participatory discrepancies can be taught. Accordingly, Student 1 argued in his VSR interview that learning groove with a band is crucial to do alongside individual studies: "It's absolutely important, in the end it doesn't really matter how good a guitarist is, if the band doesn't work. The whole band has to play together with a common goal". While it may be true that, over time, bands may intuitively evolve a distinct groove by playing together extensively (see Berliner 1994: 351; Green 2008: 9), the object in this pedagogical episode was to guide the students towards such an ability in a more rapid and conscious manner. *It is possible that not all learners may develop these intricate skills without guided listening for such musical qualities. Therefore, instruction from an active musical expert pedagogue is needed.* This line of thought follows Dewey's (1902: 24) statement, which I have mentioned above, that "nothing can be developed from nothing". This also corresponds to Gert J.J. Biesta's (2012) view that pedagogues should retain an active role instead of being mere facilitators (cf. Green 2008; Weimer 2013: 59). Ultimately, this material suggests that even teaching these intricate components of groove can be successfully applied to student-selected repertoire as well.

7.5 Applied Studies: Groove in Improvisation

Naturally, groove skills are not limited to accompaniment or playing riffs. They apply to all musical performances, be it rhythm guitar, melody, or solo. To explore their further potential, in this subchapter I analyze how the learning of Student 4 proceeded after we had practiced the timing and phrasing exercises as I described in Subchapters 7.2 and 7.3. At that point, Student 4 described his current challenges in guitar playing as follows: "I have observed that when I play solos, it somehow feels a bit like a certain smoothness and some

kind of a line or direction are missing from it. Even though there are some good ideas as such". We discussed that this smoothness may be related to phrasing, timing, and dynamics. To build on his prior learning in a constructivist manner (see Subchapter 2.1.2; e.g., Tynjälä 1999: 365; Hoidn 2017: 21, 554), we decided to study improvisation that would apply groove as a starting point and work in the context of his musical roots, Led Zeppelin and Deep Purple. As we utilized only student-selected repertoire as a premise for improvisation, this subchapter does not have a separate section on student-centered applications.

To be clear, I do not suggest that all improvisation should be performed with metronome-like timing. Such a generalization would be an oversimplification. Rather, in a multitude of occasions it appears to be the artistic choice of a soloist to detach themselves from the underlying pulse and play rather freely over the beat (for further reading on the phenomenon in a jazz context, see Benadon 2009). For a clear example in a rock guitar context, such a rhythmically loose approach can be heard in the legato style of Joe Satriani (see e.g., [01:10–01:15] in "Always with Me, Always with You" (*Surfing with the Alien*, 1987). Stretchy and elastic phrasing is a particularly common practice in slow blues (see e.g., B.B. King at [01:04–01:14] in the Live in Africa 1974 -rendition of "Sweet Sixteen"; *The Life of Riley,* 2012). Nevertheless, in the following exploration, the focus is on soloistic expression that, in contrast, strives for a definitive, percussive statement of the underlying beat. Such groovy lead performing occurs, for example, at [0:57–01:47] in Stevie Ray Vaughan's "Love Struck Baby" (*Texas Flood*, 1983), at [04:08–04:30] in Mike Stern's "Chromazone" (*Time in Place,* 1988), and, for an example outside of the guitar, at [01:42–01:55] in Sonny Rollins' "St. Thomas" (*Saxophone Colossus,* 1957). In essence, this is only one rhythmical approach among many others.

Musical and Pedagogical Intentions

Since Student 4 had already studied groove in rhythm guitar, as I explored above, our main task was to transfer those skills from his rhythm guitar playing to his solo improvisation. My first thought was that a principle of consistent picking directions would aid him to achieve cohesive timing even in lead playing. When performing 16th notes, the aim was then to utilize downstrokes on the first and the third 16th notes of a beat and upstrokes on the second and the fourth 16th notes (for the terminology of the 16th note subdivisions of the quarter note beat, see Subchapter 5.1.3, Figure 5.4). This is commonly known as alternate picking (see Subchapter 5.2.2 and Figure 5.13a), but the crucial aim in this particular application is to strictly *maintain this principle of picking directions even despite the effect of rests, longer tones, or legatos*. This elaborates on the timing exercise in Subchapter 7.1 (see Table 7.1), since the fundamental aim is to imply the continuous beat and to finetune timing. Below, Figure 7.1 illustrates this technique with the verse riff of Led Zeppelin's "Out on the Tiles" (*Led Zeppelin III,* 1970), since we employed it in the lessons as a starting point for improvisation. It must be noted that this principle is only a phase of practicing, and I do not suggest that the final result must absolutely follow any strict rules of picking directions.

Nevertheless, consequent utilization of alternate picking is related to Dave Vose's (1987) concept of Tap Timing for drums, where a drummer's hands are coordinated with similar consistency.

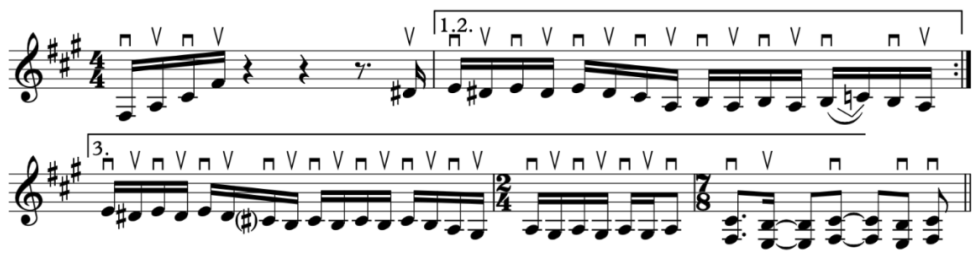


Figure 7.1. Verse riff of Led Zeppelin's "Out on the Tiles" [00:05–00:25]. Note the suggested picking directions: within each beat, the 1st and 3rd 16th notes are consistently downstrokes, the 2nd and 4th 16th notes are upstrokes (for an explanation of the symbols of picking directions, see Figure 5.13a in Subchapter 5.2.2). Crucially, this is maintained even despite rests, bends, legatos, longer tones, and syncopation as can be seen in the first two and the last two measures (cf. Vose 1987).

Secondly, I intended Student 4's lead playing to lock in rhythmically by applying the timing exercises of Subchapter 7.2 (see Table 7.2, examples 1 and 2). According to my experience, improvising with no other accompaniment than the metronome clicking on beats two and four is certainly efficient in achieving rhythmically cohesive improvisation. Having the click only on beat four is even more demanding, and thus very effective in making the soloistic expression consistent timing-wise.

Thirdly, my presumption is that Moderate Swing Phrasing (see Subchapters 5.1.3 and 7.3) is also essential in producing groove in lead playing. Overall, Student 4 had extensive skills in analyzing music but perhaps less experience of playing live. Therefore, I decided to emphasize jamming in the lessons as the main pedagogical practice as I explore below. As Student 4 improvised solos, I accompanied him with rhythm parts from his favorite music and made observations of his playing. My hope was that Student 4 would thus match his phrasing with my accompaniment, as I employed Moderate Swing Phrasing. This is aligned with the informal learning practices of popular musicians, who traditionally learned by playing with more experienced professionals (see Subchapter 2.2). Finally, as I have explored in Subchapter 5.1.2, dynamics are essential in groove, and therefore we concentrated also on dynamics in the following pedagogical episodes. According to my diagnosis (cf. Green 2008: 34), Student 4 most importantly needed to soften his dynamics in order to achieve the smoothness he sought. In alignment with Elliott's (1995) as well as Elliott and Silverman's (2015) praxial philosophy (see Subchapter 4.1.2), jamming during the lessons was a pragmatic approach to promoting Student 4's musicianship. It served as a way of constructing new knowledge based on Student 4's current playing, as I explore below.

Previously during the semester, when we studied Moderate Swing Phrasing with Student 4 (see Subchapter 7.3), his student-selected repertoire included Deep Purple's "No No No" (*Fireball,* 1971), Led Zeppelin's "Whole Lotta Love", "Bring it on Home" (both on *Led Zeppelin II,* 1969), and "Out on the Tiles" (*Led Zeppelin III,* 1970). These songs were built on a 16th note subdivision, meaning that 16th notes comprise the most intricate rhythm value in their riffs. It was natural to apply a funky approach to this student-selected repertoire, where the picking directions maintain the aforementioned consistency of alternate picking. In further detail, "Out on the Tiles" (see Figure 7.1 above) as well as "No No No" and "Bring it on Home" feature riffs that employ single note playing. Therefore, these riffs were easily applicable to playing solo with a single line approach. To practice improvisation, we based several jams on these rhythm parts.

The term jamming may initially appear misleading if it is associated with a leisurely activity, and thus suggests a sort of ineffectiveness. On the contrary, these jams always had specific focuses that we agreed upon before playing, as I outlined in Subchapter 4.1.2. These focuses followed the learning goals that I discussed above: consistent picking directions as a source of cohesive timing, Moderate Swing Phrasing, and dynamics. This was an aspect that Student 4 mentioned in his VSR interview.

> I think it was very good, especially since it wasn't "just playing", but you were always quite clear – or there was always something like "now we could try if you keep this thought and then we play and let's see how it's going to affect that thing". We clearly sought to achieve a goal through experimenting and playing. And so, clearly essential things were noticed.

The jams with Student 4 were extensive, considering the 45-minute duration of the lessons. One jam could last 10–15 minutes of uninterrupted playing, after which we discussed our observations of his playing and then played some more. The balance between analyticity and jamming was an important pedagogical issue. Emphasizing jamming appeared to be an appropriate solution, as I had diagnosed (see Green 2008: 34) that Student 4's theoretical knowledge was currently ahead of his practical skills. Since I emphasized a pragmatic approach, this learning situation corresponds to Elliott and Silverman's (2015; see also Elliott 1995) praxialism (see Subchapter 4.1.2). Our extensive jamming during the lessons may be regarded as us *musicing* together (see Elliott 1995: 40; Elliott and Silverman 2015: 16) in a real-world setting (Elliott & Silverman 2015: 253, 434). More precisely, my endeavor to utilize jamming as an effective pedagogical practice relates to the view that musicianship is a skill-in-action that can be taught (see Elliott 1995: 121; Elliott & Silverman 2015: 203, 432). Student 4 commented on the relationship between analyticity and jamming as follows: "The connection [between analyzing and jamming] has been very close. In a way, the jamming has been a way of testing practically the things that have been analytically looked into". Establishing this connection may be seen as an actualization of Elliott and

Silverman's (2015: 231, 195–235) view that musical understanding and musicianship are essentially multidimensional; our way of working with Student 4 promoted his musical understanding on several levels (see Subchapter 4.1.2).

As we jammed on "Out on the Tiles", several examples of personalized and spontaneous instruction occurred. As I expected, we discovered that increasing the dynamics enhanced Student 4's groove remarkably, and it reduced the stiffness in his playing that he had mentioned. This supported the view that dynamics and groove are closely related (see Subchapter 5.1.2). Consequently, we based several jams on utilizing soft dynamics in order to gain a looser articulation. A pedagogical reference for this was utilizing looser articulation in speech. In his VSR interview, Student 4 recognized that it "had an effect" so that "the playing would not be over-articulated". I gave him instantaneous feedback while we were playing together and between the jams. For example, an important discovery during one lesson was that Student 4 acquired the dynamics by gripping the pick in a lighter way. Such spontaneous interaction between a student and a pedagogue relates to conceiving the pedagogue as a coach (see Subchapter 2.1.3; Richmond 2014). Similarly, Elliott and Silverman (2015: 433–434) utilize the term coaching, as they discuss such musically detailed and highly situated interaction.

Furthermore, the personalized instructions were often very specific. An example of this occurred when I first observed during a jam that Student 4 sporadically accomplished a better groove by utilizing dynamics when he employed guitar strings two through four. Consequently, I requested him to improvise only on those strings for a while, so that the skill would become established. This turned out to be successful. Afterwards, he utilized all of the strings, thus making it a consistent feature in his playing. Such specific personalization required my constantly active participation. Overall, this is clearly opposed to the passivity, or "minimally guided discovery" (see Hoidn 2017: 24), that is a peril of student-centered pedagogy, according to its critics (see Subchapter 2.1.5).

Throughout this entire process, Student 4 first acquired the skill of maintaining the consistent picking directions and was able to lock in rhythmically even when he improvised. Secondly, in our extensive jams, he learned to apply Moderate Swing Phrasing to his solos. The third remarkable improvement in his improvisation was that he started employing dynamics on a wider scale. At the end of the semester, we agreed with Student 4 that his lead playing had become significantly groovier.

In my experience, the atmosphere during the lessons had been positive and creative. Student 4 commented on the entire learning process that "somehow it hasn't really felt like work because it has been something that has been interesting to me as a music listener". This statement is a prime example of the aim of the SCME approach. It suggests that Student 4 was intrinsically motivated (see Deci 1975: 23); he learned music for the music's own sake. As the improvisation was always based on the grooves of Led Zeppelin and Deep Purple, it stemmed from his musical background (cf. McCombs 2008: 2; EUA 2019). This enabled

him to employ audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) and his comments in the VSR interviews suggest that it supported a good relationship with music (see Kurkela 1993; Björk 2016). Applying groove skills to improvisation in personally favored music also promoted Student 4's musical self-expression, which aims to support a musical true self (see Kurkela 1993: 352–353, cf. Winnicott 1965 [1960]). Therefore, these studies may also be viewed as an actualization of the Intrinsic Triumvirate of Learning Music (see Subchapter 4.3). Furthermore, the learning process involved intensive work on a detailed level musically. In summary, this suggests that learning with a student-centered approach does not exclude systematic practice guided by an active musical expert pedagogue. This implication of the SCME approach is thus opposed to passivity, both on the pedagogue's part (see Biesta 2012; Hoidn 2017: 24) and on the student's part (see Doyle 2011: 7).

