RETUNE

A toolbox for composing based on Hardanger fiddle music from Setesdal

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I am very fortunate to have had help of various kinds from numerous people while working on this research. But first of all, I would like to acknowledge my gratitude to my family, who inspired me to pick up the Hardanger fiddle in the first place—sitting on my father's knee and holding his hands as he played the fiddle while my mother sang led to a life in music.

I am grateful to the University of Agder, Kristiansand, for this opportunity to study Hardanger fiddle music's characteristics and processes. The work is based on the tradition from Setesdal, and I have in this regard benefited from conversations with Kirsten Bråten Berg, Hallvard Bjørgum, Gunnar Stubseid, Astri Rysstad, Daniel Sandén-Warg, Harald Knutsen and Leonhard Jansen, whose inherently positive attitudes and generous sharing of their time and valuable specialized knowledge informed this study from start to finish. Further, a warm thank you to Roald Råsberg for his guidance when marking organic rhythm in Sanden Studios, and his sound engineering while we recorded and mixed the CD in Kongshavn Studios, Kristiansand. I am grateful for the fine musical contributions of Mathilde Grooss Viddal, Knut Nesheim Kvifte, Knut Reiersrud, Per Elias Drabløs, Jan Inge Nilsen, Tellef Kvifte and Bjørn Ole Rasch, the last of whom also produced the CD. Thank you to Nils Nadeau for copyediting and keeping my arguments on track when they started to go astray.

My special gratitude to my scientific and artistic mentor, Tellef Kvifte, and scientific advisor, Tor Dybo, for constructive criticism and guidance along the way.

None of the aforementioned people should be blamed for the weaknesses of this dissertation, but all are deeply thanked for their generous support throughout the process.

This work is dedicated to my son, Nicolai.

Kristiansand, Dec. 2019

The hand reaches and extends, receives and welcomes—and not just things; the hand extends itself, and receives its own welcome in the hands of others. The hand holds. The hand carries … Every motion of the hand in every one of its works carries itself through the element of thinking, every bearing of the hand bears itself in that element.

Martin Heidegger[1]

[1] From introduction in (Sudnow, 2001).

Abstract

Signature characteristics in music can inform our sense of a genre or repertoire or style's particular processes and serve as tools for composing more of it. This combined scientific and artistic study of popular music performance explores how Hardanger fiddle characteristics based on the tradition from Setesdal can be described as compositional tools. Through music analysis and an investigation of compositional processes, the study uncovers and articulates often tacit insider knowledge of the primarily orally transmitted practice of the Hardanger fiddle. In terms of rhythm, the study analyses the foot stomp and its bowing; in terms of melodic structure, the study looks at the little-researched aspect of fingering. The fingering perspective is particularly relevant, as many Hardanger fiddlers read the fingers rather than a transcription when learning this music. The study also activates the folk music term *tak*, which is understood as a melodic unit deriving from technical fingering issues. By exploring the transformation of a *tak*, the study frames variation as a principal creative process in the Hardanger repertoire. The work uses embodied phenomenology, fieldwork and folk music terminology as its main approaches and ultimate demonstrates how research in smaller fields, such as folk music, can contribute insight into larger fields, such as popular musicology.

This study's emphasis on fingering contributes new perspectives on punctuation and variation in this repertoire. The use of Hardanger fiddle characteristics as tools for composing produces new tunes which tend to differ from my earlier composed works in both rhythm and melodic structure. The thesis narrative and a CD with new compositions document these results and possibilities.

Keywords: Performance studies, artistic practice, folk music, popular music, oral tradition, Hardanger fiddle, Setesdal, Norway, retune, revisit, creative processes, music analysis, composing, embodied phenomenology, fieldwork, terminology, characteristics, tools, toolbox, rhythm, melodic structure, foot stomp, bowing, fingering, variability, punctuation, *tak*.

Contents

Language and abbreviations

When referring to the Hardanger fiddle in the thesis, both the terms *Hardanger fiddle* and *fiddle* are used. When referring to the regular fiddle, the specific term *regular fiddle* is used.

