

## **The SAT Technique**

The transferrable aspects of String Aligned Thumb

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# 1. Background

Upon my acceptance into the popular music performance master's programme at UiA in 2022, I was admitted as a guitarist, considering that the electric guitar had been my main instrument since childhood. Throughout my teenage years, I dedicated myself to rigorous practice and rehearsal, gradually transitioning into professional work in my early twenties, a journey that has since spanned well over two decades. As a guitarist, my career has predominantly revolved around multifaceted freelance roles, encompassing engagements as a sideman for a diverse array of artists, participation in theatrical productions and similar performances, extensive involvement in touring, corporate events and club playing, and contributing to studio recordings in various capacities involving roles as producer, mixing engineer, and session guitarist. Additionally, in 2008, I commenced regular guitar teaching, a pursuit that has persisted to the present day. This experience encompasses both the explicit and tacit knowledge that I draw upon and integrate into the framework of this thesis project.

## 1.1 Preface

My original master's thesis project was an artistic research study involving composing, recording, and performing instrumental music with the electric guitar as the focal point. The project entailed an in-depth exploration of my own method for composing music with the DAW and evolving as a guitarist in a studio setting. As a side project to the composing, I simultaneously started developing right-hand finger techniques for electric guitar. This «only fingers approach» was not a strict dogma I adhered to; rather, it emerged gradually as I increasingly utilised such techniques in the music I wrote.

My reason for incorporating this approach to the instrument was mainly rooted in a curiosity about the sounds it produced, which is quite distinct from the timbre of a guitar pick plucking the strings, but also as a means to prevent falling too much into familiar patterns on the instrument and possibly find new paths to interesting musical ideas. In turn, this approach also led to compositions I could not really play well using my

established picking technique, and as a consequence, the time I spent rehearsing throughout my first year at UiA, almost exclusively involved finger style electric guitar playing. As the first year of the master's program was coming to an end, I didn't regard this side project's technical approaches as anything special. The sounds it produced were still interesting and inspiring, but there was no denying that it was hard to execute properly. There are many reasons for that, but the most obvious to me was the sheer physicality of the electric guitar, which simply leaves very little room for fingers between the strings. It was not until I had a sudden idea to test my «newfound technique» using an electric bass that the effectiveness manifested itself in something, to me, entirely new and special. It was almost immediately clear to me that the technique where far better suited to the physicality of the bass, and as I started working on transferring it to this instrument it was only a matter of few weeks before I could play practically anything on bass using fingers, that I could do on a guitar using a pick.

This discovery led me to an entirely new shift in focus for my master's thesis. The results I was obtaining while approaching the bass in this way plunged me into a state of what I would describe as perplex curiosity. The bafflement arose from the fact that I could achieve things on the bass I had never imagined possible just weeks before. Meanwhile, curiosity enveloped my thoughts about how far I could push this concept as a musician and what I could uncover through a deeper investigation academically.

## **1.2 Prior experience with electric bass**

As indicated, I assert that I have undergone a personal and relatively quick development on an instrument I have never truly attempted to master until recently. This assertion gains significance when considering the typical effort and time usually associated with developing on a new instrument. Therefore, it is naturally relevant to describe what my prior relationship with this instrument actually entails.

Any guitarist<sup>1</sup> will have some knowledge basis on how to approach an electric bass, as the two instruments obviously share a lot of common ground. When looking at the left-hand technique (if player is right-handed) they are very similar, with the same harmonic structure throughout the neck. While the guitar has a slightly different tuning approach considering the B- and light E-string, which could be argued makes the instrument more complex to learn theoretically, most guitarist can essentially consider a four-string bass as a guitar with four strings and proceed from there without much struggle theoretically or technically. This naturally also applies to me, and I have never thought about the bass as particularly hard to play when considering left hand practices. However, the right hand is probably a distinctly different challenge for most guitarists. When compared to classical traditions in music, the electric bass has a relatively short history, and consequently, there is, to my knowledge, no established consensus among bass players or educators on guidelines for approaching technique on the instrument. Nevertheless, it is easy to find various kinds of literature on learning bass, and the seemingly most common approach is alternately plucking the strings with the index finger and middle finger (Friedland, 2004). My experience as a working musician also supports this notion, as I cannot remember to have met a bass player who did not utilise this as their main approach to the instrument.

With the same approach as my bass colleagues, I have, on two occasions in my life, briefly entertained the idea of making a concerted effort to learn the instrument properly: Once in my early twenties, and once approximately twenty years later. However, these attempts quickly subsided and eventually faded out completely because of the struggles I found in developing a proper plucking technique. While my left-hand technique required minimal modification to perform at the same standards as I could on guitar, it quickly became evident that my background as a guitarist provided little, if any, shortcut in mastering plucking technique on bass. I have, however, throughout my career, for the most part, kept at least one bass available to me. It could

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<sup>1</sup> When using the term «guitarist», «musician», or any other term referring to practitioners of musical instruments, I point to individuals with a perceived high level of expertise on their instruments.

be several years between playing it and although I have not practiced the bass in any comparable way to the guitar, I have played on many productions in my home studio. Even if I did not possess a right-hand technique to function properly as a bass player, and certainly not in a professional setting, I did develop an ability to achieve what I perceive as good results by playing very short snippets of bass and patching them together into a coherent track. This enabled me to do more work by myself in the studio, and over time, this naturally led me to develop some arranging skills for bass lines and gain practical experience in how to pluck/stroke the bass to achieve the sound I was after.

### 1.3 Exploring Key Questions

Throughout the process of developing this technique and considering my perception of its rapid progression, one question increasingly emerged as particularly intriguing to investigate:

*-In what way can this technique facilitate cross-instrument transferability between electric guitar and bass?*

Given the observed potential for cross-instrument transferability with this technique, its thorough investigation is central to my research. In this thesis, I examine the cross-instrumental capabilities of the technique from predominantly a «guitaristic» perspective but also that of a bass player. To comprehensively gather data on this relatively unexplored technique, I employ a diverse methodology. This includes an analytical review of my own development process, utilising video recordings, musical notation, tablature, and photographs. Furthermore, I extend the research to include interviews with other practitioners who have developed their own variants of the technique. This multifaceted approach not only aims to evaluate the technique, but also seeks to identify potential additional cross-disciplinary attributes it may offer.



**The research described in 4 main stages:**

1. Analysis of my own development and implementation of the technique using video recording, musical notation and tablature as main approaches.
2. Preparing and conducting qualitative research interviews with expert subjects.
3. The synthesising of the interview data.
4. The compiling of the findings into a concluding discussion.



## 2. Methodology

This thesis focuses on a specific technical approach to the electric guitar and bass, covering aspects of development and application from various perspectives, aligning inherently with the domain of performance practice in musicology. Performance practice typically examines how music was performed in specific eras using period-appropriate techniques and instruments, and/or explores the cultural and expressive elements that influenced these performances. However, the field also considers contemporary practices. Professor Per Elias Drabløs (2012) suggests that in contemporary popular musicology, there are three main paradigms: (i) the analytic paradigm, which addresses formalist concerns; (ii) the reading paradigm, which interprets the musical text in relation to other performer-related issues; and (iii) the context paradigm, described as an «intertextual discursive theorisation of musical expression» (pp. 23-24). In philosophy, a «formalist» examines the formal aspects of art. Similarly, in musicology, the formalist approach concentrates on the intrinsic elements of music, such as composition, technique, form, structure, and harmonic and melodic analysis. This methodology generally operates independently of the historical background or the composer's intended meaning, advocating for an objective analysis that evaluates music based on its internal characteristics alone.

While this thesis could be argued to touch upon all three of these aspects, it predominantly subscribes to the formalist approach.

### 2.1 Phenomenology

This thesis employs interviews as a primary method of data collection, positioning phenomenology as an essential component of the methodological framework. This approach is dedicated to understanding and accurately representing the subjective experiences and perspectives of the participants.

Phenomenology, a distinguished branch of philosophy founded by the German philosopher Edmund Husserl (1859-1938), explores the structures of consciousness

from the first-person perspective. While Husserl initiated the movement with his detailed analyses of time and intentionality<sup>2</sup>, subsequent philosophers expanded the discipline: Max Scheler enriched phenomenology with his focus on values and emotions; Martin Heidegger reoriented it towards ontology and the concept of Being; Jean-Paul Sartre introduced existential dimensions emphasising freedom and choice; and Maurice Merleau-Ponty brought attention to the body and perception (Zahavi, 2012). Given the diverse contributions from its numerous proponents, it may indeed be considered ambitious to describe phenomenology as a cohesive system endowed with a universally agreed-upon set of doctrines, and while searching for what may be the essence of what it entails, there are certainly numerous writings to choose among that differ in assertions.

Dan Zahavi (2012) highlights some of Merleau-Ponty's views on the matter which addresses especially an important distinction between introspective psychology and phenomenology. As introspective psychology largely refers to the process of investigating perception, emotions, and thoughts—thus aligning with phenomenology in those respects – Zahavi summarises Merleau-Ponty's view as being firmly rooted in a Kantian framework and underscores that: «...our cognitive apprehension of reality is more than a mere mirroring of a pre-existing world» (p. 2). This suggests that consciousness plays an active role in shaping reality, challenging the notion of a continuous, objective experience of one's surroundings.

David R. Cerrone (2012) assert that phenomenology faces significant scepticism regarding its foundational principles. For instance, when reporting on memories of experiences, one may question the accuracy of our recollection; ultimately, there is no certainty in its precision. Self-observation invariably depends on memory; even if one were to document experiences from one minute to the next, this reliance is unavoidable. Similar arguments have been proposed since the inception of phenomenology, to which Husserl had to respond in various ways, and they persist to the present day. Cerrone assert that critics, echoing these arguments, often highlight the distinction

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<sup>2</sup> Husserl's arguments about «intentionality» suggests that consciousness is always directed towards an object, regardless of whether that object is real or imagined (Kvale & Brinkmann, 2012).

between «living» our experience and «knowing it», with the latter being the focal point of their scepticism. While this seemingly reasonable epistemological concern is difficult to refute, one can similarly not deny that it quickly can turn into an ontological discussion. Cerrone uses illustrative examples to elaborate on that notion, posing that if one were to relive an experience several times with slight variations in looking at a cup from various angles, would one know which was the initial experience and would one be able to distinguish between them? «In some variations, the apparent colour might be slightly different; in others, spatial relations may be slightly altered, and so on» (P. 13). Cerrone further reflects on the likelihood that we would recognise the original experience and how this leads into a question about if there really is an «fact of the matter» about the experience we had in the first place. This argument suggests that every experience must be reproduced in our minds to be evaluated, implying that there really is no «original» experience. While the thought experiment appears coherent, it concurrently contributes to the conjecture regarding the unreliable memory humans have of experiences. So what good is it if it's not reliable and how vulnerable is a phenomenological investigation because of it? According to Cerrone, this question ultimately depends on the nature of the claims being made and scrutinised, and he refers back to his thought experiment: «In so far as perceptual experience is of or about spatial-material objects such as coffee cups, then that experience *must* be structured adumbratively; that is, there is no such thing as seeing all of the coffee cup at once» (p. 16). Cerrone underscores that phenomenology may not, or perhaps should not, be an endeavour seeking absolute accuracy or meticulous detail-by-detail fidelity. He highlights this point by quoting Husserl's vision of phenomenology as «Essentially characteristics structures of the soul» (p. 16). It is capturing the essence of the phenomena that both Husserl and Cerrone appear to highlight as a crucial aspect of the phenomenological method.

Another fundamental concept in the phenomenological method that Husserl introduced is the term «reduction» (Figal, 2012), which builds upon what philosophers in antiquity called «epoché». Epoché refers to the intellectual attitude of not taking a firm

stance on matters about which one cannot have certain knowledge (Tranøy, 2017).

When Husserl refers to reduction, he means the process of suspending or bracketing judgments about the existence of the external world. The awareness raised by reduction underscores the importance of investigating phenomena without assumptions, as preconceived beliefs can clearly shape one's reflections and experiences. An elaboration on this can be found in Merleau-Ponty's writings on the phenomenological method, where he asserts that the approach is about describing the obvious as precisely and complete as possible; here, the descriptive takes precedence over explanation and analytics (Kvale & Brinkmann, 2015).

While this thesis does not delve into philosophical questions concerning consciousness and experience, it is clearly centred on investigating phenomena that encompass both aspects, as the data discussed heavily relies on the subjective perspectives of both the author and the interview participants. In conducting a study where I claim to have discovered and devised a modified version of a technique and subsequently explore its application, it is instrumental to acknowledge my integral involvement in the phenomenological process alongside the participants. I elucidate the phenomenon of the technique from my own perspective in a manner akin to how the interviewees articulate it from their respective perspectives and «life worlds»<sup>3</sup> (Kvale & Brinkmann, 2021). Through the whole process I have carried with me the core aspects of Husserl's and Merleau-Ponty's reflections in that I have tried to capture its essence and met my subjects in conversation and interpreted their contribution without bias towards what I have come to believe or want to be true about the phenomena I explore.