8 Student-Centered Musical Expertise (SCME) in Practice II: Learning Other Musical Focuses

In this chapter, I will explore the utility of the SCME approach in other musical focuses than groove. As I outlined in Subchapter 5.2, these musical contents include fundamental music skills (e.g., chords, transcription), improvisation, technical instrumental skills, and stylistic versatility. In contrast to the previous chapter, in the first three of the following subchapters I will employ the Inductive (bottom-up) variant of the SCME approach. This means that the students and I initially detect the musical phenomena in student-selected repertoire, after which the students learn to apply them as general concepts (see Subchapter 4.2.1). Throughout this chapter, my fundamental intention is that the students will associate these musical concepts with their favorite music instead of seeing them as emotionally distant, mechanical tools. Therefore, these musical skills may, in turn, remain subliminally associated with the personal, emotional meanings that the students have ascribed to their favorite music (see Chapter 3). As in the previous chapter, this emphasis on promoting students' self-actualization aligns with David J. Elliott and Marissa Silverman's (e.g., 2015: 380) praxial philosophy of music education and it can be seen as a musical application of Carl Rogers' (e.g., 1983: 52) humanist approach. The final subchapter concentrates on expanding musical versatility to include genres that are unfamiliar to students. In doing so, I employ Relative SCME (see Subchapter 4.2.1), as I explore how a student-centered approach can be applied beyond teaching the students' favorite music.

8.1 Learning Musical Fundamentals through Student-Selected Repertoire

Student 7 is the only student among the participants who was situated outside of vocational music education proper, as he was studying on the basic level with a hobby approach (see Subchapter 6.3.1). He had commenced his first guitar studies with me a few years ago. From the beginning, I asked him to bring his favorite records to the guitar lessons. During a typical lesson, I quickly transcribed a song that he had suggested, and then taught him parts of it in accordance with his current level. Through his favorite songs we had studied, for example, the basic major and minor chords, power chords, and basic guitar technique. Applying the Inductive SCME approach (see Subchapter 4.2.1), I also associated his favorite songs with other repertoire in order to expose him to new influences. For example, we had studied basic chord strumming through Avicii's "Wake Me Up" and "Hey Brother" (both on *True,* 2013), which he had suggested. Consequently, I introduced him to Jimi Hendrix' "Hey Joe" (*Are You Experienced?,* 1967), which employs several major chords and the blues scale in the solo. As we continued working this way, I derived the following material from a video-documented lesson and his VSR interview.

Musical and Pedagogical Intentions

Exemplifying a typical lesson, the following pedagogical episode sees us copying by ear a song that Student 7 had suggested. Therefore, it applies the aural learning tradition of popular musicians that I explored in Subchapter 2.2.2 (see Green 2008: 6, 10; see also Berliner 1994: 95–99, 101–105). My long-term pedagogical intention was that Student 7 would learn to transcribe independently. As I showed him the skill through my own example, this practice relates to Albert Bandura's (1971) social learning. As I gradually guided him towards independent transcribing, this actualizes scaffolding (see Subchapter 2.1.3; Wood, Bruner & Ross 1976: 90; Elliott & Silverman 2015: 434; Hoidn 2017: 72). Since we employed student-selected repertoire, my fundamental aim was that these studies would enable him to continuously learn personally favored songs.

Pedagogical Observations and Analysis

For this lesson, Student 7 brought a currently favorite song, System of a Down's "Chop Suey!" (*Toxicity,* 2001), which I had not played before. As we studied this song, Student 7 learned the names of the chords, palm muting, and most importantly, the basics of transcription. The chords and the riff in the intro of "Chop Suey!" appear below in Figure 8.1.

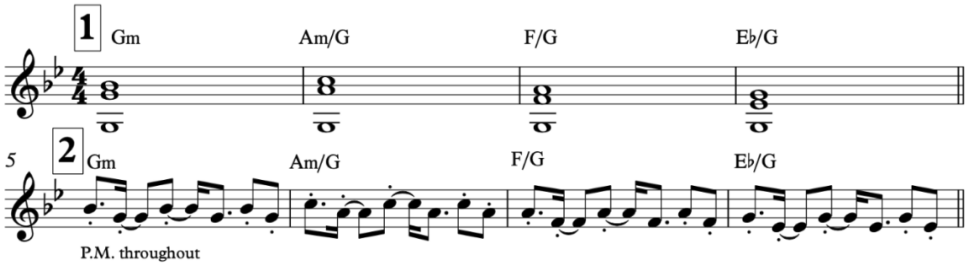


Figure 8.1. Chords (segment 1) and guitar riff (segment 2) in the intro of System of a Down's "Chop Suey!". An example of student-selected repertoire in studying the basics of transcription by finding the key and copying the top notes of the chords (segment 1), and the palm muting (P.M.) guitar technique by practicing the riff in segment 2.

The following excerpt demonstrates this practice, as we transcribed the intro of "Chop Suey!" together. After Student 7 had found the key by matching the G pedal point with his guitar, we listened to the top notes of the chords (see Figure 8.1 above):

I: Let's learn that intro. What is the first note on top, meaning the note in the melody? *[I pause the record after the first chord after which Student 7 sings the correct pitch, Bb.]*
I: So, just one note, not a chord. There's G in the bottom, but *[I sing the Bb note.]* So that one *[I play only the first chord from the record]*.
[Student 7 searches for the pitch on the guitar and finds the Bb.]
I: Would that be it? So, that would be on the bottom *[I play a G]* and that one on top *[I play a Bb]*. […]
I: Then, where does it go from there? *[I play the record and pause it after the second chord. Student 7 moves the top not correctly to C.]*
I: Exactly. Then… *[I play the third chord from the record. Student 7 moves correctly to A.]*
I: Right. Yes, and then *[I play the last chord from the record. Student 7 finds it on the guitar.]*

We continued in a similar fashion until we had copied the entire intro. Since I guided Student 7 in this task, which he could not yet accomplish independently, this way of working can be seen as scaffolding (see Subchapter 2.1.3; Wood, Bruner & Ross 1976: 90; Elliott and Silverman 2015: 434; Hoidn 2017: 72). Student 7's comments in his VSR interview suggest that employing scaffolding was an efficient method to transcribe the four chords of the intro of "Chop Suey!": "The first [chord] was demanding but then finally, when the first one had been found, the three others were easy". He even expressed being surprised about his pace of learning: "I didn't expect that I would find it so fast". Overall, Student 7 considered this a pleasant experience and valued that he was learning to transcribe independently: "Guitar [playing] is always fun. Especially when you find it [the chord and the note in question] yourself".

During the lesson, I aimed for a pragmatic musical approach that would resemble playing with a band (see Elliott & Silverman 2015: 231, 434). Therefore, we played along with the System of a Down record as soon as Student 7 had learned the intro of "Chop Suey!". In the VSR interview, Student 7 responded in a positive way to this practice: "It sounds almost exactly the same as it sounds on the album, so it's nice". This comment is a prime example of the fundamental aim of the SCME approach: the primary function of the studies is to enable the learner to play music that is personally inspiring with the help of a musical expert pedagogue. In addition to Elliott and Silverman's (e.g., 2015: 380) and Rogers' (1983: 52) emphasis on self-actualization in learning, this applies the concept of a musical true self (see Subchapter 3.4; Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]).

As the song progressed and the riffs clearly exceeded Student 7's current ability[41] in transcribing, I changed our way of working. Instead of the above method of guided

[41] In vygotskian terms, when it was outside of the student's Zone of Proximal Development (ZPD); see Subchapter 2.1; Vygotsky 1978: 86).

transcription, we continued so that Student 7 copied my demonstrations on the guitar. This relates to Bandura's (1971) social learning. In this specific context, it resembles the informal learning practices of popular musicians in peer-directed learning (see Subchapter 2.2; Green 2002: 4–5) and watching performances of more experienced players (see Subchapter 2.2; Berliner 1994: 105; Wilf 2014: 44). This appeared to be effective as well, as Student 7 commented when he watched the video of such an event: "I just looked once when you played it and then it was easy to play it myself".

Finally, in his VSR interview, Student 7 commented on his entire learning process. Student 7 reported what he had learned from the songs that he had suggested: "Everything. Hammer-ons, legatos, everything. Chords. Whatever you find in guitar: solos, the pentatonics". This suggests that employing student-selected repertoire can be efficient even at the earlier stages of learning. Student 7 described his experience of learning through his favorite songs as follows: "When you like that song very much, you want to learn. Then you learn to play it whenever you want to play it, along with the record". This comment exemplifies, firstly, intrinsic motivation (see Subchapter 2.1; Deci (1975: 23) in music learning; it indicates that he learned music for the music's own sake, and not because of extrinsic rewards. Secondly, Student 7's expression that "you learn to play it whenever you want to play it" may be interpreted as an expression of a good relationship with music (see Chapter 3; Kurkela 1993: 464–466; Björk 2016), as it describes an experience of freedom in playing music. This may be related to music that feels personal and supports the development of a musical true self (see Chapter 3; Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]). Moreover, Student 7 described that he had discovered the applicability of the musical skills that he had learned through his favorite songs. As an example of such a generalized ability, Student 7 described utilizing barré chords as in "Chop Suey!": "Almost everything that I've learned in that song fits other songs. I use barré chords all the time really, also in the band and everything".

In conclusion, this material implies that we were working *towards* the Intrinsic Triumvirate of Learning Music (see Subchapter 4.3). Firstly, Student 7 was intrinsically motivated (see Deci 1975: 23), as I discussed above. Secondly, studying music which felt personal to him supported his musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]). Thirdly, as we were practicing transcription, we gradually strived to establish his audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Finally, in addition to enjoying learning through his favorite songs, Student 7 expressed the importance of repertoire provided by a pedagogue: "Often the songs that the teacher brings are all super good, and especially, it's often good for the guitar. Even if you like some song, but it doesn't have that much guitar, it's not necessarily as good as what the teacher would suggest". Interestingly, this suggests the importance of a balance between student-centeredness and a pedagogue's input.

8.2 Learning Improvisation through Student-Selected Repertoire

In the following exploration, I elaborate on the basic idea of the previous subchapter by applying it to a more advanced musical level. As the previous subchapter focused on learning basic skills through personally favored songs, below I explore learning improvisation through student-selected repertoire.

One of the examples from the video-documented material was when we studied improvisation with Student 8. We applied the practice that is known as imitation – assimilation – innovation. As I discussed in Subchapter 5.2.3, it is commonly employed by jazz musicians and often credited to jazz trumpetist Clark Terry (see O' Donnell 2011; see also Liebman 1991, 2015). In the following, I apply it to student-centered pedagogy outside of jazz.

Musical and Pedagogical Intentions

Overall, my intention was that this pedagogical application of the imitation – assimilation – innovation approach would actualize constructivist learning. This is in accordance with Päivi Tynjälä's (1999: 365) definition of constructivism which I discussed in Subchapter 2.1.2: "helping students to actively construct knowledge by assigning them tasks that enhance this process".

I intended to implement the primary phase, imitation, by assigning transcription as homework. As the repertoire consisted entirely of Student 8's favorite guitar solos, this actualized the definitions of student-centeredness according to which it considers the individual background of a student (see Subchapter 2.1.1; McCombs 2008: 2; EUA 2019). Transcription also aligns with the informal learning practices of popular musicians and jazz musicians, which I discussed in Subchapter 2.2.2 (see Berliner 1994: 95–99, 101–105; Green 2008: 6, 10). In the guitar lessons, I implemented the second phase of this approach, assimilation, by helping Student 8 to analyze how his favorite solos are constructed. I intended this to actualize the guided discovery discussed by Sabine Hoidn (2017: 554; see Subchapter 2.1.3). Lastly, I actualized the third phase, innovation, by basing jams on the musical phenomena that we had discovered in the analysis. The student's task was then to construct variations of the solos' phrases that he had initially imitated. This approach implements the pedagogically guided jamming that I discussed in Subchapter 4.1.2.

Pedagogical Observations and Analysis

When we began the studies with Student 8, we made a plan to study improvisation by exploring the soloing styles of a few guitarists that he favored. We agreed on studying Marty Friedman's solos on Megadeth records, after which we conducted an Yngwie Malmsteen period. This is a welcome feature in the present research, since the pedagogy of constructing heavy metal solos has received much less academic scrutiny than, for example, jazz improvisation. The Marty Friedman period with Student 8 consisted of the solos in Megadeth's "Symphony of Destruction" (*Countdown to Extinction,* 1992), "Poison Was the Cure", "Lucretia" and "Tornado of Souls" (all on *Rust in Peace,* 1990). Below, I explore our studies on "Poison Was the Cure" as an example.