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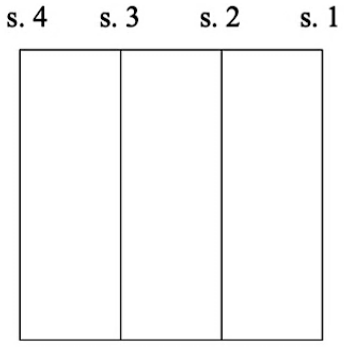
The audio tracks for the analysis are collected in the Agder Folk Music Archive at Rysstad in Setesdal, and they are used and transcribed with the archive's permission. All photos and figures used in this thesis are marked with copyright (©) and related information, with an understanding that permission has been obtained from the respective copyright holders. Photos and figures not marked this way, are either marked *from internet* with link to relevant web page in the text, or property of the author.

Designations of strings

The designation of strings is defined as shown below, with the understanding that s. 4 is the darkest string. String pairs are further referred to as *bright*, *middle* and *dark* strings.

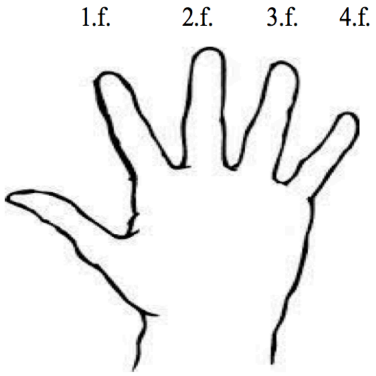


s. 1 + s. 2 = Bright strings

s. 2 + s. 3 = Middle strings

s. 3 + s. 4 = Dark strings

Designations of fingers



Abbreviation

FfHf – Facebook's forum for the Hardanger fiddle

Introduction

Background

A personal starting point

Back in 1982, people gather around a large birch tree. In its shadow, master Torleiv Bjørgum plays Hardanger fiddle tunes from Setesdal. His feet stomp like a running horse's hooves; his left hand's fingers are all over the strings; and his bow creates its syncopated rhythms with its *knify* bow attacks.

Fig. 1. Torleiv Bjørgum. © Sigmund Krøvel-Velle/ Hallingdølen

Torleiv is dressed in his black traditional costume of wool and leather with its colourful embroidery and heavy silver pendants. His eyes are closed. I am twelve years old and have travelled together with my family over the mountains to Hamar to participate in my first *Landskappleik,*[2] a fine opportunity to meet up with fellow fiddlers and experience Hardanger fiddle masters in person. Torleiv's performance represents an early lifechanging musical injection which still resides in my memory—the sound of intertwined modern 'ancientism'.

I grew up outside Ålesund on the west coast of Norway, where it was perhaps more common to hear to the sound of the strong northern winds than it was to hear fiddle music. Mauseidvåg is a modern suburb which resides far from the traditional Hardanger fiddle communities, so my main socialization with this music consisted of playing along with the masters on audio tracks. I felt I knew these fiddlers very well through the music itself, which my father had recorded

[2] The national folk music competition of Norway.

off the radio on his Tandberg recorder. Every *folkemusikkhalvtime*[3] became a part of our cassette archive and a golden treasure for me to explore. In some of these recordings, the foot stomp from the fiddler could be loud—sometimes, in fact, louder than the sound of the fiddle. This was most likely the reason why I once stomped so loudly during one of my own *kappleik* performances that a carpet had to be placed under my feet so the judges could hear the music clearly. The tune I performed in that competition was my own—titled *Droneslaget* (The battle of the drones),[4] inspired by musical characteristics of the aforementioned Bjørgum experience back in 1982. This led the judges to discuss possible disqualification due to the fact that the material was not traditional, though ended up approving my performance. Later that evening, my foot stomp functioned as an important rhythmic vehicle for both the music and the dance, where its loudness was very appreciated.

When, some years later, I was playing the regular fiddle in the local symphony orchestra, my eyes *read the fingers* of the neighboring violinist until I could follow the written music more successfully. My earlier habit of *playing by memory*[5] did allow me to look around while sitting in the orchestra pit for the many different productions (including operas and musicals), so I could glimpse some of the great performances happening on the stage. At the same time, my feet had to be pinned behind my chair legs, according to the strict orders of the conductor, so my movements would not distract him. My fiddle playing also brought me to different festivals abroad as a musician in a local dance group, which gave me the opportunity to jam with folk musicians from other cultures and explore the characteristics of their musical tradition.