## 2.2 The case study

While the case study and phenomenology may seem closely related, they are not necessarily the same. When phenomenology is employed as the methodological approach within a case study, it typically means that the inquiry is specifically exploring

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<sup>3</sup> «Life world» is a term used to emphasise the interconnectedness of various aspects of human experience within the context of their everyday life.

the lived experiences of the subjects involved. However, a case study does not inherently imply a phenomenological approach and can utilise entirely different theoretical and methodological underpinnings.

The case study method is versatile in its investigative approach, examining various subjects such as for instance social groups, events, or institutions. While it may focus on an individual representing a group (e.g., a music teacher), its most often aim to explore contemporary phenomena within their natural contexts, drawing evidence from diverse sources (Hancock & Algozzine, 2006). «Natural context» and «contemporary» refers to exploring the phenomena within a specific time and place, or as Hancock & Algozzine (2006) describe it: «...bounded by space and time» (p. 15). Case studies often take an exploratory approach rather than seeking to test and confirm a hypothesis. They rely on a variety of sources of information such as interviews, quotes from key participants, comparative analyses, anecdotes, various aspects of analytics, self-reports, and reflections. Through this multi-faceted approach, case studies aim to illuminate the numerous variables at play within the phenomenon under study.

This thesis aligns with the criteria of a case study as it investigates a specific technique within the domains of bass and guitar. It aims to utilise a multitude of sources, conducting and synthesising interviews with specialists in the technique under examination, and analysing and demonstrating the technique through video and audio recordings, as well as music notation and tablature. Additionally, it provides a comprehensive account of the technique's development and incorporates a wide range of sources from both academic and popular literature.

## **2.3 The qualitative research interview**

After searching for literature on anything that could be related to this specific kind of bass technique, I am convinced that there is either very little or no existing writings on the subject. When attempting to explore a phenomenon that appears to be quite uncommon, and given the scarcity of literature, I have chosen to search for and reach

out to individuals who have mastered this technique and through qualitative research interviews seek to understand their expertise through their unique perspective.

Kvale & Brinkmann (2021) assert that the occurrences in the qualitative research interview constitute a «conversation-based recognition process that is both intersubjective and social» (p. 37)<sup>4</sup> wherein the researcher and the participant collaboratively construct knowledge through conversation.

«Intersubjective» in the sense that the knowledge resides between conscious minds, or maybe better expressed: Is shared by more than one conscious mind. In the work with this thesis, I have interpreted intersubjectivity as an foundational framework of communication between individuals sharing context and meaning.

«Social» in the sense that an interview is fundamentally a social interaction where for instance elements like *rapport building*, *negotiation of meaning*, *power dynamics*, and *ethical considerations* is present and important like it is in any social interaction, but in the context of constructing knowledge, has a heighten role of importance:

**Rapport building** – Establishing a connection with the participant to facilitate a conversational environment where the interviewee is comfortable sharing their experiences about the subject matter. The interviewees in this thesis participate as experts and primary sources of information, bringing extensive experience in discussing their musicianship. Nevertheless, throughout the interviews I conducted, I was conscious that my behaviour would inevitably affect the creation of knowledge. As this thesis originates from my own work and discoveries, I found it natural, albeit frugal, to engage in conversations and freely share my experiences when appropriate. I deemed sharing my experiences important, particularly given the focus on specific techniques, a topic that could potentially feel stagnant without fluid conversation. Kvale and Brinkmann (2021) assert that «The interview is a one-way dialogue» (p. 52), where the questions flow in one direction. Although the questions in the interviews were directed solely towards the participants, and they were primarily the ones speaking, I found that active

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<sup>4</sup> The quote is my translation from Norwegian to English.



participation beyond mere questioning was both beneficial and necessary for building rapport.

**Negotiation of meaning** - As an interviewer have the focus and awareness to clarify and making sure that both parties of the conversation have a mutual understanding of the topics being discussed.

**Power Dynamics** - Awareness about how the roles of interviewer/interviewee has an inherent quality of an asymmetric power relation (Kvale & Brinkmann, 2021). Two points to highlight that imbalance is how the interviewer controls the questions being asked as well as the narrative emerging from the process after the fact.

**Ethical considerations** - The ethical aspect mostly considered is consent, privacy, confidentiality, and ensuring interviewees are fully informed about how their information will be used. In the case of this thesis, it is crucial that participants are not kept anonymous. When accounting for various aspects of a technique, knowing who is talking I deemed as highly relevant. Indeed, they are well-known and internationally respected musicians, and I believed their identities to be paramount in establishing some form of face validity to the information gathered and of the thesis as a whole. Of course, this was agreed upon in advance, both in standardised forms about consent and in communication through email, but also briefly informed about the same conditions orally before each interview. They have the option to read the thesis and interviews before its finalised and can use their right to withdraw their contribution in it at any time leading up to the formal submission. Given that the participants are not anonymous and are well-known public figures in the musician community, privacy and confidentiality is relevant only in certain situations. Such a situation could arise if the conversation for instance touches on subjects involving individuals who are not public figures, the interviewee states specifically that a certain topic should be excluded from the transcriptions, information emerges that should reasonably be considered irrelevant or potentially harmful in any way.

I neither possess nor make use of any personal information beyond what the subjects themselves have made publicly available through the internet, books or the interviews I conducted. In this manner, I do not have a special need to guard information in the same way I would if I was conducting, for instance a questionnaire involving a selection of individuals about their health or political views. However, the recordings made of the interviews will not be publicly available and will be stored securely by me until they are no longer needed.

### **2.3.1 Choosing and contacting subject**

Given the rarity of this bass approach and the necessity to engage with high-level professional players who employ it, the process was more about «finding» than «choosing» subjects. The first and most obvious was the Frenchman Dominique Di Piazza who is, now to my knowledge, the only musician with a widespread reputation for utilising a similar technique. Furthermore, during the development of my own variation of SAT, which largely occurred without any prior knowledge about it, I was made aware that the technique I was working on was very close to Di Piazza's approach to bass, hence I deemed his participation in the study as very important. Secondly, while I was reaching out to numerous colleagues in hopes of receiving tips on potential participants, without any success, I finally came across the American bass virtuoso Kevin Freeby on YouTube. Similar to Di Piazza, Freeby exclusively employs an SAT approach in his playing. Thirdly, while I was already familiar with the renowned English bass player Janek Gwisdala before commencing my search for participants, I was unaware that he was utilising a variation of SAT. Upon discovering this, I felt that I had sufficient participants within the scope of this thesis. I reached out to all three individuals via the email addresses provided on their respective homepages. In my messages, I outlined my intention to interview them and scheduled dates for the meetings, all of which were conducted via the video conference software Zoom.

### 2.3.2 The questions

The fact that I am opinionated on various aspects of SAT, coupled with a profound personal investment in its development within my own musicianship, underscore some critical elements that require careful consideration in formulating the questions and conducting the actual interviews. Especially important is to avoid asking leading questions that might reflect my own opinions or preferences and thereby potentially influence the responses given by the subjects. The approach to the interviews is semistructured in that they are neither an open conversation nor a fixed questionnaire. They were conducted with a set of key topics and proceeded with follow-up questions to the answers given. The questions were formulated in an open manner containing these specific topics:

- -Musical background from childhood to adolescent to professional.
- -Why choose this technique.
- -The technique in application.
- -Pros and cons concerning the technique.

These main topics served as effective starting points for branching into various subcategories and details, allowing the subjects ample room to elaborate and highlight whatever came to their minds, facilitating the gathering of as much information as possible.

### 2.3.3 Transcribing the interviews

There is no standard method for gathering knowledge through conversations, and the approach must depend on the type of information sought and how the researcher intends to analyse what is being said (Kvale & Brinkman, 2021). Further they argue that there is no universally correct transcription method; instead, the researcher must determine the most appropriate method for their specific study. Despite the chosen method, the *reliability* and *validity* of the research always need to be evaluated and addressed, recognising and minimising the inherent subjectivity in transcriptions.

**Reliability** In this context, I interpret reliability as the extent to which the transcription of audio recordings would retain its content if transcribed by another researcher. While there may be variations between different transcribers, these differences do not necessarily imply a deviation from objectivity. Achieving high validity requires meticulous attention to detail during the transcription process, including listening concentration, transcription accuracy, and judicious decisions regarding the representation of non-verbal cues, such as pauses or shifts in gaze. These elements could be crucial as they could influence the reader's interpretation of the responses.

**Validity-** In the context of transcription, I understand validity to be somewhat akin to reliability; it pertains to the extent to which the researcher accurately reproduces the original audio content of the interview. Achieving high validity, in this sense, involves ensuring that the transcription and subsequent analysis faithfully represent the original intentions and findings of the research, without for instance biasing the results to appear more favourable.

**In relation to reliability and validity-** To enhance clarity and readability, I have chosen to exclude what I consider to be excessive fillers and repetitions from the transcription. In some instances of minor grammatical discrepancies, corrections have been made. Notations such as «laughter» and descriptions detailing the interviewee's demonstrations on their instrument have been included parenthetically. However, I have not documented pauses in the conversation or attempted to interpret any non-verbal communication. The rationale behind this decision stems from the content focus of the interviews—primarily on the participants' bass techniques, which are largely factual and unlikely to elicit significant emotional responses. This assumption is based on the observation that the interviewees, being accustomed to discussing their technical expertise in both educational and interview contexts, convey their insights in a manner that is predominantly informational.

### 2.3.4 The use of video, notation and original music

For demonstrating the development and application of the techniques in question video, musical notation and tablature were utilised. In the video examples showcasing extended pieces of music exceeding one minute, two camera angles were employed: one focused closely on the plucking hand, and another capturing the entire instrument and the performer, presented as a split screen. For other video segments featuring music and/or close-ups of the plucking hand, a single-camera setup was chosen for simplicity, aiming to provide the viewer with content facilitating a comprehensive understanding of SAT. Some clips are solely intended to demonstrate movements and do not include audio. However, even as the videos containing performances also fulfil the role of showcasing movements, they additionally serve as demonstrations of the degree to which the techniques were transferred from guitar to bass. To maintain the authenticity of this function, they were recorded in one take, without overdubbing in post-production. Amplification simulation, equalisation, and compression were applied during recording, integral to the captured signal, using the Axe-Fx 3 unit from Fractal Audio, whereas reverb, delay, automation, and limiting were added during post-production using Logic software. All video editing was performed using the Capcut software and musical notation and tablature was created using the Sibelius software. The music used in this thesis is original recordings treated with the software Moises to remove the original bass from the track. I have interpreted this as within the legal ramifications of the guidelines regarding the use of original material in the context of a master thesis.



### 3. SAT development

#### 3.1 Coining the term

Spielberg (1960) asserts that within the study of a phenomenon and its various facets, it is the consistency amidst variations that encapsulates the essence of the phenomenon (Spielberg, 1960 in Kvale & Brinkmann, 2021). In line with this idea, and relevant to this thesis, I have decided to coin the term «String Aligned Thumb» as an umbrella term for the main bass technique discussed here, and I will use the abbreviation SAT when referencing it. Furthermore, SAT refers to techniques characterised by three specific criteria:

- 1.** The thumb is approximately aligned with the direction of the strings.
- 2.** The thumb serves as one of the key elements in the technique's application.
- 3.** The technique is plucking-based.

The final criterion, «plucking based», is designed to ensure that various slap techniques do not conform to the conditions of SAT, even though the hand position may appear similar, fundamentally these methods represent distinctly different approaches to the instrument.

#### 3.2 SAT

As my right-hand technique as a guitarist has developed over the years, it has predominantly involved using a pick, and thus, a sudden shift to finger-style playing meant abandoning many familiar paths and possibilities on the instrument. Take, for example, alternate picking - arguably the most common technique on the electric guitar, which simply put relies on a fundamental down/up motion. For an intermediate guitarist possessing a foundational skill set, executing for instance 16th notes on a single string at a moderate tempo should be a straightforward task. However, when working with finger style I found that this seemingly basic movement was among the hardest thing to accomplish. The reason for such a difference in technical complexity, when essentially executing the same musical sequence, is probably mostly rooted in the novelty of the motions for my motor skills. These early variations of SAT motions

involved plucking the strings while alternating between the thumb and index finger reminiscent to the up/down motion of using a pick. It would probably not surprise many that such a distinction in technique can influence the demands on the performer, affecting factors like coordination, and the ability to produce nuanced dynamics and tonal consistency. Although I did not take a very measured or goal oriented approach to the development to address these hurdles, I found that I naturally gravitated towards certain movements and nuances reminiscent of picking technique.