When Student 8 had completed the phase of imitation by performing his transcription of "Poison Was the Cure" during the lesson, we analyzed the solo in fragments. In practice, we listened to the recording, pausing it after each phrase. Next, I asked Student 8 how he would analyze the phrases in theory, and I explained to him the parts that he found confusing. Our analysis involved mainly scales, arpeggios, and melodic motifs. Finally, we based jams on the material, so that I accompanied Student 8 with the chord progression of "Poison Was the Cure" (see Figure 8.2 below) and he improvised by applying the concepts that we had explored. In the following, I present a few ideas that we worked with.

For example, we analyzed the note choices in relation to the underlying harmony in Friedman's solo. Below, Figure 8.2 shows a reduction of the main melodic material in the first eight measures of the solo [02:29–02:35]. These most central pitches of the melodic line are chord tones, meaning that they are part of the current chord in the underlying harmony. In other words, E is the fifth of the A5 chord, G is the fifth of C5, D is the root of D5, A is the third of F and thus implies an F major chord during the F5, C is the fifth of F5, and B is the fifth of E5 (see Figure 8.2). Consequently, Student 8's first task was to apply those tones as target notes and to increasingly fill the spaces between them with his own improvisation in the key of A minor. He varied the solo's phrases, which employed arpeggios and scalar runs. Next, I asked him to apply other chord tones as target notes than the ones in the recording. Working in this way, emphasizing chord tones in improvisation is an example of an *applicable musical concept* (see Subchapter 4.2.1) that we detected during this lesson through student-selected repertoire, and which we applied to heavy metal improvisation.

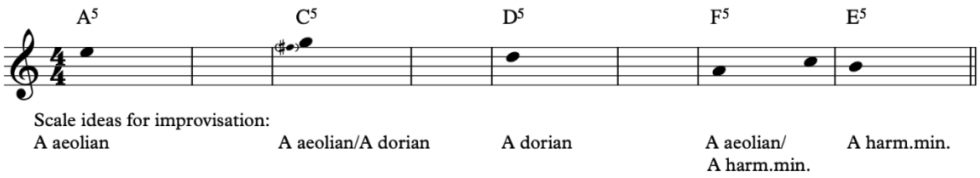


Figure 8.2. A reduction of the main melody line in the first eight measures of Marty Friedman's solo in Megadeth's "Poison Was the Cure" [02:29–02:35], a student-selected solo for studying improvisation. At the very fast tempo of 320 bpm, the scales indicated below the staff are among the many approaches that can be employed in improvisation.

As we progressed, we applied an idea of employing various scales over the chord progression of "Poison Was the Cure"[42]. The background of this idea was that we detected that an interesting feature in Friedman's style is the variety in melodic/harmonic material. In the third measure of the solo in "Poison Was the Cure", Friedman bends the G-note from an F# (see above; Figure 8.2 implies this idea with a grace note). In the key of A minor, an F# can be seen as implying the A dorian mode (A, B, C, D, E, F#, G). This is in contrast to the F5 chord in the seventh measure; in the key of A minor, an F can be viewed as implying the A aeolian mode (A, B, C, D, E, F, G). Furthermore, in the final measure, the E5 chord (which is the fifth chord degree), lacks a third, obviously. This allows an improviser to utilize either the tones G or G#. In the key of A minor, this offers an option for the soloist to employ either A aeolian or the A harmonic minor (A, B, C, D, E, F, G#) scale. Both choices appear natural. We conducted several jams that applied the above ideas of scalar variety. Student 8's next task was to employ the scales as follows (see Figure 8.2): A aeolian in measures 1 and 2, either A aeolian or A dorian in measures 3 and 4, A dorian in measures 5 and 6, either A aeolian or A harmonic minor in measure 7 and, finally, A harmonic minor in measure 8. Student 8 accomplished these variations successfully, and was not distracted by theory. Instead of relying excessively on theory, Student 8 was able to utilize audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Apparently, this is a benefit of learning improvisation through transcribing solos that the student has already listened to extensively.

In his VSR interview, Student 8 discussed his experience with this approach to learning. When we watched a recording of us working on "Poison Was the Cure", he noted that this approach was demanding: "You should use quite a lot of time on each concept and practice them separately, and then probably spend even more time to remember to use them mixed up". This suggests that such an application of student-centeredness is in stark contrast to the reported ineffectuality that I discussed in Subchapter 2.1.4 (see Dewey 1998 [1938]: 24; Hytönen 1998 [1992]: 21; Meyer 2009).

[42] All the scales discussed here employ the tonal center of A (in the key of A minor). This is different from a strictly vertical chord/scale approach where the root of each chord determines the root of each corresponding scale. This selection appears natural in the very fast tempo of "Poison Was the Cure" (approx. 320 bpm).

Furthermore, Student 8 recognized that since this practice requires intensive playing, it also has various benefits. According to his experience, it not only develops improvisation but also other features of playing: "Technique develops, too. And maybe you can come up with something new". This notion suggests that musical skills can also develop in an unnoticed way while playing extensively. This pragmatic approach corresponds to Elliott and Silverman's (2015: 434) praxial philosophy, since the student was essentially a doer and learning occurred in a real-life situation, an "authentic setting". As I expected, Student 8 noted that this approach provided him with applicable tools for realizing his personal musical ideas: "If you want to write a song and a solo in it, then you can construct something in a better way […]. For example, 'here if it'd be nice to have some Friedman-style thing' and you can make it more melodic. Then you know how to approach it". This suggests that learning improvisation through student-selected repertoire promotes a learner's musical self-actualization (cf. Rogers 1983: 52; Elliott & Silverman 2015: 380), and may even support their musical true self (see Chapter 3; Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]).

According to Student 8, applicability and motivation are essential differences between student-centered and teacher-directed pedagogies. His previous learning experiences had been uniquely teacher-directed. He argued that teacher-directed instruction does not provide the student with applicable musical skills as much as student-selected repertoire: "Maybe this is more suitable than if the teacher has his own regular songs that he plays and teaches. [In the previous studies] it wasn't that motivating. There were some good ideas as well, but I've never applied them much". Firstly, this comment implies that student-selected repertoire engages intrinsic motivation (see Deci 1975: 23). Secondly, Student 8's comment that "there were some good ideas as well, but I've never applied them much" suggests that although effective learning can indeed occur in a teacher-directed setting, its significance in the long-term perspective appears to be inferior to student-selected repertoire. This suggests that emphasizing *applicable musical concepts* (see Subchapter 4.2.1, Figure 4.1) in instrumental education can promote motivation for life-long learning, which is often regarded as an essential element of a good relationship with music (see Chapter 3; Westerlund 2008: 85; Björk 2016: 63, 65; Finnish National Agency for Education 2017a&b). Additionally, Student 8's above comment implies that repertoire stemming from the pedagogue runs the risk of remaining emotionally distant to the learner in comparison to student-selected repertoire, which relates to the psychodynamic exploration in Chapter 3.

Interestingly, although Student 8 expressed that he was not particularly drawn to jam sessions as such, he considered jamming during the guitar lessons a positive feature: "A jam situation, I don't like them very much. If the guys are like, 'let's go jamming', then I don't really know… […] I always feel a bit lost. […] But it's nice that there's playing and jamming in the guitar lessons". This suggests that it was particularly crucial to study improvisation through student-selected repertoire. As Student 8 had chosen the songs from his favorite music and he had transcribed the original solos, he certainly knew the music well, and did not feel lost when we jammed. Importantly, he could rely on audiation when he improvised (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Moreover, as

Student 8 had a personal relationship with the music that we applied, the psychodynamic view offers an emotional perspective on us jamming together. Potentially, the personally favored repertoire promoted a sense of safety, and encouraged creativity in the student's improvisation. From this perspective, jamming during the lessons could be viewed as an *overlapping* of the student's and the pedagogue's *potential spaces*, which is described as *shared playing* (i.e., "play" in the sense that children play) in Donald W. Winnicott's (2005 [1971]: 51, 69) psychodynamic theory (see Subchapter 3.3).

However, the video-documented material also implied that an exceedingly analytical actualization of the imitation – assimilation – innovation approach can be potentially disadvantageous. This appeared during a lesson that occurred, as Student 8 described it, on "a bad day overall". Student 8 had successfully internalized Marty Friedman's solo in "Tornado of Souls". Nevertheless, he felt restricted by concentrating his improvisation exclusively on the concepts of that solo. It was crucial for me, as the pedagogue, to point out that no concept needs to be followed slavishly, even if it is practiced intensively. As we then jammed without such specific instructions for a while, the situation was resolved; Student 8 became less critical of his own playing and improvised freely again. Consequently, even the imitated and assimilated ideas from "Tornado of Souls" started gradually appearing as innovations in his performance. Relating this episode to the exploration in Chapter 3, it may be analyzed with the musical application of the superego suggested by Kari Kurkela (1993: 314) and Cecilia Björk (2016: 69). The excessively strict utilization of a specific concept in improvisation may be interpreted as allying with a cruel superego. In contrast, when utilized in an unconstrained manner, as a flexible tool among several other musical possibilities, the concept may be seen as a representation of a merciful superego. In the same way, when Student 8 started improvising in a freer way again, the studied concepts provided new ideas instead of forcing improvisation to occur in an overcontrolled way.

In conclusion, the Inductive SCME approach enabled Student 8 to take Friedman's soloing ideas to the level of applicable musical concepts. Instead of merely quoting phrases, he learned to employ them creatively in his own way, potentially as a part of his musical true self (see Chapter 3; Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]). As I have indicated, an essential driving force in Student 8's learning was his extensive history of listening to Megadeth, which clearly engaged his audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) and his intrinsic motivation (see Deci 1975: 23). Thus, his studies may be regarded as being fueled by the Intrinsic Triumvirate of Learning Music (see Subchapter 4.3).

8.3 Learning Technical Skills through Student-Selected Repertoire

As implied in the previous subchapter, studying student-selected guitar solos with the imitation – assimilation – innovation approach also unfolded various other matters in addition to improvisation. Therefore, I explore below how we studied technical skills with Student 2 by utilizing student-selected solos as a starting point.

Musical and Pedagogical Intentions

I have discussed the musical focuses of the following exploration in Subchapter 5.2.2. These include, firstly, increasing the technical control of a wide range of dynamics, and secondly, practicing scales as a means of developing knowledge of the guitar fretboard in order to facilitate improvisation. My intention was to integrate these instrument skills with the student's intrinsic motivation (see Subchapter 2.1; Deci: 1975: 23) and, moreover, to promote the actualization of the Intrinsic Triumvirate of Learning Music (see Subchapter 4.3). For example, my endeavor was to make learning scales as pragmatic as possible, and I hoped that the scales would become a creative tool. This aligns with the view that good music learning enhances self-expression, as has been emphasized by, for example, Elliott and Silverman (2015: 380) as well as Patricia Campbell (2008: 19). As I have explored above, this perspective is in accordance with Rogers' (1969, 1983, 1994) humanist approach and especially Kurkela's (1993: 352–353) view of the musical true self (see Chapter 3). Furthermore, below I explore the pedagogical practice of designing personalized technical exercises. From a pedagogue's perspective, tailoring personalized exercises relates to Carol Dweck's (2000) growth mindset (see Subchapter 4.2.3). In this approach, a pedagogue not only relies on routine but spontaneously creates new learning material during the lessons (see Subchapter 4.2.3; Hendricks 2018: 5, 109).

Pedagogical Observations and Analysis

During the first lesson with Student 2, when we planned together what we would study, he expressed that he wanted to concentrate on jazz fusion. He did not suggest any repertoire or artists and I proposed that we started studying Mike Stern's song "Upside Downside" (*Upside Downside,* 1986). Although Student 2 was happy to study Stern's music, in the beginning of the next lesson he said spontaneously that he was overwhelmingly inspired by guitarist Mark Lettieri. With obvious fascination, he told me that he had listened to Lettieri's song "Slant" (*Spark and Echo,* 2016) constantly during the past week. Consequently, we listened to that song during the lesson. To seize on his current inspiration, we made a student-centered diversion from our previous plan and agreed that Student 2 would start transcribing solos by Lettieri. Before teaching Student 2, I was not familiar with Lettieri's music. Nevertheless, as I detected familiar musical concepts when we listened to these solos, this student-selected repertoire provided various topics for us to study.

In the following lesson after we had agreed on the Lettieri period, Student 2 played his transcription of the guitar solo in "Slant". He played it note for note along with the record. He brought his pedalboard of guitar effects to the lesson, and was very careful to achieve the same sound as in the original. To develop Student 2's performance, I indicated that the utilization of a broad range of dynamics was a prominent feature in the original recording. Student 2 commented on the lesson that "it's really hard to play very quietly". However, he was motivated to improve this aspect of his playing. He commented on a phrase in "Slant" [at 4:01–4:09] that especially featured contrasts between ghost notes and accents, that it "must be [his] favorite part of the whole solo". Consequently, Student 2's next task in the lesson was to apply dynamics to improvisation as we jammed over a static Cm7 chord. As this was difficult for him initially, the utilization of dynamics became a recurring topic in our lessons during the semester. Further below, I present how we later practiced this skill in a systematic way.

The VSR interview with Student 2 showed that although this way of studying required extensive work, it was also enjoyable for him: "When I transcribed [Slant], it took a lot of time. But it wasn't terrible at all or anything because I like transcribing so much". Even if Student 2 enjoyed transcribing as such, studying particularly student-selected repertoire apparently made a difference to him: "If you transcribe some songs for a wedding gig, it's a bit different sometimes. But when you transcribe [Lettieri], it's super fun, and then I just wanted to transcribe more and more and more, or faster and faster, more in one day". This clearly exemplifies intrinsic motivation (see Subchapter 2.1; Deci: 1975: 23); Student 2 was driven to learn Lettieri's music for its own sake, and he enjoyed the process as such instead of being motivated by extrinsic rewards. Therefore, his above comments relate to the discussion on passionate music learning and eudaimonia in Subchapter 2.2.4.