Oral transmission

Sitting next to fellow musicians and learning orally is a common method of transmission in many musical genres today (save perhaps Western fine art music, of course). A central part of the knowledge shared is tacit; while folk musicians also talk about their practice, the language they use often consists of terms that

[3] The main folk music radio program on NRK (National Broadcasting Corporation).

[4] The tune *Droneslaget* appears on my CD *Felefeber,* released in 1994 at Grappa Musikkforlag in Norway.

[5] The expression often used in this regard is *playing by ear*, though, I have always found that the ears are also used when one is reading music; hence, I prefer the alternative *play by memory*.

are not part of established Western music theory, as we shall soon see. According to Polanyi (2000, p. 14), this tacit knowledge is not only to what one thinks but what one gleans from experienced-based activity and its activation of one's skills—that is, a *process* of knowing. Both tacit and explicit knowledge together propel the 'recognition process' of mastering a repertoire, and it is the movement between these two types of knowledge that constitutes Polanyi's main focus (Mathisen, 2007). 'Truth', then, is not understood as stable and independent but as evolving and relative, often engaging multiple senses simultaneously (e.g., sight, hearing, touch). This type of multimodal engagement can lead to more efficient transferral, integration and comprehension of the knowledge in question; likewise, the music can be stored more quickly in the memory, most likely due to the fact that the eyes are not locked on the transcription but rather on how the other performer's body moves. Oral transmission also often encompasses one's respect for the master's knowledge, and the trust that is placed in the student with whom the knowledge is shared. I certainly experienced all of these aspects when I started my work with Hardanger fiddle master Hauk Buen from Telemark, who generously agreed to teach me for extended periods of time. I also recall Daniel Lanois's story[6] about producing Emmylou Harris's album *Wrecking Ball* in 1995. While the band was rehearsing the material, they would put their scores away and gather together in a small, tight circle so that they could truly share Harris's 'angelic voice and soul'.

Lilliestam (1995, pp. 1–2) argues that musicological research has generally addressed written music, even though oral transmission is a living practice which is as old as mankind itself and still used every day by musicians in genres such as folk music, rock and jazz. He also quotes Jeffery (1992, p. 124): 'Oral transmission is not a particular feature of some music at certain times, but rather a universal characteristic of almost all music at almost all times. What we call *oral transmission* is what most human beings throughout history have known simply as *music*—something to play or hear rather than something to write or read. We modern Westerners are the ones who do things differently, and our preference for writing is our handicap'. Lilliestam points out the lack of theory surrounding oral transmission, because it is so elusive as an object of study. In

[6] Daniel Lanois was artist in residence at the Punkt Festival, Kristiansand, where he also held a master class at UIA on 1 Sept. 2017.

Aural Thinking of Norway (1986, p. 261), Hopkin adds: 'What is fundamentally at issue, of course, is the ability to control the accumulation of knowledge, the transmission of culture (history itself) from one generation to the next. From this point of view, an understanding of oral transmission may be seen as a prelude to the study of culture change'. Such an inquiry brings up interesting and important ethical discussions regarding tradition and innovation while shedding new light on sometimes very old musical characteristics.

Folk music research and ideology

Folk music has traditionally meant local musical dialects without much reach beyond their borders, but in the recent decades both local and national borders have given way before the possibilities of modern technology. Local folk music dialects have strengthened thanks to the exposure; they have also revealed interesting similarities and differences amongst themselves.

There have been different scholarly approaches and ideologies in the research on folk music in recent decades. Back in the early 1800s, collectors such as Ludvig Mathias Lindeman (b. 1812), Catharinus Elling (b. 1858) and O. M. Sandvik (b. 1875) worked to save folk music from fading away at the exact time when nation building was also called for (Havåg, 1997). Their hope was to lift folk music up from its countryside origin to a more respectable artistic level, so that these traditional tunes could be treated as works of art music. The music was often explained and transcribed based on these collectors' backgrounds (again, mainly in art music), so that odd numbers of bars were often compressed into a defined metrical grid; the tune's tonality was displaced into either a minor or a major mode; and repeated and/or slightly varied melodic units were notated only once. These tunes, then, which traditionally did not have concrete finished forms but would instead vary from performance to performance, were set up as a canon of sorts through the process of written transcriptions.