Within the context of guitar, there is probably no need for an umbrella term to point out that the technique requires the thumb aligning with the strings, simply because most guitar techniques pivot around the thumb's use, both in fingerstyle and picking techniques. The dominance of pick usage in guitar playing can probably be attributed to several factors and although a detailed historical analysis is beyond this scope, it is acknowledged that picking has been a fundamental technique since the early years of the electric guitar (Denyer, 1985). Novices beginning their learning journey are often thought to emulate the styles of their musical idols, thereby reinforcing the tradition and continuous evolution of picking technique. Additionally, as styles evolve around the usage of picking, executing similar guitar parts that demand qualities such as distinctiveness, accuracy, and/or rapidity can be exceptionally challenging using fingertips as a replacement for a picking (Di Piazza, 2024). Also, when considering the change in timber finger plucking represents, its probably more often used and associated with softer, mellower sounds, and although many electric guitarists employ variations of SAT playing, it often seems to serve as a supplementary to picking techniques. Reflecting on my practice and observations accrued over the years as a musician and educator, I have definitively identified this approach as a secondary technique among a significant portion of both the amateur and the professional guitar community. This categorisation is not a reflection of its musical value, which naturally will differ from one musician to another, but rather its relative frequency of use and probably for most guitarists; a strict limitation in terms of virtuosity. Nevertheless, finger playing is absolutely an important technique for electric guitar and although there is always



exceptions, I do not think it is an exaggeration to regard this approach as a standard component of most working guitarist's technical repertoire. This style of playing typically involves the player holding the plectrum in the palm of their hand and in some way wedging it between the ring or little finger and palm. This positioning enables the player to employ the thumb, index, and middle finger for plucking the strings, simultaneously ensuring swift alternation between picking and SAT- style techniques. It might also be accurate to propose that SAT serves as a secondary technique for bass players, potentially even more so than for guitarists. Support for this claim is readily found in instructional literature, as for instance in the works of renowned session bass player and instructional book author Ed Friedland, which classifies the use of the thumb for plucking as a «specialised skill» (Friedland, 2000). Observationally, it is quite common to see bass players positioning their plucking hand on the strings similar to guitarists, but mostly for the purpose of using the palm to dampen the strings for a more muted effect. However, this practice, mirroring its significance for guitarists, does not seem to form a significant part of the standard playing repertoire for bass players and probably for many of the same reasons as implied for guitar players.

When referring to a «significant part of the standard playing repertoire», an illustrative example of what is meant might be envisioning a scenario where the typical session bassist<sup>5</sup> is asked to perform the first two bars of the bass theme from Jaco Pastorius's iconic song «Teen Town», using any variation of SAT. While it is entirely feasible to play that piece in that manner, the suggestion is that the player would probably not be able to render the passage with that approach at all. That particular composition requires a degree of distinctiveness, consistency, and rapidity pushing most players towards their core techniques for execution. Hence, my assessment is simply that, for most professional bass players, SAT- technique is generally not developed for the purpose of performing a wide variety of tasks, thereby illustrating what I mean by referring to it as a «secondary» technique.

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<sup>5</sup> Pointing to an approximation of a type of player who is capable of doing a wide variety of work typical for freelance musicians in popular music.

### 3.3 Developing SAT on guitar

When I began exploring a «fingers only» approach to the guitar, the immediate challenge was, as implied earlier, compensating for the absence of alternate picking and the implications it had for the technical palette available to me. To address some of these limitations, I experimented with simulating picking using my thumb and index finger, positioning them as though holding a pick but slightly apart, allowing strings to slip between for plucking. As previously stated: There is nothing special or unusual about playing with fingertips on an electric guitar, even if it does not include holding the plectrum somewhere inside the palm. What is probably less common is including wrist movement meant to mimic how picking actually works in practice. My initial thoughts on this pointed to the notion that if I could master that technique (wrist movement in combination with thumb and index), I would somewhat be able to «access» my already established picking technique and retain the ability to play as if I were actually holding a pick.

However, the implementation of this proved to be quite challenging, primarily due to the string spacing on the guitar, which does not allow the fingers to slip in between the strings without touching other strings, thereby necessitating attacking the strings slightly more from an angle above. Conversely, a plectrum allows plenty of room to manoeuvre between the strings and enables the player to attack the strings at a straight angle, or any other angle that might be preferred in different contexts. This obstacle led me to explore various solutions, including the implementation of the middle finger.

However, although relinquishing the pick entirely improved my finger plucking technique by reducing the muscle tension usually linked to holding it within the palm, it simultaneously became evident that attaining the same level of proficiency as with a pick would likely demand substantially more time and effort than what was available during the master's program. In essence it meant developing something of a novelty to

my motor skills<sup>6</sup> and it was still at this point, a matter I considered fun and promising, but not stable enough or effective in a way that it could for instance replace my picking technique. Nevertheless, in anticipation of a potential long-term outcome, I adhered to this approach throughout the composition process as a crucial element in the execution of the arrangements. This decision essentially forced me to adopt it as the sole method for performing the song in question and as a consequence I, in a sense, rehearsed variations of SAT while composing and recording. I have chosen an introductory video clip to demonstrate an example of how I initially applied SAT on guitar, as this selection appears to offer a clearer foundation for both explaining and understanding the process as a whole.

### 3.3.1 VIDEO 1- SAT implemented on guitar.

<https://www.dropbox.com/scl/fi/hn8g402a8lv3g27piep2k/Video-1-Implementing-SAT-on-guitar.mov?rlkey=0gfry0lbwkyta7a2u7ul64eur&dl=0>

The clip displays a segment from one of the pre-production phases of compositions I wrote for my original artistic research project. For someone observing closely, there is minimal wrist movement evident. While the motion does occur, its extent is limited, suggesting that a substantial part of my foundational picking technique is not incorporated in the performance. Consequently, my approach for the most part involved utilising three fingers with a more stationary wrist as shown in the clip.

## 3.4 Explore and document

In the exploration of academic literature concerning techniques for electric guitar and bass, it became apparent that much of the existing literature seems to entail works to elucidate various methodologies, often with an implicit pedagogical intent. In contrast, the technical breakdown of SAT methodology, along with the thesis in its entirety, seeks to explore and document- rather than to serve as an educational guide on the implementation of SAT technique. Nonetheless, I contend that it should include

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<sup>6</sup> There are likely numerous factors that can influence how an individual perceives learning new movements. I do not have expertise regarding the mechanisms of motor skills. The sentence is intended to convey the colloquial usage of the term rather than pointing to an accurate statement of its physiological processes.

adequate detailed information to fulfil that role to some degree. Bearing this consideration in mind, I have created a technical description aimed at delineating the foundational in «how» and «why», without aspiring to be exhaustive on details, meaning I will not provide reasons for all possible facets of the demonstrations.

While one could probably invent many terms to describe all the variations in movement that can occur when working on practical solutions to perform any given piece of music with SAT, I have chosen to describe the core elements of it as two fundamental approaches and to look at other possible movements as subcategories of these two. The two principal approaches I will designate respectively as «two finger SAT» and «three finger SAT». For convenience, I will employ the abbreviations 2f-SAT and 3f-SAT when referring to them.

### 3.5 Choosing «Havona» to demonstrate SAT.

In selecting a foundational piece to scrutinise the various facets of SAT, I chose «Havona» by Jaco Pastorius. My choice was motivated by three primary reasons.

Firstly, to exhibit the technique comprehensively, it seemed essential to select a piece that naturally displayed as much of it as possible. I wanted to demonstrate the technique through a well known piece, written by an acclaimed authority on the instrument, that would be regarded as highly advanced by most musicians, wherein «Havona» fulfilled the criteria and represented specific challenges of rapidity, rhythmic subtleties, and the need for sustained control and quality of tone<sup>7</sup> throughout the execution.

Secondly, engaging with «Havona» represented a personal challenge and a test to verify the effectiveness of SAT, a suspicion that had grown through my first four weeks of working on it in the context of bass. This challenge led me to include it in my semester interpretation repertoire, before I knew if I actually could manage it. The underlying rationale was that putting a deadline on, and achieving a certain level of proficiency in

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<sup>7</sup> The term «tone» and «sound» are frequently used interchangeably. However, in this thesis, I delineate between the two. Specifically, I define «tone» as the quality of timbre resulting from the direct interaction between the player and the instrument. Conversely, when referring to «sound», I am alluding to the ultimate output generated by all factors involved, including amplifiers, various effects, type of instrument, and so forth.

this piece, would serve as a substantial testament to myself and quite possibly others to the potential of adapting guitar techniques to the bass utilising SAT. By «a certain level of proficiency» I refer to the requisite that the performance, despite its rapid pace, must exhibit a technique that appears effortless and economical in movement, free from obvious flaws in rhythm and the quality of tone produced by the fingers.

The third reason for selecting this piece was based on my observation and belief that SAT possesses some inherent facets with the potential of influencing the tone in a certain way in comparison to how conventional technique has certain inherent qualities. In opting for «Havona» as an analytical tool, I intend to detail and argue later in the discussion that I also selected music where the SAT approach seems to excel.

### 3.5.1 VIDEO 2- Havona Demonstration

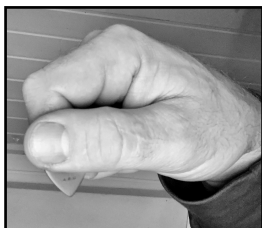
<https://www.dropbox.com/scl/fi/1ga7gxh4vflsgkd3hw1ka/video-2-Havona-demo.mov?rlkey=ebc8r4jom2hovmbemupwcjd6y&dl=0>

As the video shows «Havona» is evidently a rapid composition and both the demonstration and the original recording occur at approximately 140 beats per minute, with bass parts consisting predominantly of 16th notes. While it serves perfectly as a demonstration of the criteria I outlined as «level of proficiency» and maybe also the overall potential of SAT, it is naturally less effective for highlighting details in full speed. When utilising video to supplement the analysis, I have therefore chosen to slow it down to half speed (showing the clip in full speed consecutively) and use only the camera angle focused on my fingers.

### 3.6 2f-SAT

As already indicated the 2f-SAT technique is fundamentally based on the technique commonly referred to as «alternate picking», which involves a consistent up-and-down motion using a plectrum, wherein the primary force that prompts the pick to strike the string predominantly originates from the wrist. The positioning of the fingers that plucks the strings is a slightly modified version of how one usually holds the plectrum.

Picking position



SAT position



Both positions are quite similar; however, the SAT position sharpens the angles of the index finger to reach the strings for plucking and widens the distance between the thumb and index fingertips.

For the majority of electric guitar players, myself included, alternate picking could be considered the «bread and butter» of methods, likely representing the motion most frequently employed by a player's picking hand throughout their career. The idea was to mimic that motion sequence to use a movement I was highly accustomed to in a new scenario. In my case, the fingers involved are the thumb and index; from a guitar picking perspective, these fingers generally do not move significantly. They are not actively engaged in the picking itself and serve primarily as a flexible but stationary tool to hold the plectrum. In most picking techniques that utilise a flat plectrum, the wrist is the dominant source of movement. The same wrist-induced motion was also the starting point for me in transitioning to the bass; however, in the process of adapting to this technique, I discovered that incorporating slight finger movements to complement the wrist action resulted in a seemingly more motion-efficient approach.

### 3.6.1 VIDEO 3- Picking to 2f-SAT

<https://www.dropbox.com/scl/fi/gllw8p922mclvh3egy9l/Video-3-Alternate-picking-to-SAT.mov?rlkey=eqipwywczfteiou5fz95kimd5&dl=0>

The clip effectively demonstrates how initially the wrist acts as the main source of movement, both with and without a plectrum. Further, one can also see the development from stationary fingers to wrist and fingers in conjunction where the fingers supplement the movement of the wrist. When applying this wrist-based movement to the bass, the challenge of limited space between the strings, significant on the guitar, was in essence mitigated due to the larger string spacing. This adaptation

made the technique feel notably more akin to guitar picking, thereby enabling me to perform many of the techniques I could with a pick on the guitar, on the bass using fingertips.

One advantage SAT possesses over picking is the capacity to separate the fingers whilst concurrently maintaining the motion. This facilitates a potentially more seamless and motion-efficient transition when moving to the subsequent string or skipping one or more strings, in that one can often reach for the next string while plucking another. The reason I point to it as a possible advantage is the very obvious challenge that string skipping with a pick represents for guitar players, which is also probably the reason one can find an abundance of literature and instructional videos specifically aimed at addressing this specific issue in various ways.

To give a more detailed impression one can review a part of «Havona» where only 2f-SAT is used in the subsequent video.<sup>8 9</sup>

### 3.7 VIDEO 4- 2f-SAT

<https://www.dropbox.com/scl/fi/ucoj09awe2q2sxpku8nhq/Video-4-Havona-2f-SAT.mov?rlkey=p9pk3fqxay0yos9kyd3ait90n&dl=0>

Here, one can also see that, between the notes E and F sharp in the ascending part of the passage, «economy picking» is utilised. Economy picking is a guitar term which refers to playing notes, occurring consecutively on adjacent strings, in a single picking motion. The equivalent of this in a bass context would be «raking», which adheres to the same principle but is only available in the direction from one string towards the adjacent heavier string, or in other words: tone-wise downwards but physically upwards. When using a pick, this technique is available in both directions, hence it is also readily available with SAT as shown in the video demonstration.

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<sup>8</sup> Where notation is included, either as part of the video or as the foundation for analysis, colour coding is utilised to indicate which fingers are in use at all times Black= Thumb, Red= Index, Green= Middle.

<sup>9</sup> In this particular passage, it was discovered that I played the fourth note of this run as a C sharp, likely due to an accidental «hammer on» that masked the correct note, which is F sharp. The transcription adheres to what is heard, hence it is written as C sharp.