The second solo of Lettieri that Student 2 chose to study was from the song "Chrystal Palace" (*Spark and Echo,* 2016). As he played it during the lesson after he had transcribed it, I discovered that the solo features the D dominant diminished scale (meaning an eight-note scale that proceeds symmetrically half step – whole step – half step – whole step etc.). Applying the imitation – assimilation – innovation approach (see Subchapters 5.2.3 and 8.2), we analyzed and played this scale, and then based a jam on it. I accompanied Student 2 with a funky rhythm and a static B/D chord. The B/D chord functioned as a D7(13b9) chord, which implies the D dominant diminished scale. Therefore, Student 2 was able to concentrate only on employing the scale that we had detected. This was initially easy for Student 2, as he was somewhat familiar with the scale already. However, as we moved on, increasingly demanding applications appeared more difficult. As a concept in improvisation, we applied a rhythmical motif that Lettieri employs in the solo of "Chrystal Palace" [03:42–03:50]. In this practice, Student 2 was supposed to apply this rhythmical motif even more while employing the D dominant diminished scale extensively. As we played, he commented that it was "tremendously hard". The difficulty appeared to be that, although Student 2 knew the scale in theory and in one position on the guitar, he did not know it well enough on the

entire fretboard. This led to us developing Student 2's knowledge of the guitar neck. For the subsequent lesson, Student 2's task was to practice the dominant diminished scale over the entire guitar neck. In the following lesson, we concluded that he had accomplished this task well enough and continued jamming. In his VSR interview, Student 2 commented that learning a new scale through his favorite music facilitated practical utilization. "[Otherwise] I might not have been able to combine it with anything or use it in any way. There was at least the frame of how to use it through that motive [in the solo of "Chrystal Palace"], or how to make use of that scale in real life". In addition to being practical, this close connection may have the potential to associate the dominant diminished scale with any personal meanings that Student 2 had possibly ascribed to Lettieri's music (see Chapter 3), instead of perceiving the scale as an isolated tool.

In order to summarize the main points that we had studied, I designed a personalized exercise for Student 2. My intention was to integrate the control of the dynamics that we detected in "Slant" with improvisation based on the dominant diminished scale as in "Chrystal Palace". As Figure 8.3 shows (see below), the exercise consists of three segments. The first two segments apply Paul Gilbert's alternate picking exercises, which I discussed in Subchapter 5.2.2. Segment 1 is derived from Gilbert's instructional video *Intense Rock 2* (1991; [08:00–11:35]). We utilized it to enhance Student 2's precision in distinguishing accents when he played pianissimo (i.e., as softly as possible). Student 2 continuously alternated this with segment 2, which applies Gilbert's (see *Intense Rock*, 1988; [04:10–05:30]) well-known picking exercise to the D dominant diminished scale. As Student 2 was supposed to maintain the accentuation throughout segments 1 and 2, the aim in alternating between the two parts was to import the precise control of dynamics from tremolo picking to scalar figures. Thereafter, in segment 3 the intention was to apply similar dynamic control to improvisation that employs the dominant diminished scale. Student 2 experimented with this exercise as I designed it in the lesson, and also subsequently practiced it as homework.

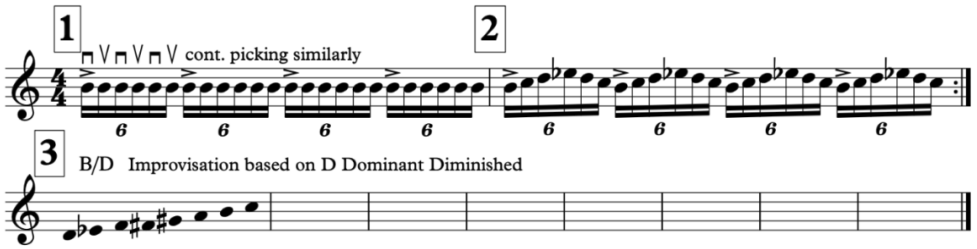


Figure 8.3. A personalized application of a technical exercise. Segments 1 and 2 apply Paul Gilbert's picking exercises (1988, 1991, respectively; see Subchapter 5.2.2). In essence, accurate control of dynamics (segment 1) is applied to a scalar figure (segment 2) and, finally, to improvisation employing the D dominant diminished scale (segment 3).

As I had intended, the personalized exercise in Figure 8.3 aided Student 2 in achieving the type of performance that he sought. As he commented in his VSR interview: "I wanted to get that sound, or to understand how to get it. So, then it was very good that there were the

tools to achieve that sound in playing. A little jazzier sound". He commented that his studies overall had supported his personal ideals and his musical self-expression: "If I want to play a certain way, I can do it more and better than before. And then, well, I learned a new cool scale. It features some great sounds, and then you can develop new ideas". As Student 2 already had a clear vision of what he wanted to sound like, his playing was importantly guided by audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). His studies expanded his possibilities of self-actualization (see Rogers 1983: 52; Elliott & Silverman 2015: 380), and thus may have supported his musical true self (see Chapter 3; Kurkela 1993: 352–353, cf. Winnicott 1965 [1960]). As I mentioned above, his tireless enthusiasm towards Lettieri's music was a prime example of intrinsic motivation (Deci 1975: 23). To summarize these aspects, his studies may be considered as an actualization of the Intrinsic Triumvirate of Learning Music (see Subchapter 4.3). Overall, although I was not an expert on Lettieri's guitar playing, I was sufficiently familiar with similar music that I was able to effectively analyze this student-selected repertoire. Therefore, I was able to guide Student 2 in reaching the goals he had set for himself as a guitarist. As I have mentioned above, the goal of aiding learners to achieve the goals that they set for themselves is similar to Green's study (2008: 34). However, such active participation on the part of the pedagogue, as in this exploration, is different from Green's (cf. 2008: 31) approach. In the same way as in the previous subchapter, my role as the pedagogue was to analyze the student's favorite music and engage him to improvise when we played together. This aligns with the discussion in Subchapter 4.1.2; a balance between an analytic and a pragmatic approach essentially promoted Student 2's musicianship, which relates to Elliott and Silverman's (2015: 195–235) view of multi-layered musical understanding.

8.4 Student-Centeredness in Expanding Stylistic Versatility

This final exploration focuses on how student-centered pedagogy can be applied beyond student-selected repertoire. According to my experience, it is not uncommon that a learner wishes to study something other than their favorite music at some point. In the video-documented material, this occurred with Student 9. During our first lesson, when we planned together what we would study, he expressed that he had already played so much rock and blues that he wanted to expand into a genre that he was not familiar with. Specifically, his wish was to learn the basics of jazz, as he formulated it: "so I wouldn't be completely lost when someone starts playing chords that I barely know by their name".

Musical and Pedagogical Intentions

Pedagogically, my main intention was to present a new genre from the perspective of the learner's musical background. In practice, I employed Relative SCME, which I outlined in Subchapter 4.2.1; I applied music analysis to indicate similarities and contrasts between Student 9's favorite music and an unfamiliar genre. Essentially, this approach is a musical

implementation of constructivism (see Subchapter 2.1.2; Hytönen 1998 [1992]: 22; Tynjälä 1999: 365; Hoidn 2017: 21), as it aims to utilize a learner's prior knowledge to expand stylistic versatility. By conceiving the study material from the viewpoint of the learner's favorite musical genre, I aimed to actualize *a teacher's empathy,* which, for example, Carl Rogers (1983: 169), Karin S. Hendricks (2018), and Judith V. Jordan and Harriet L. Schwartz (2018) consider crucial (see Chapter 3). In contrast to the previous explorations, the musical concepts that we studied do not stem from the student's personal history, nor was our primary goal to apply them to his favorite music. Therefore, this subchapter explores a different actualization of the definitions of student-centeredness, according to which student-centered pedagogy considers a learner's individual background (see Subchapter 2.1.1; McCombs 2008: 2; EUA 2019).

Musically, this exploration largely applies the focuses that I outlined in Subchapter 5.2.4. I aimed to make a gradual transition from highly personalized experimentation in jazzy material to studying authentic jazz performance. I intended this transition to occur through studying three key topics, commencing with fundamental musical elements before moving on to study more elaborate features. First, I approached jazz harmony in a horizontal way (see Subchapter 5.2.4), which aimed to enable the student to improvise in the correct key centers as we jammed during the lessons. As I argued in Subchapter 5.2.4, a horizonal approach is a more familiar approach for a rock and blues guitarist. This applied to Student 9. As the second topic, I intended to illuminate the groove (i.e., swing) of jazz by indicating differences between accentuation in rock and jazz phrasing. Only thereafter, I thirdly aimed to proceed to vertical improvisation by utilizing similarities between rock and jazz. Fundamentally, my intention with applying constructivism to this gradual transition was to facilitate an experience of success and to thus support a good relationship with music (see Chapter 3), even in an unfamiliar style of music.

Pedagogical Observations and Analysis

In our first lesson, we applied horizontal improvisation to jazz. We jammed on a IV–V–I progression in F major (Bb–C–F). I accompanied in a pop/rock style. Student 9 improvised by employing an F major scale and emphasizing the tension and release movement with the Bb and A notes over the chord change from C to F (see Figure 8.4 below, segment 1). During this jam, I changed the Bb chord in my accompaniment to a Gm7, which constituted a II–V–I progression (see Figure 8.4, segment 2), and I opted the even eighth notes for a swinging rhythm. Thus, Student 9 managed to utilize his prior skill of improvising horizontally in a new context that was jazzy. As we moved on, Student 9 improvised over a sequence that modulated the same II–V–I progression between the tonal centers of F, Eb, and Db (see Figure 8.4, segment 3). Student 9 then employed the F, Eb and Db major scales similarly as before. As we added a II–V–I in C minor, over which Student 9 employed a C harmonic minor scale, we were able to play the jazz standard "Solar" (*Walkin',* 1954) by Miles Davis even during our first lesson (see Figure 8.4, segment 4). In summary, I here relied on my

pedagogical experience, according to which I was confident that this approach would provide an easily accessible starting point, and the more sophisticated scale options could then be practiced afterwards (see Figure 8.4, segment 5).

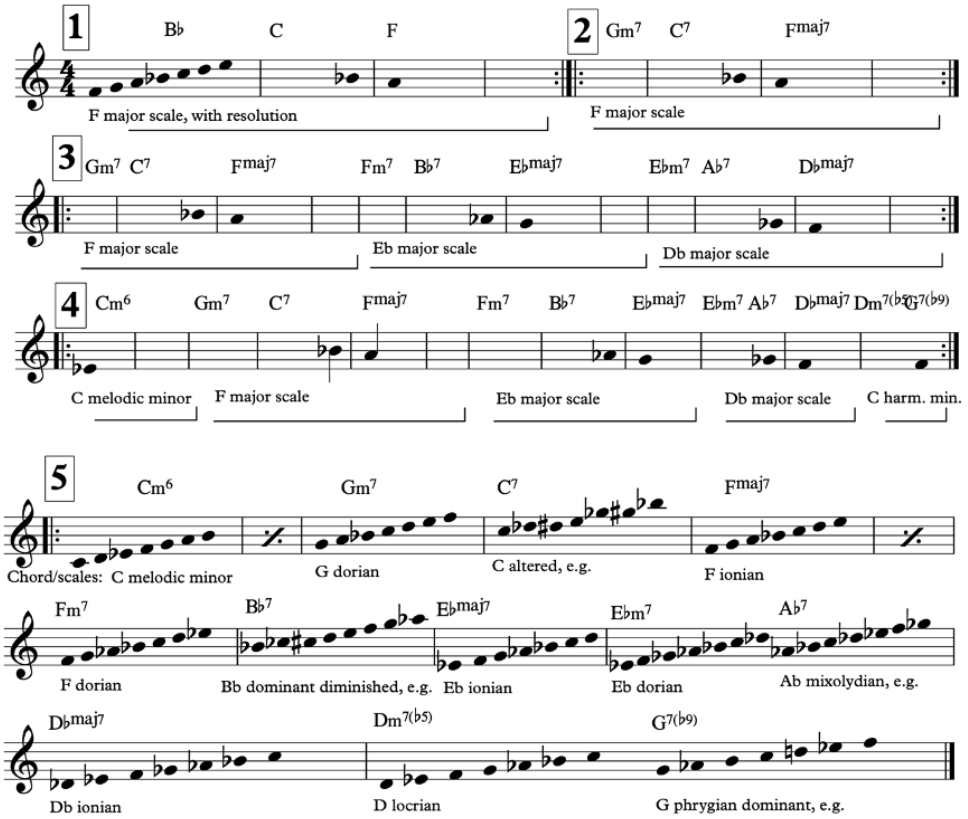


Figure 8.4. A gradual, constructivist transition from horizontal to vertical jazz improvisation for a blues/rock -oriented student. Horizontal improvisation over a IV–V–I progression (segment 1), a II–V–I progression (segment 2), a modulating II–V–I sequence (segment 3), and finally over the chordal structure of Miles Davis' "Solar" (segment 4). A more elaborate vertical approach, the chord/scale concept, appears in segment 5.