Most of these original collectors were men, but one woman did manage to distinguish herself: Olea Crøger (b.1801) from Heddal in Telemark. She met resistance as she ventured into yet another of the largely male cultures of the time, but today she is regarded as one of the most important collectors in the 1800s: 'She has been the pioneer, and all the great collectors have followed her

footsteps. Landstad and Lindeman, Jørgen Moe and Sophus Bugge. The terrain has been open after her clearance work' (Wagn & Lindheim, 2010, p. 73).[7] Following these early collectors, who where typically organists with an art music background, came collectors who were folk fiddlers, such as Truls Ørpen (1880–1958), Arne Bjørndal (1882–1965) and Eivind Groven (1901–1977). Given their experience and relative intimacy with folk music style, they were able to learn the tunes in question and write them down later or notate them directly with the source present. Yet the goal of capturing and saving these tunes remained, and, especially among the earliest collectors, the original sources' names (and opinions) often went unmentioned. In addition, the collectors concentrated their work in certain districts, generally south of Dovre (Larsen, 2011). This geographical concentration meant that they missed half the country—that is, the northern traditions.

Finally, at the end of 1960s, the relationship between the researcher and the informant gained prominence in musicological research in Scandinavia, thanks to the influence of the neighboring discipline of anthropology. It was at this time that the term ethnomusicology also appeared, first introduced by the Dutch scholar Jaap Kunst in his book *Musicologica: A Study of the Nature of Ethno-musicology, Its Problems, Methods, and Representative Personalities* from 1950 (Pegg, 2001), and soon replacing the term comparative musicology (Jonsson, 2011, p. 13). As Pegg argues in her article 'Ethnomusicology', it is difficult to construct a genealogy of ethnomusicologists and scholars in different countries, though Cecil Sharp remains prominent in England, the Seeger family in America and Béla Bartók and Zoltán Kodály in Hungary, whatever these individuals' own perceptions of their national affiliations. Pegg notes: 'Jaap Kunst made it possible to name and describe the paradigmatic shift away from musical comparison and towards social scientific methods' in the interests of capturing local and individual distinctiveness (Pegg, 2001). Ola Kai Ledang was among the early ethnomusicologists in Norway and a colleague of Jan Ling in Sweden. Through projects like 'Musical life in a village' from 1973, Ledang sought to integrate culture and music *by the people* into the general practices of music research, using a humanistic approach to the field. Ledang was also among the

[7] Stated by Hallvard Heggtveit and Rikard Berge in *Olea Crøger, Norsk folkeminnelag, 1918*. Translated by author. Original: 'Ho hev vore pioneren, alle dei store samlarane hev teki hennar fotefor. Landstad og Lindeman, Jørgen Moe og Sophus Bugge. Lende hev legi opi for plogen etter hennar rudningsarbeid'.

first scholars to write about popular music, including the rock music from the Trøndelag region in Norway, *Trønderrock* (Ledang, 1980).

While early scholars in the international field of ethnomusicology focused on playing styles and instruments, they are today expected to engage with the culture and social situations as well. A primary element that distinguishes ethnomusicology from musicology is the amount of field engagement. Blacking adds: 'Ethnomusicology is not an area study concerned with exotic music, nor a musicology of the ethnic—it is a discipline that holds out hope for a deeper understanding of all music' (Blacking, 1973, p. 31). Now that ethnomusicological research also focuses on the sound itself and on musical structures and forms, 'music in and as culture' has become a tagline for the field. Owe Ronström (1990, p. 6) argues, however, that 'music and culture' sets up a dialectical relationship between art and people whereby music is studied by musicians and music researchers, and culture mostly by ethnologists and anthropologists. He also positions music ethnology or anthropology at the border between music science and pure ethnology/ anthropology, with links to either side. Geertz puts it a different way in his 1973 book *The Interpretation of Cultures*: 'Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning' (Geertz, 1973, p. 5). Both musicology (focusing on music) and ethnomusicology (music in and as a culture) will therefore be two aspects around the same problem.