In the first few weeks of implementing SAT on the bass, I relied exclusively on 2f-SAT. Although I subsequently incorporated a third finger, I do believe that this approach alone, akin to picking on the guitar, could possibly serve as a comprehensive system capable of adapting to most situations. The development of the 3f-SAT technique was significantly influenced by the challenges I faced in learning «Havona», which contains several sections that proved to be very hard to execute without anything to supplement the 2f-SAT approach. I gradually started to incorporate the middle finger, aiming to further facilitate string skipping and to explore the potential for a more expansive technical palette. Similar to 2f-SAT, this adaptation was also grounded in movements with which I was very familiar, through a technique most commonly known as «hybrid picking»<sup>10</sup>, which I had started to incorporate into my repertoire sometime in my twenties.

### 3.8 VIDEO 5- Hybrid to 3f-SAT

<https://www.dropbox.com/scl/fi/8sixrcoyt1b6ai2dcdgt0/Video-5-Hybrid-to-3f-SAT.mov?rlkey=afbm2r7hh1rlo12wk19a78uer&dl=0>

The clip displays a typical hybrid pattern and illustrates the evolution from hybrid picking to the 3f-SAT version utilised in the «Havona» demonstration. However, unlike 2f-SAT, which closely mirrors the movements found in alternate picking, there is an evident divergence when transitioning from hybrid picking to 3f-SAT; notably, the wrist motion is eliminated, and the index finger is no longer connected to the thumb. This technique was noticeably more difficult to become accustomed to, which I primarily attribute to the deviation a stationary wrist represented from my already established technique.

Moreover, I continue to view the 3f-SAT as a less polished aspect of my technique, as it appears less steady, thus heightening the probability of various mistakes.

It is common to find less refined techniques more taxing to perform, which usually leads to inadvertently compensating with larger movements, further accentuating the issue. To mitigate this, I developed strategies to limit the use of 3f-SAT over extended periods.

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<sup>10</sup> Combining the use of a pick and the use of fingers. When holding the pick with the thumb and index the remaining middle, ring and little finger is still available to reach the strings for plucking.



Transitioning from 3f-SAT to 2f-SAT offers a brief respite for my plucking hand, preparing it for the next sequence of 3f-SAT as shown in the subsequent video.

### 3.9. VIDEO 6. SAT transitions

<https://www.dropbox.com/scl/fi/1vrz33kr0npbfhfg8mm0/Video-6-SAT-transitions.mov?rlkey=gdvluq9whmgqnnhs1wq5zeptp&dl=0>

#### 3.9.1 Distribution of the two techniques

Although the need to change between approaches to stay relaxed while playing, the distribution of 2f-SAT and 3f-SAT throughout the performance is not primarily determined by the need to shift between them; they were predominantly chosen to best accommodate the technical challenges presented by the passage at hand. While not a strict rule, and in the context of «Havona» there is a tendency to employ 2f-SAT for passages involving one or two strings, whereas 3f-SAT is more frequently used for sections requiring the involvement of several strings or string skipping. To further elaborate on this, the first 23 bars of the «Havona» demonstration is transcribed exactly as I performed them<sup>11</sup>, using both standard musical notation and tablature. This intends to make accurate recreation possible solely through this description. Furthermore, it is colour-coded with fingerings and brackets to show the distribution of the techniques in question and the order in which the fingers occur.

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<sup>11</sup> My interpretation adheres closely to Jaco Pastorius's original composition, yet it occasionally diverges slightly in select segments of the piece.



♩ = 140

3f-SAT

Musical notation for system 1, measures 1-3. The bass clef staff shows a sequence of notes with various accidentals and articulation marks. The guitar staff below shows fret numbers (2, 1, x, 4, 4, 2, 4, 4, 2, 2, 3, x, 3, 0, 5, 5, 7, 5, 0) and fingerings (1, 4, 2, 4, 2, 3, 1, 4, 4, 2, 3, 0, 5, 7, 5).

3f-SAT

2f-SAT

Musical notation for system 2, measures 4-6. The bass clef staff shows notes with articulation marks. The guitar staff shows fret numbers (7, 7, 9, x, 7, 9, 9, 7, 9, 7, 0, 7, 2, 2, 4, 4, 2, 2, 4, 2, 2, 0, 2, 2, 4, 2, 3, 4, x) and fingerings (7, 9, 7, 9, 7, 9, 7, 4, 4, 4, 2, 3, 4).

2f-SAT

3f-SAT

2f-SAT

Musical notation for system 3, measures 7-8. The bass clef staff shows notes with articulation marks. The guitar staff shows fret numbers (4, 4, 4, 2, x, 4, 0, 2, 4, 0, 2, 4, 0, 2, 4, 0, 2, 4, 0) and fingerings (4, 2, 4, 0, 2, 4, 0, 2, 4, 0).

Musical notation for system 4, measures 9-10. The bass clef staff shows notes with articulation marks. The guitar staff shows fret numbers (2, 9, 10, 14, 11, 16, 19, 14, 16, 14, 15, 14, 14, 12, 0) and fingerings (7, 9, 10, 14, 11, 16, 19, 14, 16, 14, 15, 14, 14, 12, 0).

Given the arrangement's notably active string switching, 3f-SAT might be slightly overrepresented, and a realistic average (in my case) is likely more accurately reflected in the clip «SAT transitions». What is also evident in the notation is that I do not strictly label the techniques based on whether the middle or index finger is part of the phrase, although this is often the case. There are sections where the transition between the two methods is more gradual than abrupt, thus representing a grey area, as for instance in bar 10 on the first page. In this example, one could argue that the first three notes should be classified as 3f-SAT. However, I opted to categorise it as 2f-SAT due to its brevity and because the overall feeling of the phrase and finger positioning is more reminiscent of 2f-SAT. This observation merely serves as a suggestion that the system presented here may need to be more nuanced if it is to function as a comprehensive framework useful for describing and labelling all possible variations of SAT approaches. In my case, the 2f-SAT is consistently accompanied by wrist motion and could have been classified solely according to that criterion, as my wrist remains stationary during 3f-SAT. However, it is very conceivable that other practitioners of 2f-SAT do not use the wrist at all, hence it makes little sense to classify it by that criterion alone.

Where 2f-SAT is close to the movements produced by alternate picking, the 3f-SAT is probably more akin in movement to the technique classical guitarists would designate as «tirando», or, in layman's terms, «free stroke». Within the context of classical guitar, this technique refers to finger movements that pluck the strings without touching any adjacent strings afterwards. The contrasting technique to this is «apoyando», or less formally known as the «rest stroke», where the finger rests on the adjacent string after each pluck (Parkening, 1999). These expressions hold particular significance in the analysis of SAT, where all strokes are, in fact, tirando; by contrast, conventional bass technique primarily relies on approaches involving apoyando.

### 3.10 SAT in application

In working with SAT in the context of bass over approximately a four-month period before recording the «Havona demonstration», there are naturally many aspects of it with which I have not yet had time to gain experience. Nevertheless, as I mentioned at

the outset of this thesis, I have some experience playing bass in a studio setting, although limited, it provides some basis for me to highlight certain aspects of SAT in application. When highlighting the traits of SAT, it seems most natural to do so through a comparative framework with conventional techniques, as I am accustomed to the sound produced by conventional approaches to playing the bass. Consequently, I automatically interpret the unique characteristics of SAT as «differences». The most obvious distinctions between SAT and conventional technique quickly became apparent during the initial phases of development, which involved aspects of both sound and phrasing. While the difference between apayando and tirando does result in a noticeable variation in sound—tirando appears «smaller» in its sonic footprint when compared to apayando—the contrast between SAT and conventional techniques seemed more pronounced in terms of phrasing. Plucking the strings in a conventional fashion, alternating between the index and middle finger, can produce a very similar sound, resulting in a consistent overall impression. In both 2f- and 3f-SAT, the thumb usually plucks every other note, alternating with the index or middle finger. As the thumb has more mass, it also produces a «bigger» sound, resulting in an audible difference in timbre between the strokes.

### 3.10.1 Video 7- Conventional vs SAT, Timbre

<https://www.dropbox.com/scl/fi/tigtouajknbwiiirnyceq/Video-7-Conventional-VS-SAT-Timbre.mov?rlkey=mc1stq9bzkr2hore5c46vh02x&dl=0>

As I do not possess a proper conventional technique, it is quite possible that my demonstration of apayando suggests a larger difference in timbre between the fingers than what would be displayed by bass players proficient in this method. Nevertheless, despite my questionable skills in this area, it still serves to demonstrate clearly that there is a more noticeable difference between the thumb and index finger than between the index and middle finger. This observation becomes particularly apparent when the passage focuses on a single string, as switching between strings inherently alters the timbre, thereby masking the variation to a certain extent. Coming from a background as a guitarist, I did not initially see this as an obvious downside of SAT, since playing with a

plectrum also produces differences between strokes. Perhaps not to the extent that SAT does, but it is still an inherent aspect of the technique I am accustomed to. There is, however, no denying that this might be perceived as a sonic downside in certain contexts, but it is also quite possible that, if viewed as an issue, one could mitigate it through technical adaptation. This will ultimately depend on individual preferences, and from one perspective, it could also be employed as a strength in phrasing, accentuating the variation with musical intention. As 2f-SAT is very similar in application to alternate picking, the ease with which one can vary the velocity between notes, combined with the variation in timbre, could open up many musical possibilities that might be less accessible when playing conventionally.

### 3.11 Video 8- Dynamic phrasing. Alternate picking to 2f-SAT

<https://www.dropbox.com/scl/fi/7dzkfhdad3hzxgbcwwao/Video-8-Dynamic-Phrasing.mov?rlkey=6vxcs8us6skjrsmf7crabk5ve&dl=0>

The simple «one string» funk groove, a common guitaristic idea, demonstrates how both the timbre and variation in velocity between the notes, allowing for a rather large dynamical range. While this is likely feasible to execute with several possible approaches to bass technique, this could be a particular feature at which SAT is poised to excel. Not only because there is an inherent timbre variance but also for the simple reason that it is relatively easy and little strenuous to execute. As the groove in this example, including the ghost notes, consists of a continuous sequence of 16th notes including large dynamic variations, it is tempting to speculate that similar dynamic variations could impose a considerable strain on the hands when played conventionally, particularly if the piece is characterised by a rapid tempo. This concept is likely better demonstrated within the context of actual music and also serves to illustrate that this particular aspect is not confined solely to 2f-SAT but functions equally well when adhering exclusively to 3f-SAT, as demonstrated subsequently.

#### 3.11.1 Video 9- Dynamic phrasing, «Shiftless Shuffle»

<https://www.dropbox.com/scl/fi/p5sgpgocjef81n7n4c4mp/Video-9-Dynamic-Phrasing-3f-SAT-Shiftless-Shuffle.mov?rlkey=hvippqqltya74uu3c98ugwpyz&dl=0>

In the dynamic phrasing demonstrated through this short snippet of Herbie Hancock's composition «Shiftless Shuffle», particularly the rhythmic pattern in the opening section of the song—loosely improvised on a Latin-inspired pattern—the use of ghost notes as an effect to give a «forward push» to the arrangement distinctly exemplifies the technical character in focus. Applying SAT, the ghost notes occurring before each beat can be played in a very light and «non-intrusive» fashion, subtly masking the effect to give the passage a smooth feel, while imposing minimal muscle strain on the hands.

The image shows a musical score for the bass line of Herbie Hancock's «Shiftless Shuffle». The score is written in bass clef and consists of two staves. The top staff is a standard musical staff with a treble clef (labeled '1' at the beginning), showing a rhythmic pattern of eighth notes. The bottom staff is a guitar-style tablature with a bass clef, showing fret numbers (10 and 12) and red 'x' marks indicating ghost notes. The notation is divided into two measures, each starting with a '10' fret marker. The first measure contains a sequence of notes: 10, x, 12, x, 12, x, 12, x. The second measure contains: 10, x, 12, x, 12, x. The 'x' marks are positioned above the fret numbers, indicating ghost notes played before the main notes.

### 3.12 SAT in Summary

In this chapter, the development phases for the 2f-SAT and 3f-SAT approaches have been respectively accounted for, culminating in a complete technical method seemingly poised to tackle a broad set of challenges. The process of adapting and transferring guitar techniques into bass playing has been highlighted from various angles through videos, notation, and photographs, accompanied by in-depth explanations. The explorative aspects have been initiated and prioritised over an educational approach, yet verifiability has still been ensured through detailed notation and tablature as well as close up video of the demonstrations. The application of SAT has been highlighted through a comparative approach to conventional technique, making the analysis of phrasing and sound easily accessible and relatable for a broad spectrum of musicians in the field of popular music. In summary, this forms a well-founded contribution to the concluding parts of this thesis, where it will be discussed alongside the findings from the interviews.





## 4 The synthesised interviews

### 4.1 Dominique Di Piazza

Born in 1959 and raised in France by his stepfather, who was of Romani descent, Di Piazza's formative years were steeped in the rich tapestry of Romani musical tradition. This early exposure to a diverse array of music, deeply rooted in Romani culture, laid the foundation for his journey into jazz during his adolescence. As an admirer of the renowned guitarist Django Reinhardt, Di Piazza embarked on his musical journey with the guitar. It was not until the conclusion of his teenage years that he began to delve seriously into the realm of the electric bass, which represented a quite abrupt change in his life of musical goals.