Importantly, practicing a vertical approach first (see e.g., the chord/scales in Figure 8.4, segment 5) would have opposed the constructivist view that I discussed above, because it would not have relied on Student 9's current strengths. On the other hand, another constructivist option would have been to commence with jazz/blues (e.g., Sonny Rollins' "Tenor Madness", *Tenor Madness,* 1956). However, I had a specific reason for not commencing with a jazz/blues context; it would not have addressed Student 9's initial request of learning to improvise over chord progressions that are foreign to his blues/rock background. In his VSR interview, Student 9 commented on this practice as follows: "It was relatively easy to transfer to the jazzier way of playing. Then we moved on from there gradually. […] It was fast to somehow step into another style of playing with such small

alterations. We started from something familiar and then added something gradually. […] It's a good way to learn". This suggests that we achieved the aim of this constructivist approach, which I discussed above (see also Subchapter 2.1.2; Hytönen 1998 [1992]: 22; Tynjälä 1999: 365; Hoidn 2017: 21). This material implies that only after a learner's self-confidence is fortified should an entirely novel approach be applied when studying music in an unfamiliar context.

With the second topic, introducing jazz phrasing, I applied a constructivist thought in the exact opposite way. I indicated the contrasts between rock and jazz, in other words, the genre that Student 9 was familiar with and the unfamiliar musical style. In jazz, it is a common practice to accent the upbeat eighth notes as opposed to emphasizing the downbeat eighth notes, which is, roughly, more typical in rock (see Subchapter 5.1.4; iambic grouping vs. trochaic grouping; see Butterfield 2011). Since syncopation is essential in rock as well, this dichotomy is a simplification, which was, however, pedagogically purposeful in this context. As Butterfield (2011) argues, jazz musicians' practice of accenting the upbeat eighth notes is crucial to producing a forward motion. Therefore, I intended the groove of jazz to be a fundamental feature that Student 9 should become familiar with at the early stages of our studies. During the lesson, I demonstrated this characteristic with my guitar in the manner that Figures 8.5a and 8.5b illustrate below. Comparing Chuck Berry's (1958) lead break on "Johnny B. Goode" (see Fig. 8.5a) with the jazz standard "Anthropology" (Fig. 8.5b) may be an extreme example and a simplification, as mentioned. Nevertheless, it was a pedagogical demonstration of jazz phrasing that succeeded in clarifying the matter for Student 9.

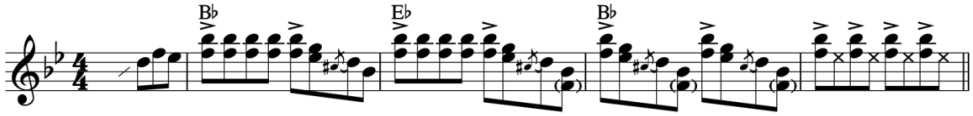


Figure 8.5a. Chuck Berry's (1958) solo break from "Johnny B. Goode" [01:25–01:32]. This example illustrates extensive accenting of the downbeat eighth notes in a rock context.

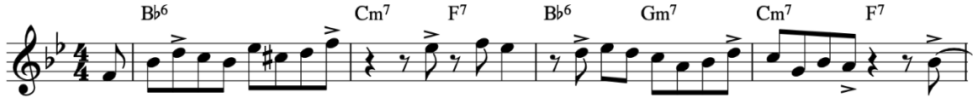


Figure 8.5b. Theme from bebop tune "Anthropology", credited to Charlie Parker and Dizzy Gillespie (1945). The accents indicated here exemplify the emphasized upbeat eighth notes that are typical in jazz.

Student 9 absorbed this rapidly. The practice of comparing contrasting examples was efficient, which is in alignment with the observations in Subchapters 7.1 and 7.3. His VSR interview suggests, furthermore, that this demonstration clarified Student 9's awareness of his own playing: "It was really good, because I hadn't thought about it myself. And then when we compared it to rock, I kind of realized that 'true, I'm always playing TAka-TAka-

TAka [emphasizing the downbeat]'. I hadn't thought about it before". The awareness of his own typical phrasing essentially enabled Student 9 to adjust it to an unfamiliar genre, in this case jazz. When Student 9 heard his playing in the VSR interview, he was genuinely surprised how much he had improved even between the first two lessons. Apparently, the transition from emphasizing the downbeat eighth notes to accenting the upbeat eighth notes made a significant impact on his jazz playing. Below appears an excerpt from the VSR interview, as we watched an episode where he had changed his accentuation.

> Student 9: What on earth?
> I: This is from the next lesson.
> S9: Well, that sounds much better [laughs]. This was clearly an essential thing, this way of thinking. You immediately sound different when you realize that you have always played a certain way, and now you have to play with a slightly different accentuation.

As the excerpt above shows, Student 9 noticed a dramatic change in his playing retrospectively. This suggests that, in this particular study, it was beneficial that I conducted the VSR interviews at the end of the semester instead of soon after each lesson, which is more common in VSR studies (see Subchapters 6.2 and 6.3).

Our third topic was to study a vertical approach to improvisation. As I discussed above (see Subchapter 5.2.4), in essence this involves outlining the underlying chord progression carefully (see e.g., Berliner 1994: 128). Pedagogically, I intended to integrate constructivist pedagogy and music analysis as follows. Since Student 9 credited rock/blues guitarist Gary Moore as his main influence, we initially explored the similarity between Moore's "Still Got the Blues" (*Still Got the Blues,* 1990) and the jazz standard "Autumn Leaves" (Kosma, Prévert & Mercer; orig. 1945). Below, Figure 8.6 illustrates the way we proceeded.

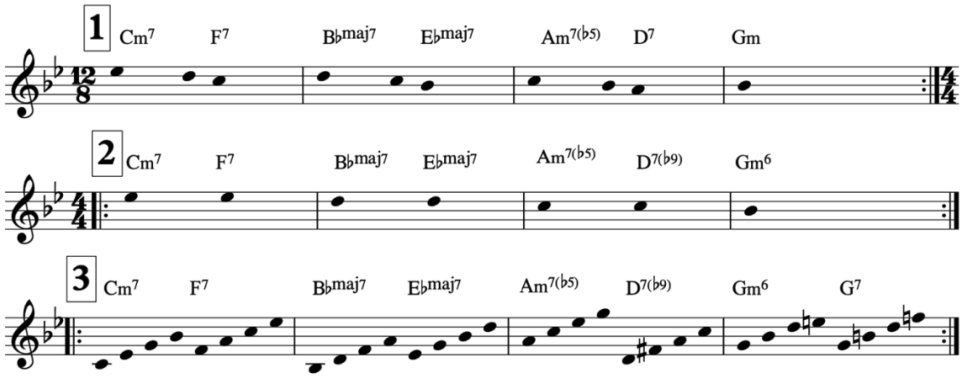


Figure 8.6. A constructivist approach to teaching improvisation with chord tones to a rock/blues-oriented learner. Segment 1 illustrates the main melodic line in the guitar melody of Gary Moore's "Still Got the Blues" (transposed from the original key of A minor for demonstration purposes). As segment 2 shows, the jazz standard "Autumn Leaves" employs the same chord progression and also chord tones (guide tones) in the melody. Segment 3 illustrates the entire seventh chord arpeggios.

As Figure 8.6 shows above, both songs employ a chord progression that relies on the circle of fifths. As I indicated to Student 9, the melodies in both songs emphasize the chord tones. To benefit from this similarity in improvisation, we jammed first on "Still Got the Blues" and then segued into "Autumn Leaves". In other words, during the jam I altered my accompaniment from the 12/8 time signature of "Still Got the Blues" (Figure 8.6, segment 1) to the 4/4 swing feel of "Autumn Leaves" (Figure 8.6, segment 2). However, I initially asked Student 9 to maintain a similar playing style throughout the jam. As in a rock context, he employed a heavily distorted sound and frequent string bending. I encouraged him to continue in a similar way, although I transferred my accompaniment into "Autumn Leaves". As I had expected, Student 9 continued relying on Gary Moore's guitar style, and intuitively emphasized the chord tones on each chord change. As Student 9 played by ear and applied the style of Moore, which he had listened to extensively, this practice engaged his audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). After we had jammed for a while, I asked him to change the distorted sound to a clean tone and reduce the string bending. However, I challenged him to maintain the same note choices as he had done in the rock style of playing. Finally, in terms of rhythm, I asked him to strive for the consistent eighth notes and swing phrasing that we had practiced, instead of bluesy long tones.

In his VSR interview, Student 9 expressed that the practice of applying his prior skills from "Still Got the Blues" to "Autumn Leaves" helped him bridge to the gap between jazz and rock: "There was a bit like a gap to jazz, because in a basic rock or pop progression I might have played some chord tones without thinking about. […] It took a moment before you started to realize that 'really, they're kind of the same thing'." Most importantly, he described that "it made it sound yet more like my own playing". This implies that this procedure may have associated the unfamiliar genre with his musical true self (see Chapter 3; Kurkela 1993:

352–353; cf. Winnicott 1965 [1960]), which I discuss further below. Moreover, Student 9 described the above procedure as positive and illuminating. In alignment with the title of Rogers' (1969, 1983, 1994) work, *Freedom to Learn*, he speculated how student-centeredness affected the studies: "Had a teacher been, like, 'now, let's play jazz' [laughs], then it might have been a little more forced. But now that we started playing little by little, getting more and more jazzy from blues/rock, it was at least more fun, and then the big picture is perceived better".

During the rest of the semester, we studied yet more authentic jazz improvisation, since Student 9 had become more conscious of relying on chord tones through the above practice. We practiced improvisation over "Autumn Leaves" by utilizing only the arpeggios (see Figure 8.6, segment 3). As his first proper jazz solo transcription, Student 9 practiced Pat Martino's solo in "Just Friends" (*El Hombre,* 1967), from which he started learning authentic jazz vocabulary. He could now conceive that the bebop style phrases were largely built on chord tones that were approached with chromatic embellishments as well as scalar passages. As we continued practicing improvisation over jazz standards, we applied the imitation – assimilation – innovation approach to Martino's bebop phrases (see Subchapters 5.2, 8.2 and 8.3). From a highly personalized introduction we had thus advanced to the common learning strategies of jazz musicians.

Student 9 commented on the results of the entire learning process as follows: "I have gotten ways to approach something new so that I can play it somehow in a musical way instead of just having separate tools. Instead, they are now connected to my own thing after all". Firstly, this suggests that this approach enhanced the musical quality of his learning, as the new skills were acquired in a holistic way rather than a fragmented fashion. Most importantly, according to this comment, even an entirely new musical style, jazz, became integrated with music that felt personal to Student 9. This, in turn, implies that even a new genre may potentially be associated with the subjective meanings that he may have ascribed to his favorite music (see Chapter 3). Overall, the mention of his "own thing" suggests that approaching even an unfamiliar genre in a constructivist way can potentially support a learner's musical true self (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]). Furthermore, Student 9 described these studies as "at the same time hard work, but also rewarding and motivating". This implies intrinsic motivation (see Subchapter 2.1; Deci: 1975: 23). As we also applied the style of Gary Moore, which he had listened to extensively, he employed audiation (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) as much as possible. Thus, these studies may be viewed as an application of the Intrinsic Triumvirate of Learning Music (see Subchapter 4.3) to some extent, even if Student 9 did not have a personal background with jazz yet. Finally, Student 9's comment that the studies were "at the same time hard work, but also rewarding and motivating" suggests that the SCME approach succeeded in integrating student-centered and teacher-directed pedagogies. This comment shows that student-centeredness did not imply passivity or ineffectuality (see Subchapter 2.1.4; cf. Meyer 2009; Richmond 2014). On the other hand, relying on the

pedagogue's input did not equate with being authoritarian or bypassing the student's individual background (see Subchapter 2.1.4; Schweisfurth 2013a: 13).

9 Conclusions

In this research, I explored the individual studies of nine electric guitar students by video-documenting their weekly lessons for three months. I applied the Student-Centered Musical Expertise (SCME) approach with all of the students. To access the students' experiences, I employed the video-stimulated recall (VSR) method, according to which they watched excerpts of their own lessons and commented on them. I had multiple roles in this process, as I was the pedagogue, the researcher, and the interviewer for the VSR sessions. We studied groove with five students, and other musical focuses with four students. Before drawing the conclusions of this study, I will briefly summarize these learning processes.

9.1 Summary of the Student-Centered Musical Expertise (SCME) Approach in Practice

As a primary example, I introduced AC/DC's "It's a Long Way to the Top (If You Wanna Rock 'N' Roll)" (*High Voltage,* 1976) to all of the students who studied groove. Through this example, which represents my musical expertise, I demonstrated the timing exercises to the research participants. After practicing this song thoroughly, we applied these exercises to student-selected repertoire. I have termed this order the top-down, Deductive SCME. We applied it to all of the components of groove. Collectively, all of the timing exercises that the students practiced contributed to the development of an "unfailing sense of the beat" (see Berliner 1994: 157). The widely known exercise of having the metronome on beats two and four in a 4/4 time signature (see Subchapter 7.2, Table 7.2, Exercise 1) enhanced a forward moving impression in the students' performances. As one of the participants described it, it even "forced [him] to play better". A more challenging timing exercise, having the click only on beat four (see Subchapter 7.2, Table 7.2, Ex. 2), further reinforced the students' timing. Since they had to take full rhythmical responsibility on beats one, two, and three, this exercise made the students imply the beat even more explicitly in their performances. Furthermore, as I expected, the students consistently considered practicing at very slow tempos (i.e., 40 bpm) to be an especially difficult exercise (see Subchapter 7.2, Table 7.2, Ex. 3). Consequently, it was also effective, as it reduced rushing and fine-tuned the note durations in the students' performances. Overall, these timing exercises considerably enhanced a rhythmically accurate and percussive way of performing for all of the students. This relates to fundamental skills in interplay, "communicating a uniform temporal reference for the rest of the band", as formulated by Matthew W. Butterfield (2011: 16). Importantly, all the above exercises are open, in the sense that they are not bound to a particular repertoire or music genre. Therefore, we were able to apply them to the students' favorite songs extensively.

The main musical finding of this study is *Implied Moderate Swing Phrasing*. In essence, it involves a phrasing of eighth notes that is almost imperceptibly swinging – although it appears to be even and is commonly notated as even eighth notes. This study suggests that it is an essential component of hard rock groove. I discuss this further below. For a pedagogical implementation of this finding, I introduced a systematic phrasing exercise. As discussed, phrasing that is in-between even and swing is a common feature in funk. It is much more subtle in hard rock, and has not been widely acknowledged. Therefore, the students practiced the riff of AC/DC's "Hell Ain't a Bad Place to Be" (*Let There Be Rock,* 1977; *If You Want Blood…You've Got it,* 1978) first over a funky drumbeat with a half-time feel. Then, we applied moderately swinging phrasing over the original drumbeat (see Subchapter 7.3, tables 7.3 and 7.4). Through this exercise, we transferred a nuance of the rather obvious swing from 16th notes in funk to the more subtle swing of eighth notes in hard rock. As a result, the students learned to perform Implied Moderate Swing Phrasing. By applying this awareness, we then continued studying phrasing by exploring songs that the students suggested in the lessons. We discovered that Implied Moderate Swing Phrasing was a crucially important tool for performing several grooves in the students' favorite pieces. With one research participant, we also applied this to enhancing groove in lead guitar improvisation.

According to my experience as a performer, as well as the musical analysis in this study (see Subchapter 5.1.5), groove is essentially a product of the interplay within a band. Therefore, I needed to extend this pedagogical exploration beyond individual guitar education. In the band class, the essential concepts that we studied were different time-feels, and more specifically, participatory discrepancies. This involved the drums emerging minutely later, or alternatively, earlier than the other instruments in the band. As examples of such grooves, we studied Black Sabbath's "Sabbath Bloody Sabbath" (*Sabbath Bloody Sabbath,* 1973) and The Police's "Next to You" (*Outlandos d'Amour,* 1978), respectively. After listening to these recordings, the students imitated the grooves in these songs, and we employed mental images such as "heavy" or "hectic" to describe them. To introduce a concrete technique, I encouraged the drummer in the band to initially exaggerate the lateness, or alternatively earliness, and to gradually adjust towards the other instruments' timing. Through this experimentation we discovered the appropriate amount of discrepancy between the instruments. Therefore, the band succeeded in producing similar grooves as on the above recordings. Once we had studied the above songs that I had introduced, we applied this approach to songs that the students suggested.

For a broader view of the utilization of Student-Centered Musical Expertise (SCME), I also explored it with other musical focuses than groove. For these focuses, we started with exploring the students' favorite pieces, where we discovered musical concepts that the students could apply even beyond that initial repertoire. I have termed this order of proceeding the bottom-up, Inductive SCME. For example, with a student who was at the earlier stages of learning, we studied fundamental music skills as they appeared in the songs that he suggested (e.g., transcription, chords, and fundamental instrument techniques). With

another student, we applied jazz trumpetist Clark Terry's (see O'Donnell 2011) method of practicing improvisation. This consists of the phases of imitation, assimilation, and innovation. First, this student transcribed a selection of Marty Friedman's guitar solos on thrash metal band Megadeth's records, because they were his personal favorites. Consequently, I helped him to analyze these guitar solos, and his task was to apply our discoveries to improvisation as we jammed extensively during the lessons. Similarly, as another student transcribed jazz fusion solos of his favorite guitarist Mark Lettieri, he learned the dominant diminished scale and was prompted to practice his control of dynamics. As we made these discoveries together during the lessons, I designed a personalized exercise for him that further enhanced all of those skills.

Finally, I also explored how student-centered pedagogy can be applied if a student wants to study something other than their favorite music. One participant in the research had already played blues/rock extensively and wanted to learn jazz, which was an unfamiliar genre to him. In this situation, I employed Relative SCME, meaning that I explicitly indicated similarities and differences between blues/rock and jazz. To expand the student's stylistic versatility, I aimed to conceive jazz from the perspective of his background in blues/rock. For example, we studied the basics of jazz improvisation initially with a horizontal approach because improvisation in blues/rock is clearly more horizontal than in many forms of jazz. This approach was a popular music implementation of constructivism; we built new knowledge by referring to the student's prior knowledge in various ways (see e.g., Hytönen 1998 [1992]: 22; Tynjälä 1999: 365; Hoidn 2017: 21).

9.2 Conclusions of Learning through Student-Centered Musical Expertise (SCME)

The results of this study suggest that the Student-Centered Musical Expertise (SCME) approach succeeds in integrating the advantages of student-centered pedagogy and a pedagogue's musical expertise. An essential tool in actualizing this integration was *musical exercises that are on the one hand specific enough to be musically effective, and on the other hand open enough to be applicable to various student-selected repertoires*. Firstly, the video records show that the pedagogical practices that I employed with the students were musically demanding and effective. Thus, the SCME approach is fundamentally different from the sort of student-centered education that has been criticized for relying on flawed assumptions and being ineffective (see Meyer 2009; Richmond 2014). At the same time, the students and I applied the exercises to various student-selected repertoires. The video-stimulated recall (VSR) interviews with the research participants suggest that these practices supported the students' good relationships with music. I discuss this in further detail below.

As the video records showed, both the students and I, in the role of the pedagogue, were active participants in the lessons. On the one hand, the students were immersed with the challenging exercises that we applied to their favorite songs. From this perspective, this

implementation of student-centered pedagogy is in alignment with Terry Doyle's (2011: 7) statement that "the one who does the work does the learning". On the other hand, I applied my musical expertise to analyzing the students' favorite music, assigning personalized exercises to them, and jamming with the students. The emphasis of my input as a musical expert pedagogue can be related to John Dewey's (1902: 24) statement that "nothing can be developed from nothing". My active role as a pedagogue corresponds to Gert Biesta's (2012) view of "giving teaching back to education", which is his critical response to "the disappearance of the teacher". In this sense, the documented lessons retained certain features of the traditional master-apprentice model of learning (see Burwell 2012). As I intended, my role was crucially different from student-centered views where educators have the more passive role of a facilitator (see e.g., Weimer 2013). Therefore, the SCME approach is different to Lucy Green's (2008: 31) study on popular music education, where it was beneficial for the teachers to "stand back". On the other hand, my perspective is similar to Green's (2002, 2008) research in encouraging the students to practice their personally favored songs.

In the VSR interviews, the participants in this study expressed their appreciation for student-selected repertoire. However, they also emphasized the importance of a pedagogue's input in terms of presenting new musical influences. This occurred even more than I had expected. Although the number of participants is small, this implies that neither student-centeredness nor teacher-directedness are solitary ideals in themselves. Rather, this suggests that integrated approaches are needed, which is in alignment with the studies of Andrée Sursock and Hanne Smidt (2010: 32), Cecilia Björk (2016: 184), Sabine Hoidn (2017: 24), Ed Sarath (2018: 194), and Susanna Mesiä (2019: 46). According to this study, student-centered pedagogy is not restricted to a student's favorite music either. This research material displayed such applicability, as in the case where a student wanted to expand his stylistic versatility and I explicitly related an unfamiliar genre to the student's favorite music.

Nevertheless, the VSR interviews showed that the studies were consistently rewarding for the students as they worked on their favorite pieces. As described by one research participant, *"somehow it hasn't really felt like work because it's been something that has been interesting to me as a music listener".* This suggests that the students who could choose learning material from their favorite music were *intrinsically motivated* (see Deci 1975: 23). In other words, they learned music for the music's own sake and not primarily to fulfill other purposes, for example, a teacher's ideals or other extrinsic rewards. Furthermore, in their VSR interviews the students described their learning processes by referring to, for example, their individual interest, pleasure, and joy. This implies that working with student-selected repertoire had the potential to balance libidinal economy with narcissistic economy in the documented learning processes (see Kurkela 1993), as I delineated in Chapter 4.

Furthermore, the VSR interviews suggest that learning through student-selected repertoire felt personal for the students. One of the students expressed this when he heard his playing from a video-documented guitar lesson: *"It does sound like me. Only it's more accurate".*

This comment could be rephrased as the student becoming "the 'best' version of themselves", which Marissa Silverman (2020: 31) discusses as she explores music education that sets *eudaimonia,* human flourishing, as its primary pedagogical aim. Therefore, as the students became more proficient in performing music that felt personal to them, the studies promoted their musical self-expression (see Campbell 2008: 17–19) and their self-actualization (see Rogers 1983: 52; Elliott & Silverman 2015: 380). Ultimately, this can be interpreted as supporting the learners' *musical true selves*, a concept of Kari Kurkela (1993: 352–353) that applies Donald W. Winnicott's (1965 [1960]) psychodynamic theory of the true self and false self. The concept of true self, in turn, relates to the broader theory of the potential space (Winnicott 2005 [1971]), which is the primordial foundation of creativity, self-expression, and integrity, amongst other characteristics (see Chapter 3). Since the theories of true self and false self (Winnicott 1965 [1960]) and potential space (Winnicott 2005 [1971]) originate from research on the fundamental development of mental health, this psychodynamic perspective adds considerable depth to understanding why emotion-driven, student-selected repertoire feels meaningful for learners. As listeners, the participants in this study had a prolonged engagement with the pieces that they practiced. Potentially, the students may have invested the learning material with subliminal meanings from personally favored music (see Chapter 3; e.g., music as a source of protection, music as a container of troublesome emotions). However, this cannot be proven with this research material. Nevertheless, the VSR interviews suggest that employing a student's favorite musical pieces as learning material supports a good relationship with music. By exploring the psychodynamic theories on the mechanisms that underlie self-growth, this study contributes to the discussion on eudaimonia in music education (see e.g., Elliott & Silverman 2015; Smith & Silverman 2020).

As previously mentioned, the main musical finding of this study is that an essential component of hard rock groove, for example in AC/DC, is *Implied Moderate Swing Phrasing*. This means a phrasing of eighth notes that is minutely swinging – although it appears to be even. Spectral analysis of recordings confirmed this assumption, which stemmed from my long experience as a performer. However, an unexpected finding was that Implied Moderate Swing Phrasing is often contrasted with anticipated upbeats. Together, these contrasting micro-rhythmic features induce tension and release, which promotes forward motion musically. Furthermore, in contrast to Implied Moderate Swing Phrasing, which creates a loose effect, strictly even phrasing produces a stiffer groove. The documented lessons also supported these findings when the research participants practiced groove. Therefore, this study suggests that phrasing is an essential means of creating *different* grooves. This occurs alongside other essential components of groove (i.e., timing, dynamics, time-feel, and interplay within a band). Overall, the video-documented learning outcomes in this study suggest that an instrumental performer's control over the above components of groove can be enhanced considerably through systematic practice. This conclusion is opposed to any mystification of groove. Additionally, the inclusion of a thorough exploration of hard rock groove in this study suggests a further pedagogical conclusion. As we were able to apply highly specific groove exercises to student-selected

repertoire, I propose that *a pedagogue's advanced musical knowledge does not necessarily impel an authoritarian, teacher-directed pedagogy.* This perspective is fundamentally different from much of advanced education – and from the traditional master-apprentice model – where highly specialized expert knowledge is most often combined with an educator imparting it as such.

The learning results in this study were consistently of a high musical standard, as the students agreed when we watched the video-documented materials at the end of the semester. The VSR interviews suggest that the students were able to rely on *audiation* (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351) when they practiced. In other words, the students could employ their imaginary hearing. Thus, they had an impression of what the music was supposed to sound like. This was most probably because we concentrated on repertoire that the students had listened to extensively. One of the students reported that the groove studies even developed his audiation and that it, in turn, clarified his further musical aims: *"I see my goal in this thing even better, like 'that's what I want to sound like'".* The importance of audiation became even clearer with one student who, in contrast, did not want to study his favorite music. Instead, he wanted to study hard rock groove because he was not familiar with that genre. Initially, he was somewhat confused with Implied Moderate Swing Phrasing in AC/DC. This was most likely because he had not listened to that music extensively and could not rely on audiation as much as the other students. Apparently, because of the other participants' extensive backgrounds as listeners, implicit learning (see Ahonen 2004: 14–15, 82) and enculturation (see Green 2002: 96; see also Ahonen 2004: 24) had already begun the internalization of the music that they practiced. These results suggest that a prolonged engagement with personally favored music is essential to absorbing the intricate rhythmical details of groove. Therefore, it appears that *groove studies considerably benefit from student-selected repertoire.* I elaborate on this finding further below. Following from this observation, the variety of the students' backgrounds and their conceptions of groove suggests that a pedagogue needs to be able to handle several different approaches to groove.