In 1979, at the age of 20, Di Piazza would typically be considered a young man in most contexts. However, when confronted with the immensely distinguished players such as Pat Metheny and Jaco Pastorius, who were only a few years older than him but had already achieved significant accomplishments, he felt far from young in that setting: «I was not a professional, I was just playing during the weekends but when I discovered Jaco (Pointing to Jaco Pastorius) in 1979 I quit my job. It was a risk, and I decided to really work and explore the instrument» (Di Piazza, 2024 p.2). In a review in the online Jazz magazine «All about jazz», one can find an example of what seems to be a common misunderstanding regarding Di Piazza's musical background, wherein he moved from guitar to bass as an already high-level player on guitar (DiPietro, 2002). It is an understandable mistake, which I readily made myself, given his upbringing in a Romani environment and the traditions of virtuosic guitar players emerging from that culture, such as the above mentioned Django Reinhardt. However, regardless of how reminiscent Di Piazza's highly advanced style on the bass may seem of that tradition, there was no direct connection. As stated in his own words: «On guitar I was not advanced, I had no technique» (Di Piazza, 2024, p.3). In reality, it was the chords that drew him into the guitar, and there was little else besides that harmonic knowledge that could be transferred into the pursuit of advanced bass playing.

When asked about his unique approach to bass technique, Di Piazza highlights several significant environmental factors. For instance, he notes the scarcity of instructional methods on how to play bass. Instead, learning often occurred through rare opportunities to watch artists perform while on tour in France, allowing aspiring musicians to gain some insights by observing them onstage. This circumstance resulted in a myriad of different techniques among local players, such as the use of a device known as a «thug bar», introduced by Fender in the 1950s. Typically mounted on the pick-guard near the neck and below the strings, it allowed for resting the hand and playing with the thumb exclusively. In the 1970s, this device was more often found over the strings and functioned as a «thumb rest», which was a very common accessory on Fender basses (Blasquiz, 1990). It was, however, the «thug bar» variant that exposed Di Piazza to players using only their thumb and think he might have drawn some inspiration from that. Perhaps more importantly, he drew significant influence from his numerous friends in the French-African community who were skilled in playing the Kora. The kora, originating from West Africa, is a harp-like instrument characterised by its 21 strings and handles on both sides. Typically, the player grips the handles with the middle, ring, and little fingers, allowing the index and thumb to remain free for plucking the strings with both hands (Stone, 2005). Moreover, some of the Kora players he knew integrated techniques from the traditional six-string guitar, retaining essential elements of Kora technique. Experiencing this fusion of technical approaches significantly influenced Di Piazza's exploration of stringed instrument methodologies. The utilisation of guitar picks and alternate picking, characterised by the simple up-and-down movement, represented another facet of the technical approach and a source of inspiration. Initially, he adopted a conventional two-finger technique for bass playing, with the knowledge that Pastorius approached the instrument like that and It was during the intensive study of Pastorius's songs and style that the transition towards SAT began to manifest gradually. He soon identified string skipping as a particularly challenging aspect to tackle and especially recalls the time he started to incorporate octave licks in his repertoire: «I tried to but It was not possible. I was thinking maybe, what if I play with two

fingers like a pick , go up and down, up and down» (Di Piazza, 2024 p4). The string skipping challenge, combined with what he described as stiffness in his wrist, marked a turning point. Subsequently, he committed to employing the 2f-SAT method and kept that particular approach for the majority of his time in the John McLaughlin trio. The concept of introducing the third finger emerged upon realising that triplets, as a rhythmic subdivision, were challenging to execute satisfactorily using the 2f-SAT method alone. He further developed the ability to play with four fingers by incorporating the ring finger into his repertoire for use in certain situations, which for the most part seem to represent fast flurries of notes in some ways reminiscent of a flamenco sound, yet also as an effective way to approach chords on the instrument.

This topic leads into what Di Piazza thinks about the sound of SAT as for instance when playing consecutive notes with 3f-sat on one string in a 4/4 groove using a common pattern as accentuating every fourth note. He highlights how this effectively alters which finger accents each cycle, adding an additional layer of difficulty in maintaining the correct accentuation and sound throughout the passage. Furthermore, notably, he categorises the various approaches based on what he considers to sound the best, ranking them in the order of 2f-, 3f- and 4f-SAT. In this hierarchy, 2f-SAT represents the fundamentally "biggest" sound, while 4f-SAT occupies the opposite end of the spectrum. As Di Piazza puts it: «Playing with four fingers, you can play very fast but the sound is small. With three fingers it's better, the best is with two» (Di Piazza, 2024, p.8). Going into that topic a little further, he elaborates on how the 2f-SAT is naturally adapted for playing certain things, such as when phrasing bebop lines. The contrast in timbre between the thumb and index fingers can be utilised to achieve a wide dynamic range between notes, making it easy to accentuate uneven eighths in a sophisticated manner. Elaborating on this topic Di Piazza reflects on his philosophy in developing such an uncommon technique: «In fact, my goal was to have a great technique and to have a technique that enabled me to forget about technique. Because my goal was not to fight all the time and to struggle» (DI Piazza, 2024 p.9).

## Mail correspondence after the interview

A short time after the interviews with Di Piazza, I became aware of a particular record called "Spiritual Hymns», where Di Piazza plays both the bass and guitar parts. After listening to this album, I quickly came to the conclusion that I had to contact him a second time. The reason was simply that the guitar parts were of a completely different caliber than what I had expected, very reminiscent of his virtuoso bass playing. Di Piazza responded by explaining that his involvement in guitar playing arose from accepting a performance engagement without being fully informed about the expectations for his musical participation. After agreeing to participate, he was informed that they expected him to play guitar at the festival, which focused on what Di Piazza describes as the «Manouche» style of guitar, which is the style that the guitarist Django Reinhardt is famous for. As the gig was offering good money in a period with little income Di Piazza explained that he took the challenge and started rehearsing. After attempting to directly transfer his bass technique with fingertips, he realised that he could neither play swiftly nor precisely, which were essential for the planned repertoire. After a brief period of concern about his ability to play in this context, the solution emerged from experimenting with various fingerpicks. Two months later, he performed at the concert. In his own words: «Since I was advanced technically on the bass, I could make progress very quickly with the idea in my mind to match the speed of those great gypsy players» (Di Piazza, 2024 p.14). Two years later Di Piazza recorded the above mentioned album. In the first interview, he had explained that he was a novice on the guitar before he picked up the bass and became serious about his musicianship. When asked about the relationship between his early attempts on guitar and the skillset demonstrated on the album, he responded: «All I do on the guitar I learnt from the bass playing. In the beginning, when I started playing the guitar, before the bass, I had no technique at all» (Di Piazza, 2024 p.14).

## 4.2 Kevin Freeby

The California-based session player and educator Kevin Freeby (-79), has an extensive roster of collaborators accumulated throughout his career as an internationally touring musician. Among those he has worked with are Tony McAlpine, Derek Sherinian, Virgil Donati, Jerry Goodman, Chris Bailey, Adrian Terrazas, and Ines Bacan, to name but a handful.

Freeby began taking bass lessons at the age of 13, with his initial instructor being primarily a guitarist but with a reasonable competence on multiple instruments. This teacher introduced him to his distinctive and guitar-influenced bass style, which Freeby describes as having a percussive and «strummy» feel to it, reminiscent of Stanley Clarke's style of bass playing: «Even if it was a single note on a string, the way he was attacking it and the loose feel he had with it, it was clear he wasn't a bass player. Blew my mind at that age» (Freeby 2024, p 9). Although his teacher had an unique technical approach to the bass, he possessed a high skillset on classical guitar, and had the ability to accommodate Freeby in the process of developing a conventional 2 finger rest-stroke technique. After establishing a career as a professional bass player, gigging and touring extensively, Freeby began experiencing symptoms of focal dystonia in his right ring finger: A rare neurological condition that affects specific muscles and often manifests as involuntary muscle contractions. Given the rarity of the condition and the fact that the early symptoms could be mistaken for simply needing more practice, Freeby initially did not grasp the severity of the issue. Like many musicians facing similar challenges, he attempted to alleviate the situation by increasing his rehearsal efforts only to accelerate the deterioration into a permanent and untreatable condition. Obviously distressed and facing urgent circumstances to maintain his career as a bass player, the eventual pathway forward led him to consider Dominique Di Piazas approach to bass playing. Freeby was introduced to Di Piazza during his late teens through a fan of the French bass player who also owned a bass shop in San Diego. Initially, it primarily entailed listening to Di Piazza's performance on the John McLaughlin album «Que Alegria», which greatly influenced the aspiring musician. However, when the shop owner

facilitated Di Piazza's journey to San Diego to host a clinic at the store, Freeby seized the opportunity to interact and receive lessons from him for several days, firsthand experiencing his distinctive approach to the instrument. This meeting, although occurring years before the onset of the focal dystonia, served as an inspiration for Freeby to explore the possibility of adopting a similar methodology, thereby potentially bypassing the nerve-damaged middle finger altogether in his playing.

At the time Freeby met Di Piazza in person, Di Piazza had not extensively developed his 3f- and 4f-SAT method and primarily relied on his 2f-SAT technique which became the approach Freeby started to implement.

Having spent 12 years employing a traditional two-finger technique, Freeby diligently endeavoured to replicate the familiar sound he was accustomed to, particularly when he observed the sonic difference transitioning from predominantly playing rest-strokes to solely relying on free-strokes. As he articulates in his own words: «I was making my living as a bass player and so I had to figure out a way to try to make it sound like a bass again» (Freeby, 2024, p.15). Elaborating on that topic, Freeby highlights that, from his perspective, what one hears in his playing today is his version of emulating the conventional two-finger technique, and he underscores the countless hours he has dedicated to achieving that proficiency. A significant portion of that effort has been devoted to experimenting with the technicalities of how and where to pluck the strings, alongside rehearsals using instruments with narrow pickups that prompted meticulous attention to detail in maintaining consistency of tone between the thumb and index finger. However, despite Freeby's apparent success in that endeavour, he still occasionally reverts to a conventional plucking position and employs just one finger when a consistent big sound is required and can be executed without both fingers working in conjunction: «I think that Dominique (...) he embraced the guitaristic sound of it. I wanted to embrace the technique, but I still wanted to get the tone of a supportive role bass player» (Freeby 2024, p15). Now nearing two decades since the beginning of transferring his conventional technique to 2f-SAT, Freeby emphasises that this transition remains an ongoing quest, not only focused on optimisation but also on

being open-minded about trying new variations, constantly asking questions: «What's causing the tone? Why is it sounding so thin on this finger? What do I need to change to make this finger sound more like this thumb?» (P.18).

Another important aspect of Freeby's approach to 2f-SAT involves the wrist as the main force behind plucking the strings while keeping his thumb and index together, only separating when string skipping. The idea of implementing these two aspects primarily stemmed from observing guitar players with a high level of picking technique, such as John McLaughlin and Al Di Meola, and noting how their picking arm remained largely stationary, with the force to pluck the strings generated solely from the wrist movement. Freeby has developed the ability to play in a relaxed manner, even at very high tempos. However, when asked about whether the speed he possesses is due to his technique conversion, he pushes back on that idea: «I just think that's practise. I think that the speed and agility can occur no matter what your technique is. You know, traditional technique or not. I mean, listen to some of these amazing guys, somebody like Hadrian Feraud» (p 21). However, Freeby identifies some specific advantages of SAT. One is the fact that palm muting is always available as in contrast to changing the hand position back and forth with a conventional approach. The other facet is its efficacy in managing large intervals and facilitating string skipping. In traditional hand positioning, string skipping demands considerable conditioning, as the fingers necessitate distinct separation, resulting in a movement markedly different from playing passages on one or adjacent strings with smaller intervals. Freeby underscores that for instance playing octaves, particularly at higher tempos, using conventional technique, poses a familiar challenge for bass players. In contrast, executing the same movement using SAT is pretty much a straightforward endeavour in comparison. In the conclusive parts of the interview, Freeby delves into his exploration of incorporating the ring finger into his SAT technique, revealing that he had been experimenting with the use of three and four fingers also prior to the onset of focal dystonia. This approach aids in executing, for instance, triplets, as well as other subdivisions, underscoring the importance of

maintaining an open-minded perspective and seeking solutions to challenges regardless of their nature.

### 4.3 Janek Gwisdala

The London-born (-78) US-based bass player and record producer Janek Gwisdala boasts an impressive list of collaborators on his résumé, including Randy Brecker, Pat Metheny, Mike Stern, Carlos Santana, John Mayer, Peter Erskine, Eric Marienthal, Billy Cobham, Dennis Chambers and Marcus Miller to name just a few. Despite establishing a successful freelance path in London at a very early age, at 20 he made the decision to relocate to New York, where he has forged a reputation as an internationally renowned and respected figure in the music industry. After almost two decades as a sideman in numerous projects, he eventually transitioned into a more independent vocation in making a living by composing and touring with his own music as an artist. Presently, he has also authored no fewer than 21 instructional books on various aspects of bass playing.

Gwisdala attributes his approach to bass technique to his years of studying classical guitar during his childhood and emphasises especially how these lessons taught him fundamental principles and the methodical approach to practice. The training furnished him with a technical base that, in his own words, was «..quite transferable to bass» (Gwisdala, 2024, p.2) and how his left-hand technique required almost no modification during the transition to the bass, which started at the age of 15.

One specific aspect of Gwisdala's training, which he perceives as setting him apart from musicians who have exclusively concentrated on bass since the beginning of their musical endeavour, is his emphasis on distinguishing between rest-stroke (apoyando) and free-stroke (tirando) and highlights that there are few players, such as Dominique Di Piazza, who employ the free-stroke technique at all. Detailing on this, he points to his childhood and adolescent years and how the pre-internet learning environment for aspiring musicians rarely provided much insight into their idols' approaches, except for live performances and the sound of them from the albums they released or participated



on. This could naturally lead to misinterpretation about specifics, but at the same time, it had the inherent quality of facilitating and pushing the player into an autonomous development process; both the broad strokes and the details in performance should ultimately be determined by the individual player, as what works for one person may not be suitable for another. Elaborating on that point, Gwisdala remarks that he adopts a seated posture when playing, aligning closely with the conventional posture of a classical guitarist placing the instrument's body between the legs resting on the left thigh. This approach is mainly meant to accommodate and maintain his right hand technique and wrist position which he keeps as straight as possible at all times. When asked about his use of the wrist and thumb in the context of SAT it turns out Gwisdala does not utilise any wrist movement as a force to pluck the strings unless it's with a pick, and his thumb is only active when in conjunction with right hand palm muting. Indeed, it remains a dynamic aspect of his technical vocabulary, and his practice routine frequently revolves around refining the seamless transition from palm muting SAT to a technique resembling an intersection between SAT and a conventional right-hand posture. This technique bears some similarity to how the bass virtuoso Gary Willis (Tribal Tech) angles his right hand slightly towards the neck as opposed to straight down aligning with the bridge of the instrument.

He continually experiments with the degree to which his fingertips make contact with the strings to evoke various characteristics of sound. The quality of timbre he can produce and how it is delivered in timing is clearly at the core of Gwisdala's focus in his bass playing: «The only thing I care about is time and sound. That's it! I don't care about anything else, really» (p.14). This topic leads into the timber of the SAT- technique and the use of the thumb as a core element in the passages being played. The prevailing belief among bass players seems to be that utilising the thumb, and possibly free strokes in general, results in a weaker sound. While this holds true in certain instances, such as when plucking open strings with the thumb compared to a rest-stroke, Gwisdala asserts that the thumb, contrary to common perception, can indeed produce a substantial and resonant sound. Over time, he has developed a tough, leather-like skin

on the plucking side of his thumb, enabling him to achieve this effect while still maintaining the full spectrum of variation by adjusting the amount of plucking surface in contact with the strings. When exploring these aspects of the instrument, one must adopt an open-minded approach to possibilities, as thinking about various approaches as «different» and not necessarily inherently «better» or «worse». Gwisdala poses the question, «Are you naturally a curious person? Do you always ask the next question, or do you always ask the next five questions, or are you very easily satisfied?" (Gwisdala, 2024, p. 17) In conclusion, Gwisdala underscores the perpetual nature of the developmental process for musicians, urging curiosity and a willingness to ask questions to further one's growth in the field.

## 4.4 Summary of the interviews

Despite the age difference, with Janek Gwisdala and Kevin Freeby born in the latter half of the 1970s, and Dominique Di Piazza approximately 20 years their senior, all three share a common background of growing up in the pre-internet era. This is a common point among them, as they note that there was limited information available on the specifics of playing musical instruments. There was likely a somewhat broader set of available literature and television shows featuring musical events for Gwisdala and Freeby, but all three cite concerts and their surrounding environment as their main sources of information throughout their musical upbringing. The guitaristic influences are also quite evident in their musical backgrounds, where Di Piazza drew inspiration from a multifaceted cultural environment. In particular, the Romani and West African influences to which he was exposed during his childhood and adolescence were instrumental in his initial development of the SAT technique. Gwisdala, on his part, had a background in classical guitar, a technique he adapted and carried with him when he began learning the bass in his teens, while Freeby, albeit having a guitar instructor as his first bass teacher, is the only of the three that adhered completely to conventional technique from the start. In the case of Freeby, the onset of focal dystonia in his early twenties compelled him to alter his technique. He drew upon his previous encounters with Di Piazza as inspiration to develop his own version of SAT. Di Piazza, on the other hand, invented his variant of SAT as a response to what he disliked and found difficult to implement when playing conventionally, starting out with 2f-SAT which was later expanded into both 3f-SAT and 4f-SAT. Gwisdala, a player who occupies a somewhat grey area in terms of conforming to the criteria of SAT, predominantly uses a conventional technique. However, it is a slightly modified version that appears to merge SAT with traditional methods. He has also retained his pure SAT approach, which he frequently utilises, but exclusively in conjunction with palm muting. Albeit different reflections, they all share a common and rigorous focus on tone and phrasing which was key elements of discussion in all three interviews. In the case of Freeby, who has worked diligently for years to adapt his SAT to mirror the sound of conventional

technique, he highlights this project as an effort to replicate the tone from his days as a conventional player. He still reverts to using his index finger in the conventional position when he feels the style of music requires it. He is open about the fact that he would clearly prefer the conventional technique if he could, but simultaneously feels that he has closed the gap between SAT and conventional to a large extent. Di Piazza, who has played SAT from a very early stage of his development, also comments on the tone of SAT, pointing to both potential upsides and downsides in choosing such a technique. On the other hand, Gwisdala views various techniques as producing different sounds and is not eager to grade them in terms of better or worse. However, the theme of variation between thumb and index was a topic that was discussed from many angles with Di Piazza and Freeby. Freeby relies solely on 2f-SAT, as the nerve damage in his middle finger prevents him from using more fingers. In contrast, Di Piazza uses all variations from 2f- to 4f-SAT but grades them in sound, highlighting 2f-SAT as the preferred approach. Gwisdala points out how many seem to believe that one cannot produce a «big» sound using the thumb, and he pushes back on this idea. He explains how he has conditioned the skin on his thumb over the years and adjusted his technique to achieve this quality in tone. Di Piazza points out how rapidity and string skipping might be advantages of the SAT approach. Concerning string skipping, all subjects agree on the advantages, but when it comes to rapidity, while not contradicting each other directly, they seem to have different reflections. Gwisdala points out that passages composed using SAT are naturally harder or sometimes impossible to execute properly using a conventional approach, indicating that it is more a matter of how the music is composed than the technique in question. Freeby underlines that rapidity and agility are matters of rehearsal and are not necessarily connected to the style of technique. In a post-interview email correspondence, an important finding was discussed with Di Piazza, where it was revealed that he had adapted his SAT technique to fit the guitar using fingerpicks in just two months. Further, he highlighted that he was not proficient on the guitar prior to the months of preparing for a specific gig.

## 5 Discussion

As this thesis explores an aspect of cross-instrument transferability, which inherently involves learning a new instrument to some extent, it seems appropriate to include a brief discussion on the nature of learning to play—from the novice stages to acquiring skills that could, in one way or another, be recognised at a professional level. From there, and before more directly addressing the key question of the thesis, I will briefly discuss some reflections on transitioning from a high level on one instrument to another in general. I consider both topics relevant to understanding not only «how» SAT can facilitate cross-instrumental projects but also the «why» and «when» of SAT as a cross-instrumental tool.

### 5.1 The nature of learning an instrument

The academic field most closely related to the process of transitioning from novice to professional is likely the domain of «high ability» research<sup>12</sup> on musicians, a field that occupied much of my study time as an undergrad in musicology. I was initially surprised that the discipline appeared highly politicised. It gradually became more understandable, given its engagement with sensitive aspects of human study, that the disagreements primarily focused on how much innate qualities contribute to achieving high-level musicianship. To contextualise this discussion, one might reference the article «The role of deliberate practice in the acquisition of expert performance» (Ericsson, Krampe, & Tesch-Römer, 1993), which goes far in attributing high musical ability solely to deliberate practice, even coining the now-famous and frequently cited estimate of 10,000 hours to achieve such proficiency. Or for instance a quote from another prominent team of researchers stating: «Innate talents are, we think, a fiction, not a fact» (Howe, Davidson, & Sloboda, 1998, p. 437). Conversely, the article «Becoming an expert in the musical domain: It takes more than just practice» (Ruthsatz, Detterman, Griscom, & Cirullo, 2007)

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<sup>12</sup> More colloquially called «talent research». Predominantly conducted in the field of psychology.

directly addressing Ericsson et al in the title. This paper presents several counterarguments, strongly challenging Ericsson et al claims and proceeds to propose a relationship between IQ scores and level of instrument proficiency.

While the debate over a direct, monotonic relationship between mastery and hours of deliberate practice to some extent persists, there is a clear and uniform consensus that extensive practice is essential for acquiring expertise on an instrument. Furthermore, and to my knowledge, no one posits a direct bilateral relationship between genetic predisposition and instrument mastery.

Although an extensive dive into the field of high ability research granted me few undisputed «truths» about the subject that seemed entirely reliable, I found myself, in a sense, reaffirmed or perhaps more precisely, persuaded, that progressing from novice to excellence in playing an instrument is an inherently deeply individualised journey, characterised by a significant potential for variation among individuals in how to get there. After all, nobody truly knows in great detail the cognitive process of others; even if one listens to authorities play while explicitly addressing their approach, I would argue it only to represent a coarse-grained version of the full picture. One can only speculate on how much the tacit part of the process matter in the long run.

Although I describe my belief about the process of learning an instrument as an «deeply individualised journey» the «coarse-grained» version I refer to are probably very similar for most. There are likely abundant facets that one could delineate and attribute to various aspects of the undertaking, and I will adhere to describing only what I believe are some core categories and elements important for learning musical instruments and what I mean when pointing to them in this context:

**Motor skills-** Entail the physical coordination of movements directly impacting the instrument and the sound it produces.

**Listening skills-** The ability to discern and interpret the various aspects of music involving rhythm, pitch, harmony and timbre.

**Theoretical skills-** Encompass the utilisation of analytical tools to understand various aspects of music, such as harmonic analysis, chord construction and progression, arrangements, scales and their relationship to harmony, as well as form and structure.

**Learning skills-** Involves the refinement of strategies in how to, for instance: Rehearse, absorb feedback from peers and teachers, engage in metacognition regarding how strategies might impact outcomes, the ability to both narrow and broaden one's perspective when appropriate, maintaining motivation and persistence.

**Creative skills-** Involves the ability to generate, develop and express novel ideas in for instance: Composing, improvisation, sound design and technical solutions to various challenges.

**Instrument specific skills-** Instrument specific skills form a category arguably intertwined with all four of the previously mentioned groups. They encompass all practical and theoretical knowledge unique to each instrument.

As implied, the list is not meant to describe and categorise elements in instrument learning in a scientifically accurate or exhaustive manner, but although there is quite possible that some could disagree on the categories and what is designated to them, it would probably not be of fundamental character. Furthermore, I include a disclaimer that these categories are likely interconnected, with their respective elements possibly exerting mutual influence in numerous ways. With that notion in mind, I will further discuss which skills may be specific to particular instruments and which qualities could be assumed to remain consistent when learning a new instrument, building upon a foundation of already high ability in another.

## 5.2 Enduring aspects of musical skills in transition

When considering the enduring aspects of skills while transitioning from one instrument to another, the listening, learning, theoretical and creative skills seems to be quite obvious candidates of categories to be most resilient. It appears challenging to construct well-founded arguments suggesting that any of those categories might represent transitional problems, and even if they do, I believe the emerging issues are likely to be relatively minor.

Motor skills on the other hand seems to be an entirely different story. One example of this, as previously described in this thesis, is my attempt to learn a conventional plucking bass technique. Despite building on extensive experience with the guitar, I ultimately failed in this endeavour, twice. Although an anecdote, I believe that this is not particularly unique to me. The prevailing belief among musicians and educators seems to be that learning an instrument to a high level, is sensitive to when it occurs in one's life, specifically during childhood and adolescence. This notion has been presented to me as a fact on numerous occasions across various contexts, and without any actual evidence, I have accepted it as true at face value.

Upon further investigation, there are findings in the field of neuroscience that seem to support this claim to a certain extent. Neuroplasticity could be described as the «capacity of neurons and neural networks in the brain to change their connections and behaviour in response to new information, sensory stimulation, development, damage, or dysfunction (Rugnetta, 2024. p. 1). Neuroplasticity could also be understood more colloquially as the «malleability» of the brain. Research in this field shows that there are specific periods during childhood and adolescence when humans are particularly receptive. As described: «During this time, the basic architecture of the neural circuits is laid out and all learning (and plasticity) that occurs after the sensitive period will cause alterations only within the connectivity patterns constrained by this framework» (Knudsen, 2004, as cited in Miendlarzewska & Trost, 2014, p. 3).

Miendlarzewska & Trost (2014) further highlights how studies consistently show that, especially, fine motor skills, rhythm perception, and auditory discrimination are enduring qualities at which children undergoing musical training excel at later in life.