Drawing together the above benefits of employing student-selected-repertoire, I suggest that many of the documented learning processes actualized *the Intrinsic Triumvirate of Learning Music* that I presented in Subchapter 4.3. This is the synergy of three driving forces of a music students' learning. In other words, according to my analysis of the video records and the VSR interviews, the studies constituted the joint actualization of *intrinsic motivation* (see Deci 1975: 23), the *musical true self* (see Kurkela 1993: 352–353; cf. Winnicott 1965 [1960]), and *audiation* (see Gordon 1985; Elliott 1995: 228; Elliott & Silverman 2015: 350–351). Firstly, the students learned music for its own sake; secondly, the music felt profoundly personal to them; and thirdly, they were able to hear the music internally. This occurred as I presumed when I outlined this concept in Chapter 4. Learning groove offered a concrete example of this synthesis, as I summarize in the following.

As I discussed above, the students who practiced groove essentially needed to utilize audiation, because the rhythmical nuances that constitute groove are very intricate (see e.g., Subchapter 5.1; phrasing measured in milliseconds). Relying on a theoretical understanding of groove would have been insufficient. As mentioned, the students who were able to effectively utilize audiation had listened extensively to the music that they practiced. Through the extensive listening processes that enabled the students to utilize audiation, the students had also formed emotionally meaningful relationships with their personally favored music. This was implied by the observations that the students were intrinsically motivated, and that the music felt personal to them. These results suggest that *learning groove on an advanced level also benefits from an emotion-driven, personally meaningful relationship with music*, which I have explored by applying psychodynamic theories. It may be that mastering groove is unlikely – or even impossible – without a profound emotional attachment to one's favorite music. From this holistic perspective (i.e., where a learner is perceived as a whole, multidimensional person; see Rogers 1983: 167; Elliott & Silverman 2015: 158–164), I suggest that the Intrinsic Triumvirate of Learning Music is an appropriate pedagogical goal, especially in popular music, because it is common for popular musicians to have learned by imitating records that they identify with (see Berliner 1994: 95–99; Green 2002: 175; Green 2008: 6, 10). Ultimately, the Intrinsic Triumvirate of Learning Music suggests an answer to one of the research questions: why student-centeredness should be applied in instrumental popular music pedagogy. To apply Sigmund Freud's (s.a. [1899]: 399) statement that dreams are a "royal road" to the subconscious,[43] the results of this study suggest that *student-selected repertoire is a royal road to a student's musical potential and integrity*.

Furthermore, the results of the research materials suggest that a hypothesis of this study can be confirmed: *music analysis and rapid transcription skills are essential tools in actualizing student-centered music pedagogy successfully.* In practice, since I was aware of the essential components of groove, I was able to identify them as I heard the songs that the students suggested during the documented lessons. An analytical understanding of groove enabled me to apply exercises to various repertoires spontaneously in the lessons. For example, Implied Moderate Swing Phrasing was an applicable tool in studying student-selected repertoire such as Led Zeppelin, Deep Purple, and a student's own composition. During the VSR interviews, the students reported that they gained insight into the grooves of their favorite songs – *"why do they sound like they sound"*, as formulated by one of the participants. This applied to learning other musical focuses as well. On a more basic level, a student who learned musical fundamentals (i.e., transcription, chords, and guitar techniques) through a personally favored song commented that *"it sounds almost exactly the same as it sounds on the album, so it's nice"*. Moreover, a research participant who practiced improvisation expressed that the musical concepts that we derived from his favorite guitar solos were also highly applicable in making his own music. Therefore, they facilitated his

[43] Although this is often quoted as "dreams are a royal road to the subconscious", the original sentence is (translated by A. A. Brill): "At any rate, the interpretation of dreams is the via regia to a knowledge of the unconscious elements in our psychic life". (see Freud, s.a [1899]: 399)

self-actualization (see Rogers 1983: 52; Elliott & Silverman 2015: 380). As he summarized it: *"If I want to play a certain way, I can do it more and better than before".* As this study has displayed, analyzing student-selected repertoire together with the students corresponds with several writers' views of a collaborative student – teacher relationship (see Subchapter 2.1; Rogers 1994: 20–21, 44; Weimer 2013: 59, 61–61; Richmond 2014), and especially the guided discovery discussed by Hoidn (2017: 554).

However, it must be emphasized that music analysis was not the only important means of promoting the students' music skills in this study. Another essential feature of the video-documented lessons was *jamming*, especially in studying improvisation. One of the participants expressed in his VSR interview that analyzing and jamming essentially benefit from each other when they are balanced well in the lessons. The aim for such a balance corresponds to David J. Elliott and Marissa Silverman's (2015: 195–235, 231) praxial philosophy, which emphasizes that musical understanding is essentially a multidimensional form of thinking and knowing. Promoting the students' musicianship by jamming worked in this study as an application of Elliott and Silverman's (2015: 231; see also 434) praxial view of "musicing" where learners are positioned as active doers and learning occurs in a musical real-life setting. When the students who participated in this research practiced groove, they looped the exercises extensively without interruption. We also played the riffs in unison continuously, persistently aiming to nail the groove together. Such vivid musical interaction between a student and a pedagogue also relates to Christopher Small's (e.g., 1998, 1999) "musicking", which emphasizes the social dimension of performing music. In the research material, looping a rhythm part consistently also highlighted the embodied experience of groove (see e.g., Danielsen 2010: 20; see also DeNora's (2004 [2000]: 99). For example, one of the participants commented on his development when he watched his video-documented lessons that *"you could see the rhythm coming better into the body. […] When that movement wasn't in the body, it didn't groove either"*. Thus, learning groove in this study corresponded with Tiger Roholt's (2014: 2) statement that to understand a groove is not to apprehend it intellectually but to feel it in the body. Overall, this pragmatic approach complemented the music analysis in the documented lessons.

In summary, in order to integrate student-centered pedagogy and musical expertise, a pedagogue needs the ability to apply *music analysis* and pedagogical practices *flexibly*. Moreover, by applying the students' favorite music as learning material, the SCME approach implements and elevates a *pedagogue's empathy towards each individual student* (cf. Rogers 1983). This pedagogical approach emphasizes that empathy must lead to action. This is in accordance with Karin S. Hendricks' (2018) view of compassionate music teaching. In the SCME design, a pedagogue retains the musical expertise of the master-apprentice model – but applies it in an empathic way to exploring music that is meaningful for each individual student. Ultimately, then, the SCME approach contributes to *dismantling the dichotomy between the master-apprentice tradition and student-centered pedagogy,* as a pedagogue combines their musical expertise with empathy. Within its field, this study thus suggests a solution to the fundamental problem that student-centered pedagogy remains unsuccessfully

actualized (see Estes 2004; Hoidn 2017: 23; EUA 2019). As such, the SCME design is a *readily applicable tool* for instrumental popular music pedagogy. In essence, according to the above analyses, a successful integration of student-centeredness and a pedagogue's musical expertise *both* promotes musically ambitious learning outcomes *and* supports a good relationship with music – *not one or the other.* Table 9.1 summarizes the conclusions of this study below.

CONCLUSIONS

- *The Student-Centered Musical Expertise (SCME)* design offers a readily applicable tool for instrumental popular music pedagogy. It integrates the advantages of both student-centered pedagogy and pedagogues' musical expertise.

- In actualizing this integration, an essential pedagogical tool is the use of *musical exercises that are on the one hand exacting, and on the other hand applicable* to various repertoires in accordance with students' individual backgrounds.

- In order to apply student-selected repertoire effectively, a musical expert pedagogue needs rapid skills in *music analysis* and *transcription*, the ability to apply pedagogical practices *flexibly*, and *empathy* towards each individual student. Thus, a pedagogue is not passive in the learning process, but applies his or her musical expertise to processing student-selected repertoire.

- Student-selected repertoire is a "royal road" to a student's musical potential and integrity. From a psychodynamic perspective, a learner has subliminally ascribed emotional meanings to his or her favorite music through a prolonged engagement with that music as a listener. Therefore, employing a student-selected repertoire supports a good relationship with music.

- An essential component of hard rock groove is *Implied Moderate Swing Phrasing*, i.e., a phrasing of eighth notes that is minutely swinging, although it appears to be even. Moreover, it is often contrasted with anticipated upbeats. Together, these contrasting micro-rhythmic features induce tension and release, which promotes forward motion musically.

- In contrast to Implied Moderate Swing Phrasing, which creates a loose effect, strictly even phrasing produces a stiffer groove. Therefore, phrasing is an essential means of creating *different* grooves. Other essential components of groove are timing, dynamics, time-feel, and interplay within a band.

- In instrumental music studies, the components of groove can be learned by practicing systematically. They can be taught by employing specific exercises that can be applied in a student-centered way. Therefore, a pedagogue's advanced musical knowledge does not necessarily impel an authoritarian, teacher-directed pedagogy.

- Learning groove considerably benefits from the utilization of student-selected repertoire. This suggests that extensive listening, and thereby an emotionally meaningful relationship with personally favored music, is essential to absorbing the intricate rhythmical details of groove.

- Student-centered pedagogy can even be applied to presenting musical genres that are unfamiliar to a student. This can be done by explicitly relating the new musical influences to a student's musical background.

- As the above points suggest, the integrative SCME approach *both* promotes musically ambitious learning outcomes *and* enables students' self-actualization – *not one or the other.* In addition to groove, this applies, at least, to learning improvisation, technical instrument skills, stylistic versatility, and musical fundamentals.

Table 9.1. Conclusions of this study.

9.3 Critical Remarks

My first critical remark on this study is that due to the limited number of participants I cannot make definite conclusions about the Student-Centered Musical Expertise (SCME) approach's applicability to all learners. On the other hand, the whole SCME approach is about the pedagogue's sensitivity and flexibility to each individual learner's needs. Therefore, a one-size-fits-all model is neither feasible nor desirable. In this sense, one may argue that the approach is applicable to all, provided that the pedagogue has enough sensitivity to continuously finetune it for each student. This may involve, for example, balancing between student-selected repertoire and repertoire from the pedagogue's expertise. Nevertheless, the decision between exploring data on either a broad or a deep level is a common dilemma (see Barkhuizen 2014). I have chosen to research this matter in depth, but with less participants. Even if this research setting lacked the potential for absolute proofs, I stand by the view that my aim of pursuing a thorough level of knowledge has most probably provided information that is applicable to many.

Secondly, it is clear that I am not an entirely objective researcher in this study because of my multiple function, as I was both the pedagogue and the researcher. In Design-Based Research (DBR) it is common for the researcher to have multiple roles, and they typically function as the designer of the intervention, the teacher implementing it, and also as the evaluator of the results (Hoadley 2004: 205; Barab 2014). For example, Sasha Barab and Kurt Squire (2004) argue that "ensuring that researchers can make credible and trustworthy assertions is a challenge", because a researcher is intimately involved in all the phases of the process. On the other hand, Terry Anderson and Julie Shattuck (2012) respond to this by stating that there are several qualitative methods, and for example anthropological studies, that do not claim to remove the researcher's bias from the research process. Anderson and Shattuck (2012) even argue that the researchers themselves are in fact optimal for the task, since they possess a "deep understanding of the context" in addition to their biases. In the present study, as the SCME approach is my design, I assess that my own insight into my pedagogical practices adds considerable depth to this study (see Anderson and Shattuck 2012). From this perspective, I believe that the benefits of my having multiple roles in this research outweighs the potential negatives. Additionally, Daniel C. Edelson (2002) recognizes that DBR should not be judged by the same standards as traditional empirical research, because their objectives are different; DBR does not lead to results with statistically determined confidence levels. Instead, as Edelson (2002) argues, the goal of DBR is "the generation of new, useful theories". He furthermore suggests, in alignment with Nienke Nieveen (1999), and Barab and Squire (2004), that the two most important criteria in such studies are novelty and usefulness. I believe that this study fulfills those criteria.

Nevertheless, the reliability of my own observations of the pedagogical events needs further comment. In learning studies, teachers researching their own practices has even been encouraged (see e.g., McLaughlin, Black-Hawkins & McIntyre 2004; Wyatt 2010; Leuverink & Aarts 2019). For example, David Hopkins' (2008) account of classroom

research concentrates on the pedagogue as a researcher of their own work. Hopkins (2008) describes this as action research, a field that has sometimes been described as similar to DBR (see Goldkuhl 2013). Importantly, Hopkins' (2008: 1) approach essentially employs self-reflection, or the pedagogues' "systematic reflection upon their craft with the aim of improving it". In accordance with Barab (2014), Hopkins (2008: 142) suggests triangulation as a technique that can enhance validity in qualitative research, meaning the utilization of multiple sources of evidence. In this study, my intention has been to fulfill this by employing both my own observations and the video-stimulated recall (VSR) interviews in the analysis.

In research settings similar to that in the present study, a recognized potential for bias is that the research participants may present themselves more favorably than they might otherwise, as the researcher is also their teacher (see Calderhead 1981: 215; Lyle 2003; Ojala 2017: 66). I acknowledge this issue in my research. However, I rely on Barab's (2014) and Hopkins' (2008: 142) views that even this problem can be balanced through triangulation. Similar to Aleksi Ojala's (2017) DBR study on learning through music production, the gathered data presented a counterargument to this potential bias: I also received critical comments from the students in the VSR interviews (cf. Ojala 2017: 66). For example, one of the participants insisted that the concept of Implied Moderate Swing Phrasing in hard rock groove felt distracting to him. Furthermore, students also emphasized that student-selected repertoire is by no means the only desirable learning material.