Studies examining how musical training in childhood affects cognitive development in general, likely cannot be used as evidence for specific motor skills related to particular instruments. Nevertheless, it can probably serve as a mild indicator that fine motor skills learned during the «sensitive» periods of one's upbringing could reach a higher level of proficiency than those trained in adulthood. This, combined with the countless hours musicians typically spend rehearsing one instrument, especially throughout



adolescence, seems to lend some weight to the notion that transitioning to an instrument requiring a different set of motor skills will probably be challenging for most musicians, regardless of background.

These reflections are important in that I describe SAT as a slight modification of skills that have already been rigorously trained. In my view, it was more about discovering that «it was there» rather than embarking on an extensive project, as seemed to be the case with conventional approach. Hence, I believe that the facilitating aspects SAT can offer when transitioning from guitar to bass, or vice versa, probably must be well-founded in existing techniques to be effective. This assumption could also mean that bass players looking to learn guitar, generally will not find many facilitating aspects in SAT, because, as I proposed in the chapter about SAT development, it is a secondary technique generally not developed and conditioned for performing a wide variety of tasks. I will not argue that it is impossible; in fact, Kevin Freeby is a prime example that it is not, as he was forced to switch to SAT at 22 years of age. However, he was clear about that it was a very time consuming and demanding project that has never really subsided, and still refers to it as an ongoing process 24 years later.

### 5.3 To what degree is technique transferred facilitated by SAT.

Another aspect that highlights the nature of learning new instruments, building upon a solid foundation in others, is the observation—albeit relatively uncommon—of musicians proficiently playing a variety of instruments. The guitar, banjo, flute, pedal steel and accordion virtuoso Stian Carstensen is probably the most well known Norwegian musician to fit the category of a so called «multi-instrumentalist», playing all five instruments at a very high level<sup>13</sup>. It is also not uncommon to find musicians in the freelance community who are somewhat adept at playing more than one instrument, like saxophone players who can play the clarinet, roles typically required in the orchestra pit in theatre productions. This particular focus is also the sole writings I have found on cross-instrument transferability, represented only by a few internet blogs addressing

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<sup>13</sup> Those are just the instruments I have seen him play in concert. According to his own webpage, the list of instruments Carstensen can play also includes violin, bagpipe, Bulgarian flute, and mandolin.

issues saxophone players encounter when transferring their technique to the clarinet. There are to my knowledge, no in-depth scholarly articles or popular literature addressing this topic specifically. However, the absence of targeted research in this area is probably unlikely to astonish anyone broadly associated with music professionally. I could give numerous possible reasons for that but they will mostly be subcategories of one: Achieving a high level of proficiency on a single instrument is challenging enough. For most musicians this is very likely to be the main reason not pursue a high level of skill in two, let alone, several instruments. With rare exceptions, like Carstensen, my observation is that when musicians can play multiple instruments, there is typically one that dominates, far surpassing the others in technical proficiency.

Although I have already to a certain extent implied it, I want to highlight that this is not what I am referring to in the context of transferring technique with SAT. The criteria I assume involve an *extensive* transferring, granting the practitioner an «access» to the instrument that is very close to the instrument from which he or she is transitioning. To further clarify: In my transitional process from guitar to bass, my perception was that the bass felt every bit as familiar to play as my guitar, within a short amount of time. In the case of Dominique Di Piazza, he transferred from bass to guitar in what he estimates to be about two months, and soon after recorded an entire album<sup>14</sup> where he plays all the guitar parts very reminiscent of his virtuoso bass playing. As Di Piazza commenced his musical journey on the guitar, there seems to be a prevalent assumption that this background facilitated his ability to «suddenly» perform at a high level. However, when Di Piazza discusses this topic in detail, he explicitly states that he did not possess an advanced skillset on the guitar before he committed to becoming a musician and learning the bass: «On guitar I was not advanced, I had no technique» (Di Piazza, 2024, p.3). Had I not had my own involvement with SAT, that statement might have left me wondering whether he was downplaying his background as a guitarist. Nonetheless, having experienced the period of SAT development myself, I find no issue with that claim whatsoever. In his own words: «All I do on the guitar I learnt from the bass playing»

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<sup>14</sup> *Spiritual Hymns*, released in 2002.

(Di Piazza, 2024 p.13). However, referencing the category proposed of «instrument-specific skills», while an extensive transferring of technique is not trivial, it obviously does not impart any new musical comprehension in the process; indeed, being what I think of as a «bassist» or «guitarist» involves a great deal of specific experience well beyond the mere technical handling of the instrument. Or in other words: you bring what you have. In the case of Di Piazza, considering his comprehensive experience at the highest perceived level, he obviously brings a lot to the table when transferring his technique to the guitar.

## 5.4 Criteria for being considered facilitating

I began this thesis by explaining how my process of discovering the potential to transition from guitar-picking to bass-plucking is fundamentally the reason I chose to explore SAT further. Considering the facts that throughout my musical career I have been consistently attentive to bass, attempted to learn bass conventionally, and played bass on numerous studio productions, it was a big surprise to discover that this potential had, in a sense, been «hidden in plain sight» all along. To clarify: I believe that I could have made this transition twenty years ago just as effectively as I did just a few months ago. As I have not observed any unusually rapid leaps in progression in my past as a musician, nor anything else that would suggest this was unique to me, it was also natural to ask questions about how this technique could facilitate transitioning between guitar and bass, not just for me, but for anyone interested. In the process of addressing the key question of how SAT can facilitate such a process, I find it important to underscore some of what I believe are core findings through development and interviews, and to discuss them comparatively with conventional technique. The comparative aspects came about because the subjects, albeit for different reasons, largely discussed their technique in comparison to a conventional approach. This was also a crucial aspect for me throughout the development of my own version of SAT because if it had sounded too foreign, I would probably not have delved so deeply into it. Here, «foreign» means something akin to being too detached from what I was accustomed to hearing from an electric bass. To consider SAT seriously, it had to closely resemble conventional

technique in application and sound. To further clarify: Using a pick to play the bass, although sometimes fitting a song perfectly, is a good example of what I mean by «too detached» and is not generally the sound I prefer to hear from a bass. Although this is naturally a question of individual preferences, some bass players adhere solely to the plectrum. For SAT to be considered a generally effective facilitator of cross-instrument transition, I would argue that the sound it produces should, if not identical, at least be able to closely resemble the traditional sound associated with the bass or guitar. So, what does SAT really sound like?

## 5.5 The sound and phrasing of SAT

In the context of bass, and as highlighted in the SAT chapter, one of the deviations SAT technique represents from conventional technique in sound is rooted in the difference between *apoyando* and *tirando*. In conventional approach most plucks involves *apoyando* («most» meaning the player can choose) whereas SAT is solely dependent on *tirando*. Kevin Freeby attributed this difference to the fact that in *apoyando*, more of the finger is in contact with the strings, producing a slightly «bigger» sound and allowing for more available force, which results in a generally higher output, if wanted. *Apoyando* also typically includes a percussive «thump» from the finger hitting the adjacent string, which can be described as a discreet kick drum sound accompanying the transient of the stroke. I use the word «discreet» because this «thumping» sound is not very obvious to a non-bass player until one listens by going back and forth between *apoyando* and *tirando*. When doing that, the difference will be easily detectable for most. However, on a four-string bass, this effect is not available when playing on the low E-string, as there is no string to «rest» on after the initial pluck.

In SAT, the fingers strike the string at a sharp angle, where the difference in sound from conventional technique is most noticeable when using any finger other than the thumb. Gwisdala argued that in the case of using the thumb, one can produce a sound just as robust as with conventional playing, and that this is mostly a matter of conditioning the skin and adjusting the technique. However, when evaluating the other fingers in use, there is a noticeably thinner sound, which is further accentuated by the difference when

alternating between the thumb and, for instance, the index finger. Di Piazza discussed this phenomenon in a hierarchy of preference, where he rated the middle finger<sup>15</sup> and thumb as the «best sounding». He then highlighted how the use of a third and fourth finger increased the ability to play rapidly but also produced a «smaller» sound, with the 4f-SAT being the version he preferred the least in that aspect. A very interesting contribution to this topic is how Freeby talked about how he experience the difference between conventional and SAT. From the point where Freeby was coerced into using SAT due to nerve damage in his middle finger, exploring how to achieve a sound closer to that of apoyando has been one of his key focuses. The onset of this process represented a huge challenge, which he describes as «making it sound like a bass again». This involved extensive experimentation with pickups and various plucking techniques to make the sounds produced by the thumb and index finger less distinct from each other. Freeby also underscores another interesting point about sound in mentioning Di Piazza: «I think that Dominique (...) he embraced the guitaristic sound of it. I wanted to embrace the technique, but I still wanted to get the tone of a supportive role bass player» (Freeby 2024, p. 15). Although this quote has already appeared in the interview synthesising of Freeby, I think it is important to highlight this statement again as it might suggest a less facilitating aspect of SAT, that is, if the goal is to adhere to a traditional sound. As I can only draw on a few months of experience in developing this approach, this aspect is only for me to speculate about. The music I have engaged with during the development period has been largely influenced by the surprising realisation that I could play bass-oriented music like the virtuosic piece «Havona», which can hardly be described as giving the bass a «supportive role» in its arrangement. It is also not hard to see why Freeby would think of Di Piazza's playing as «guitaristic», given that his style incorporates many aspects of chordal use and arpeggiated runs, often positioning the bass as a leading element in the arrangement rather than a supportive one. Although Di Piazza appears on many recordings where his role aligns more with what might be

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<sup>15</sup> Di Piazza plays 2f-SAT using the thumb and middle finger.

interpreted as «supportive», he also underscores that SAT does presents challenges in achieving a «big sound», which might be an issue in certain instances.

## 5.6 Approaching styles with SAT

Even though I have not gained significant experience on the matter, an obvious situation where SAT could deviate more than some might prefer from a conventional sound is when playing a groove with straight eighth notes using 2f-SAT. In that situation the variance between index and thumb would be very noticeable, as the previous demonstration between conventional and SAT phrasing seems to suggest. For the most part, I believe those situations could be handled by strictly using the thumb, but at the same time, there is no denying that it could present challenges depending on the arrangement. This notion could also indicate that there are styles of music where SAT might would be more or less suited as an approach. Kevin Freeby elaborates on that topic, noting that he still reverts to conventional positioning, using only the index finger, particularly in the context of, for instance, a rock ballad. While the specifics distinguishing the use of only the thumb or only the index finger in such a setting remains somewhat unclear to me, as I have never been on stage with a band playing the bass, Freeby's comments on style preference likely represent an important aspect to consider. Indeed, he has experienced both techniques, demonstrating a high level of proficiency in each of them.

Gwisdala addresses this subject and demonstrated during the interview how he practises to seamlessly transitioning between SAT and conventional techniques for sound variation. He emphasises the importance of continuously «asking questions» while being immersed in the music. Here, the stylistic differences between Gwisdala and Freeby may be of interest, as Gwisdala now predominantly works as a jazz musician, playing instrumental music and utilising improvisation extensively. Meanwhile, Freeby, although not unfamiliar with instrumental music and improvisation, primarily works with music involving vocals in more traditional pop/rock settings. In other words, Freeby occasionally plays rock ballads, whereas Gwisdala does not. Neither does Di Piazza, who discusses the phrasing aspects of SAT as being suitable for different situations. For

instance, when playing bebop phrases in a swing context, he highlights how the variation in timbre contributes to the style, making it easier to accentuate the differences between the heavy and light beats. This is a particular aspect of phrasing Di Piazza interestingly contrasts with conventional approach which he suggest could impose a stiffness to the execution of such passages and a general lack of rhythmic elasticity. This observation I interpret to align closely to the point I was conveying in the SAT analysis concerning phrasing demonstrated with the Herbie Hancock composition «Shiftless Shuffle». In that example, the groove is not a swing beat but still incorporates an element of syncopated ghost notes before every beat, which, while using SAT, allows them to be executed very lightly and «non-intrusive», despite the continuous string switching. In describing that style of phrasing, a term like «rhythmic elasticity» conveys the musical intention effectively, where the very light and percussive touch of the ghost note aids the forward momentum in the groove without drawing excessive attention to the effect. This is also the only instances where I contrast SAT with the conventional approach, suggesting that this particular aspect is a quality where SAT might excel.

## 5.7 Facilitating aspects from bass to guitar

The analytical breakdown of SAT is conducted from my perspective as a guitarist, and consequently, this thesis predominantly focuses on transferring technique from guitar to bass. Meanwhile, the expert subjects are all bass players, and as I state in the chapter concerning the questions addressed in this project: «I examine the cross-instrumental capabilities of the technique from both a guitaristic perspective and that of a bass player», it is important to underscore that the only individual I have been able to find who has extensively transferred techniques using SAT from bass to guitar is Dominique Di Piazza. Further, I describe transitioning from picking to SAT on guitar as challenging to execute and requiring considerably more time to meet the standards of my picking technique. I demonstrated how I use SAT on guitar, simultaneously highlighting that a substantial part of my picking skills was not included in the performance. In sum my overall assessment is that I can not yet regard that part of the endeavour as «an extensive transferring of technique». While I do not believe it is impossible for me to

eventually regard my SAT approach on guitar as somewhat akin to my picking technique, it is very clear that the timeframe suggested by both Di Piazza and myself will be considerably extended compared to how he transitioned to guitar and I transitioned to bass. Di Piazza's approach also differed from mine in that he utilised fingerpicks to succeed. In his own words, «..I tried to use my bass technique on the guitar with the fingers only, but I couldn't play fast and precise..» (Di Piazza, 2024, p. 14). From my perspective, that statement is very relatable as words like «fast» and «precise» pinpoint the challenges I encountered. The use of fingerpicks was an approach Di Piazza did not mind, which is a method he also incorporated back into his bass playing for a period. However, the use of fingerpicks represents a clear deal breaker for me, not only because of the sound they produce but also because they would compromise my much used damping technique, which relies on the fingers not wearing picks.

This seems to reinforce my suggestion that, in order to serve as a robust facilitating tool for crossing instruments, the sound and feel of the technique should probably possess qualities that do not deviate too much from how one is accustomed to hearing the instrument and utilising ones technique. While these findings suggest that SAT might not meet the standards I proposed as a tool for extensively transferring technique from bass to guitar, as I believe it does effectively the other way around, it is quite possible that many players will appreciate the sound and utility of fingerpicks. However, the fact remains that very few bass players are proficient at playing SAT to begin with, suggesting that Di Piazza probably is somewhat of a unicorn in this context. When listening to the albums of the world-renowned guitarists Jeff Beck and Joe Pass, who both predominantly played SAT with their fingertips throughout their careers without the use of fingerpicks, it is clearly evident that there is no lack of ability to play either fast or precise. Nevertheless, citing Jeff Beck and Joe Pass as proficient in SAT in the context of guitar does not provide much insight into the degree of transferability that SAT might facilitate for someone coming from a background as a bass player.

Perhaps this is to be expected considering the numerous guitaristic origins of SAT: identical to guitar hand positioning, Di Piazza's inspiration from Kora playing and



alternate picking, Gwisdala's background as a classical guitarist, Freeby's incorporation of what he observed from Di Piazza and his study of guitar players in this endeavour, and my own transfer of technique from guitar to bass. Di Piazza demonstrates that it is indeed possible, but I am hesitant to categorise SAT as a facilitating aspect for bass players in general. Such labelling would imply the necessity of mastering SAT as a fundamental approach to the bass before transitioning which is simply not the case for most bass players. Such labelling would imply the necessity of mastering SAT as a fundamental approach to the bass before transitioning, which is simply not the case for most bass players.

## 5.8 The case for rapidity

Di Piazza is indeed the only individual I have identified who, in addition to being an internationally recognised figure within modern jazz, is also well known for his development and unique abilities within SAT. This naturally raises the question of why he chose such an unorthodox method to begin with, especially since his idol at the time, Jaco Pastorius, utilised a conventional approach. One reason Di Piazza highlights, is how the lack of information resulted in many variations of approaches. This aligns with Gwisdala, who pointed out how the pre-internet environment consequently meant scarce access to details and standards regarding how to approach technique. However, Di Piazza points out another very interesting explanation: he simply found conventional technique quite challenging and adapted to the situation by experimenting, drawing inspiration from Kita players in the French-African community, and merging it with an idea of alternate guitar picking: «In fact, my goal was to have a great technique and to have a technique that enabled me to forget about technique. Because my goal was not to fight all the time and to struggle» (Di Piazza, 2024 p.9). Di Piazza elaborates on this topic and conveys that he does indeed consider SAT poised for rapidness.

While it is difficult to argue against the notion that Di Piazza's version of SAT is not rapid; it is staggeringly rapid, it is also plausible that it is Di Piazza himself who possesses rapid abilities rather than being a product of the inherent qualities of SAT. Freeby seems to lean towards such reflections: «I just think that's practice. I think that speed and agility

can occur no matter what your technique is» (Freeby, 2024, p. 21). It is easy to find examples to support Freeby's assumption. For instance, the Indian bassist Mohini Dey, who is arguably one of the most rapid bass players today, solely plays conventionally. Another compelling example to support this is the guitar phenomenon Matteo Mancuso, who primarily plays SAT, utilising fingernails akin to classical guitarists. While Mancuso certainly seems able to play faster than most in the SAT position, my observation is that he actually switches to the conventional position, utilising *apoyando* in all the fastest segments of his playing.

A more inclusive perspective might be offered by Gwisdala, who, during the interview, highlights and demonstrates passages from his latest album that he simply cannot play without adhering to SAT. That view is also similar to how I describe the early stages of my own development on guitar before transitioning my technique to bass. During this time, I composed while adhering to SAT, rendering me somewhat unable to play those compositions without the technique. While the demonstration of SAT on guitar is neither particularly rapid nor replete with technical nuances, I still would not be able to perform the piece as intended using a pick. This would naturally also be true if I hypothetically developed rapid passages as an inherent part of the composition, meaning it would probably contain challenges of rapidity I could not execute with a pick even though my picking technique generally is a lot faster and more precise than my SAT in the context of guitar. This notion lends some weight to the idea that the rapidity is probably more a question of the tools used in the creative part of the process than SAT being an inherently fast technique. Still, it is possible Di Piazza is touching upon something that holds true in certain instances, especially passages with a high focus on string skipping, a quality that all the subjects seem to agree is an excellent facet of SAT.

## 5.9 Exemplifying through «Havona»

In the analytical chapter, I outlined various reasons for choosing «Havona» as a piece to demonstrate SAT. In the concluding point, I noted that I would detail and argue in the discussion that this particular piece exemplifies where SAT appears to excel. As «Havona» possesses distinct qualities, being a highly rapid piece that induces a

continuous stream of string skipping, heavy utilisation of the demonstrated «forward pushing» ghost notes, and plentiful opportunities to exploit the potential rhythmical elasticity highlighted by Di Piazza, I will argue that, in sum, SAT indeed excels in this musical context. If something «excels» it has to be in comparison to something else which in this case would have to be the conventional approach. As Jaco Pastorius, utilising a conventional technique, in the original recording of his composition «Havona», executes it in a brilliant fashion, it is worth noting that the term «excel» might convey a different meaning than intended. The qualities I highlight do not aim to position SAT as superior; rather, the point is that certain situations, depending on the individual, could be an facilitating approach to render specific passages more easily. Especially, in the cases akin to mine, where technique is transferred from guitar to bass.

## 5.10 Discussion in summary

This discussion has brought attention to certain aspects of learning an instrument, starting from the basics and progressing to a level that could be broadly acknowledged in a professional setting. In identifying and categorising skill sets deemed significant components of such an endeavour, it has provided a framework for further discussing which of those qualities are likely to endure when transitioning from one instrument to another and what might pose significant challenges in the facets that are instrument-specific. Further, and now focusing more specifically on key questions of the thesis, it has been emphasised how «multi-instrumentalism» is relatively uncommon in the sense of mastering several instruments at a high level of technical proficiency, yet not as rare when referring to playing various instruments while one significantly surpassing the others in competence. This was used to discuss the proposed criteria for SAT to function as a facilitating technique during transitions and how those criteria contrast with the more common level of multi-instrumental abilities, suggesting an extensive transfer of technique, particularly in the case of the guitar to bass relationship. The issue of criteria was elaborated on and linked with how sound, feel, and phrasing should ideally align closely, but not necessarily identically, with one's accustomed perception of the instrument in order to be considered a facilitating tool. This implies that if the technique

is too detached from that ideal, it could certainly work for some but might not be of interest to many. This is further elucidated by highlighting situations where the sound and phrasing of SAT might be considered less appropriate, as well as identifying settings in which it might excel, underscoring how styles and perspectives could influence the perception of these factors. In the question about transferring technique from bass to guitar, Di Piazza is used as a clear example that it has been done successfully, and within a similar timeframe as my own process of transitioning. However, the fingerpicks Di Piazza was compelled to use in the process appear to, in some sense, contradict the criteria regarding being too detached from a traditional sound. The topic of timeframe is emphasised in various ways because it suggests whether existing technique is adapted and transferred or if one is simply learning a new technique, as in the case of Kevin Freeby. The culmination of findings suggests that SAT probably should not be considered a facilitating aspect for bass players looking to transition to guitar, given that most bass players would have to learn SAT on bass first. In the concluding parts, rapidity is discussed, highlighting the various perspectives of the finding. The proposal here is that SAT might not be an inherently rapid technique, but rather offer different technical approaches that affect the creative process. In turn, it may be rapid in a way that could be harder to recreate with a conventional approach. Nonetheless, different aspects of the matter do imply that SAT could be particularly effective in the context of string skipping and might represent an excellent technique in that regard. This topic is further elaborated on by exemplifying the composition «Havona», which embodies many of the facets discussed as potential excellent aspects of SAT.

## 6 Concluding reflections

### 6.1 Main findings

In highlighting the insights gleaned from this thesis, I will underscore that one of the most significant facets of the findings is the discovery that it is indeed feasible for a guitar player to extensively transfer an already developed picking technique into a functional and complete bass technique and how this project thoroughly demonstrates that particular endeavour. The reason to advocate such importance to this aspect is the notion that it represents a highly unknown link between the two instruments, which I truly believe is readily exploitable not just in my case, but more importantly, for anyone interested. Although now, at the conclusion of this process, the SAT approach might seem obvious, it was, both to myself and to any musician with whom I discussed the matter during my thesis work, a completely novel concept. As indicated in the discussion, it was a matter of discovering that it was there; thus, I believe the work I have conducted can contribute to the field of music performance by first and foremost demonstrating that indeed it is.

The critical points raised in how SAT can facilitate this process of transferring are addressed from many angles. The chapter concerning my own development of SAT has strived to describe the process as rigorously as the scope of a master's thesis permits. While not primarily intended for pedagogical purposes, it demonstrates to fulfil that role for anyone interested in replicating the findings, which is facilitated through detailed transcriptions, explanations and videos of the process.

The criteria indicated for SAT to be a robust facilitating tool for a transition in technique implies that it can not be too far detach from the ideals one is traditionally accustomed to hearing. That rule still only represent a notion that if to be evaluated as an efficient transferring tool, then it also should have a potential to appeal to many, hence adhering close to a traditional sound. Apart from that assumption it only functions as a dogmatic tool to discuss SAT from various angles and bears no real significance outside the scope of this thesis. Nevertheless, evaluating the findings under those criteria suggest that SAT might not have many facilitating qualities when transitioning from bass to guitar. This

issue is further explored and emphasised by examining the timeline required to transfer the technique, which the thesis argues is a significant indicator of the extent to which SAT can facilitate the cross-instrumental process. Here, the discussion suggests that a brief timeline for transfer is a fundamental characteristic of an effective facilitating tool. Still, Di Piazza exemplifies that if the individual is proficient in SAT, it can be highly effective from bass to guitar if one is willing to step outside the norm.

In the question of whether SAT meets the criteria of sound when evaluating the process from guitar to bass is likely a question of who one might ask. This thesis suggests that it does, but it also contains a broad set of information for one to form their own opinion on the matter. As the interviews present internationally highly acclaimed musicians who all utilise their adaptation of SAT, contributing with their insight as performers with extensive experience from the field, the discussion draws upon a valuable set of informants. Additionally, the fact that subjects work with SAT is readily evidenced through numerous albums and video-recorded concerts, as well as interviews, which firmly strengthens the connection this thesis has to the field and the extent to which potential readers can conduct their own investigations.

## 6.2 Methodological reflections

This thesis has opted to demonstrate that the phenomenological approach has functioned as the principal reflective tool utilised. This approach has provided a foundational framework for the case study in several ways:

In the chapter on SAT, it has opted to investigate and describe the experience of developing the technique through what appears as the essence of the phenomena. This essence is communicated through videos, pictures, transcriptions, and reflective explanations, as presented as a case study of SAT. The case study, as stated in the methodological chapter, is «bounded by space and time». This implies that the investigation of the phenomena of SAT has been conducted within the specific environment and timeframe in which it occurred.

The interviews were conducted with the attitude of maintaining an unbiased stance, asking open questions, and allowing the subjects to contribute their experiences freely.

The interviews were synthesised with the same frame of thinking, ensuring that all aspects concerning SAT were accounted for, interpreted, and presented, opting to give an unbiased representation of the findings.

The findings, encompassing all the various elements presented throughout the thesis, were thoroughly discussed, synthesising the information and offering coherent reflections on the SATs facilitating aspects of cross-instrument transferability.

### 6.3 Personal and professional growth

A theme not discussed in particular in this thesis was the interview subjects remarks on being open minded in ones musical endeavour. An invitation to being open-minded could easily sound like a cliché, as it is a recurring theme in many fields of profession. Nevertheless, the learning experience that working on this thesis has provided is the strongest reminder I have encountered throughout my career as a musician that this is indeed an important aspect of the journey. Discovering that SAT was a facilitating tool for me to transfer my picking technique to bass was simply a mind-bending experience. Especially notable was the degree to which this was the case, as I now consider the electric bass as an additional «main instrument» alongside my guitar, which prior to the work done during my time at UIA was unthinkable. Going forward, this addition to my personal musicianship, I deem as significant as it opens up a range of possible paths I am truly looking forward to explore and develop further.

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Quotation style: APA (American Psychological Association)

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