However, considering the entirety of this study, I suggest that it fulfills the criteria that Mats Alvesson and Kaj Sköldberg (2018 [2000]) set for good qualitative research. Alvesson and Sköldberg (2018 [2000]: 372) emphasize "richness in points" as an important aspect in research. This means developing insights and novel ways of thinking (Ibid.: 372). With the aim of promoting progress instead of repetition and stagnation in science, such pluralism strives to encourage imaginative richness and creativity (Ibid.: 374). Therefore, Alvesson and Sköldberg (2018 [2000]: 396) argue that what primarily determines the quality of research is an "awareness of various interpretive dimensions at several different levels, and ability to handle these reflexively". What this handling means is "setting into motion reflections on several issues" (Ibid.: 396) and finding new connections by, for example, asking how research material makes sense in another way than that typically proposed in its field (Ibid.: 389). I suggest that this study has done so. The multilayered nature of this study has functioned as a springboard, as it has made connections between popular music learning, hard rock groove, pedagogy, and psychodynamic psychology. In essence, even the pedagogical outcomes suggest that, in practice, Implied Moderate Swing Phrasing enhances groove in guitar performance, which was first an important finding in my musicological study of hard rock groove. Conversely, the music analytical exploration contributed to the pedagogical practices, as it not only supported the utilization of established timing exercises but also elaborated groove exercises. Furthermore, the psychodynamic insight offered considerable depth to understanding the meaning of learning through personally favored music. The students' multiple voices suggested that both student-centered and teacher-directed features are desirable in music education. With a critical view on established ways

of thinking about music education, this study suggests a novel approach to popular music instrumental pedagogy. Finally, according to Alvesson and Sköldberg (2018 [2000]): 382), a decisive criterion is whether research "makes a productive difference in the delivery of research results". My results suggest that the SCME approach is a readily applicable tool for music education, and therefore I believe that this study is both theoretically and practically significant (cf. Alvesson and Sköldberg 2018 [2000]: 375).

In summary, I acknowledge the limitations of this study, but I argue that the results are valid and significant. I have consistently followed the above principles and relied on previous research that has similar interests. Therefore, I have made every effort to conduct this study in a way that is as reliable as I could possibly achieve.

9.4 Contributions and Future Prospects

The contribution of this study to music pedagogy is a fresh learning design, the Student-Centered Musical Expertise (SCME) approach. As there has been a crucial need for domain-specific research on student-centeredness (Hoidn 2017; EUA 2019), the present study has aimed to alleviate this need within the field of instrumental popular music pedagogy. If the SCME design would become widely utilized, the actualization of student-centeredness would not rely only on the isolated efforts of individual educators. Instead, this study offers a readily applicable tool for all music pedagogues. The SCME design could even contribute to pedagogues' professional development and the betterment of higher education. In future studies, this design would be interesting to research with a larger number of participants. Furthermore, I believe that SCME is utilizable for all instruments and probably applies to any music genre, which would be intriguing to see if it was widely realized. I hope that this pedagogical design spurs the development of novel tools for actualizing student-centered music learning, even if they would not align with the views that I have presented here.

A further input to popular music pedagogy is that this study has shown that groove can indeed be taught, and importantly, that it can be taught in a student-centered way. As with any subject, there is probably variation in how far different learners can proceed. However, the results of this study suggest that groove-related skills can be essentially enhanced through systematic practice. This pedagogical matter will hopefully develop in future studies, as groove has had the unfortunate burden of mystification, both in pedagogical practices and among musicians. Although accomplished jazz pedagogues have taught swing in jazz contexts, established and elaborated learning methods on groove are still missing especially in other genres. According to my experience, as discussed herein, popular music instructors have widely dismissed groove with vague comments, for instance that it is merely a feeling, or solely a matter of natural talent. Improvisation has received similar treatments earlier in its history (see Ake 2003). Since it is now an acknowledged pedagogical subject with innumerable volumes of learning materials, perhaps the pedagogy of groove could become likewise established with time.

Even if sometimes unintentionally, the time spent conducting this study has presented possibilities for developing these pedagogical practices in the future. A long period of writing this study occurred during the COVID-19 pandemic. In my everyday pedagogical work, this meant distance learning. This extensive period showed me that the groove-related exercises that I have applied in this study also worked well in online teaching. Even band lessons were effective; a student band prepared a set of student-selected repertoire as follows. We rehearsed the individual performances of each band member in video meetings. Taking turns, each band member performed his or her parts individually with a metronome or a record, while the other students listened during the online lessons. Consequently, when the students' band was finally allowed to rehearse together after four months of video meetings, the results were astonishing. Timing-wise, the band quickly locked in with each other, and the overall togetherness was surprising. Clearly, the students had a shared conception of the grooves of the songs, and secondly, they were well familiar with each other's parts – they had internalized the musical entirety of the pieces that they rehearsed. If online instrumental teaching remains popular in the future, it would be interesting to develop these pedagogical applications in future studies on music education.

More broadly, the present study contributes to the discourse in the learning sciences on how student-centeredness can be actualized in everyday education. Perhaps adaptations of the SCME model in other fields could be designed; could a general concept of Student-Centered Subject Expertise be applied to other forms of the arts, science, or any school subjects?

Importantly, this study has contributed to music research by exploring groove. The main finding, Implied Moderate Swing Phrasing, clearly deserves further research. Of special interest for future studies is the finding that it often occurs in conjunction with anticipated upbeats that function as a counterforce to produce a continuous alteration of tension and release. I believe that this phenomenon is more common in various music genres than previously acknowledged. However, studying groove in multiple genres was beyond the scope of this study. Therefore, this was only a beginning to exploring the matter. Other researchers in musicology are welcome to benefit from this study by employing the same method of exploring phrasing, since I have explained my measuring procedures thoroughly above. Also, I hope that future tools for spectral analysis will make such measurements easier.

As the present study has addressed several different fields, it has contributed to multi-disciplinary research as well. The Intrinsic Triumvirate of Learning Music summarizes this, as it integrates concepts from the learning sciences, musicology, and psychodynamic psychology. Furthermore, this study suggests that a psychodynamic view is still viable and applicable in multi-disciplinary research. Conducting this study has convinced me that an active dialogue between psychodynamic research, the learning sciences, musicology, and arts research would be beneficial for all fields involved.

9.5 Closing Reflections

In retrospect, I would like to take a wider philosophical look at the findings of this study. Both the main research topic, the Student-Centered Musical Expertise (SCME) approach, and the main musical implementation field, groove, have fundamentally involved a similar effect. In their respective domains, they have essentially promoted forward motion. What the components of groove have done at a micro-level of time musically, the SCME approach has done at a macro-level of time pedagogically. As I have found, Implied Moderate Swing Phrasing in a seemingly even rhythmical context produces a loosely forward moving sensation, and the anticipated upbeats work as a counterforce to this by inducing an urgent feel. Together, the friction between these contrasting elements causes a succession of tension and release that creates a vividly forward propelling effect – groove. Analogously, the results of this study suggest that in the SCME approach, the interaction between student-centered practices and input from the musical expert pedagogue produces considerable progress with the students – in other words, forward motion in the learning processes. To elaborate on the reflection with which I concluded the exploration of groove (see Subchapter 5.1), then, the dynamics between two contrasting forces constitutes a primary endeavor – progress.[44] For example:

- tension/release,
- implied moderate swing phrasing/anticipated upbeats,
- student-centeredness/teacher-directedness,
- night/day,
- ac/dc, etc.

This leads to a philosophical discussion that could be continued in several disciplines: why is forward motion experienced as pleasureful? In an overall sense, groove inspires dance, and dance inspires physical interaction, which also determines our reproduction and ultimately the survival of our human race.[45] Likewise, progress in learning underlies the mental development of our species. Thus, an essential attraction to forward motion appears to be encoded in our very nature. From an evolutionary perspective, then, the findings of this study reflect a fundamental feature of (human) life.[46]

Ultimately, apart from colleagues in pedagogy and academic research, who could benefit from the development in music pedagogy that this study has contributed to? The answer is, naturally, the music learners of the present and future generations. In an ideal world, if SCME would be ubiquitously implemented, future students would have better prospects of

[44] Similar concepts of dualism occur in several cultures, e.g., Yin and Yang in Chinese thought; see Wang 2012.

[45] For further reading, see the studies on biomusicology by Wallin (1992 [1991] and Wallin, Merker and Brown (1999).

[46] For a philosophical discussion on human finitude and the temporal aspect of human life, see Moore (2001 [1990]: 218–233).

learning in such a way that self-actualization would be well-balanced with studying the musical tradition passed on from their predecessors. Furthermore, music learners would have the opportunity to develop their own groove as a standardized part of their education, and as a vital part of musical heritage. As a quality that induces forward motion, groove would promote sensations of pleasure in the learners' performances. Even for the students who would not continue with their music studies, the SCME approach would have guided them towards enjoying work that is, simultaneously, disciplined yet rewarding, encouraging yet demanding. Although, or perhaps because, our ideals are realistically never entirely fulfilled, it is our, the pedagogues', and the researchers' ceaseless endeavor to develop the learning opportunities for our musical successors. To paraphrase a song by AC/DC, as it has been a central band in this study:

For those about to learn music, we salute you!

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2 Discography
3 Audiovisual Material
4 Primary Pedagogical Source Material
  4.1 Video-Documented Guitar Lessons
  4.2 Video Stimulated Recall Interviews, audio recordings

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4 Primary Pedagogical Source Material

All the following material was collected at the Helsinki Pop & Jazz Conservatory during a fall semester in the late 2010's. In order to protect the privacy of the students who participated in this study, the academic year is not mentioned.

4.1 Video-Documented Guitar Lessons

Student 1
Lesson 1 43'15''
Lesson 2 46'29''
Lesson 3 45'11''
Lesson 4 36'48''
Lesson 5 43'18''
Lesson 6 37'45''
Lesson 7 42'08''
Lesson 8 18'43''
In Total 5:13:37
(Edited into a video compilation (duration: 52'37'') for a Video Stimulated Recall Interview.)

Student 2
Lesson 1 42'08''
Lesson 2 36'33''
Lesson 3 34'55''
Lesson 4 40'05''

Lesson 5 45’22’’
Lesson 6 40’23’’
Lesson 7 41’54’’
Lesson 8 32’28’’
Lesson 9 39’15’’
In Total 5:53:03
(Edited into a video compilation (duration: 34’46’’) for a Video Stimulated Recall Interview.)

Student 3
Lesson 1 **45’02’’**
(Edited into a video compilation (duration: 17’28’’) for a Video Stimulated Recall Interview.)

Student 4
Lesson 1 31’04’’
Lesson 2 40’35’’
Lesson 3 40’15’’
Lesson 4 36’09’’
Lesson 5 42’38’’
Lesson 5 40’44’’
Lesson 6 28’30’’
Lesson 7 11’45’’
In Total 4:31:40
(Edited into a video compilation (duration: 29’44’’) for a Video Stimulated Recall Interview.)

Student 5
Lesson 1 34’02’’
Lesson 2 28’30’’
Lesson 3 22’19’’
Lesson 4 45’02’’
Lesson 5 28’24’’
Lesson 6 42’28’’
Lesson 7 34’00’’
Lesson 8 26’27’’
In Total 4:21:12
(Edited into a video compilation (duration: 37’52’’) for a Video Stimulated Recall Interview.)

Student 6
Lesson 1 41’04’’
Lesson 2 16’25’’

Lesson 3 39’05’’
Lesson 4 41’00’’
Lesson 5 35’21’’
Lesson 6 52’54’’
Lesson 7 43’20’’
Lesson 8 31’02’’
Lesson 9 21’59’’
Lesson 10 57’33’’
In Total 6:20:19
(Edited into a video compilation (duration: 1:25:38) for a Video Stimulated Recall Interview.)

Student 7
Lesson 1 **14’10’’**

Student 8
Lesson 1 36’46’’
Lesson 2 31’17’’
In Total 1:04:03
(Edited into a video compilation (duration: 20’17’’) for a Video Stimulated Recall Interview.)

Student 9
Lesson 1 47’02’’
Lesson 2 43’21’’
Lesson 3 47’09’’
Lesson 4 35’45’’
Lesson 5 46’41’’
Lesson 6 49’33’’
Lesson 7 37’52’’
Lesson 8 35’13’’
In Total 5:02:36
(Edited into a video compilation (duration: 29’52’’) for a Video Stimulated Recall Interview.)

Video-Documented Guitar Group Lessons
Lesson 1 36’51’’
Lesson 2 1:21:07
Lesson 3 1:26:16
Lesson 4 1:16:52
Lesson 5 43’09’’
In Total 5:24:15

Groove Band Workshop
Lesson 1 44’43’’
Lesson 2 1:32:10
Lesson 3 1:18:08
Lesson 4 41’56’’
Lesson 5 1:16:13
In Total 5:33:10

Altogether 65 video-documented lessons, total duration 44:23:07.

4.2 Video Stimulated Recall Interviews, Audio Recordings

Student 1 1:56:36
Student 2 51’19’’
Student 3 59’46’’
Student 4 1:22:26
Student 5 53’30’’
Student 6 46’12’’
Student 7 25’34’’
Student 8 47’24’’
Student 9 1:03:23
Average duration of interviews: 60 min.

Total duration of audio recorded interviews: 9:07:17