The present study could be understood as music-ethnological/-anthropological, as it explores and describes an artistic compositional process (mine) in the context of the field of ethnomusicology. It is also autoethnographic, along the lines of Howlett's (2009) combination of a case study and an autoethnographic research project on his own creative practice as a producer. He positions his role as a record producer at the nexus of three fields: the performer and the song, the technology of the recording context, and the commercial ambitions of the record company. He reports upon his research process of engaging with five recordings by three different artists, concluding that the art of record production is a complex interaction of several processes with the producer at the centre, giving

form to an idea which can be communicated to others: 'In the end it is the music that makes the process meaningful' (Howlett, 2009, p. 92).

The Concept of Retune

A central concept for this study is the *retune*—per the Oxford English Dictionary, meaning to 'tune (something) again or differently'.[8] This *something* could be understood as the performer herself (me) revisiting traditional sources after decades of touring primarily with contemporary folk music. My artistic practice has mostly consisted of performing my own compositions with my own band, being part of the Norwegian folk group Bukkene Bruse and the international string band String Sisters, collaborating with the legendary folk singers Kirsten Bråten Berg (Setesdal) and Sondre Bratland (Telemark), and with the musicians Roger Tallroth (guitar) and Bjørn Ole Rasch (keyboards and harmonium). This work has resulted in seventeen albums[9] on which I have played the Hardanger fiddle, Keyed fiddle (*Nykkelharpe*) and regular fiddle, and also contributed vocal parts. I have long had to compromise between letting Hardanger musical characteristics lead the way when composing and arranging music and ensureing that the Hardanger fiddle fits in with my fellow performers. The present study covers music composition based on Hardanger fiddle characteristics, following upon this research question:

> How can characteristics of Hardanger fiddle music from Setesdal be described as compositional tools?

The study is a combined scientific and artistic effort. The scientific part aims to identify signature Hardanger fiddle characteristics and explores how they are used by a Hardanger fiddle master. The artistic part shows how this music analysis results in a toolbox of signature characteristics defined as compositional tools, how these tools can be used when composing new tunes, and it encompasses the aesthetic assessments I apply to the various possibilities of this

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[8] See https://en.oxforddictionaries.com/definition/retune. Accessed 7 March 2019.

[9] My practice has also included playing for dance with Aage Sogn's gammeldansorkester and Dalakopa, serving as a soloist in the Symphony Orchestra's performances of works composed for the Hardanger fiddle (Johan Halvorsen and Geirr Tveit), and collaborated with the Chieftains, Åge Aleksandersen and singer-songwriters such as Erik Bye, Loreena McKennitt and Andy Irvine among others. See more at www.annbjorglien.com.

material. The new tunes are recorded and included on the enclosed CD 2 in appendix G, and is planned for release by Grappa musikkforlag in 2020, accompanied by a tour. The actual recording process is not adressed in the thesis's narrative, due to limitations of scope.

This study hopes to show how characteristics of a traditional musical genre can serve as tools when composing new tunes. It will engage insider knowledge on playing technique and often tacit processes in Hardanger fiddle music through analysis and composition. In the end, this research will demonstrate that smaller fields such as folk music can shed new light on the sometimes tacit compositional and creative artistic processes of larger fields such as popular musicology.

Characteristics as tools

Musical characteristics often involve signature instrumental qualities or capacities and can, in turn, influence how the music itself is organised. Specific instrumental techniques and gestures signal musical genres, even when these characteristics can be reproduced on other instruments in other genres. The Oxford English Dictionary defines the term characteristics as 'a feature or quality belonging typically to a person, place, or thing and serving to identify them'.[10] An alternative perspective on the term characteristic is *idiosyncrasy*, though this notion has negative connotations that are counterproductive in the present context.[11] The present project aims for a more inclusive approach to the uncovering and activating of musical qualities in an existing repertoire, in the earnest interest of informing the creation of new repertoire, and I therefore favour the term 'characteristic' here.

The dual temporal nature of these Hardanger fiddle characteristics—residing in an ageless traditional repertoire and informing the composition of music which does not yet exist—might best be captured by certain tropes of Western culture, as follows.

[10] See https://en.oxforddictionaries.com/definition/characteristic. Accessed 7 March 2019.

[11] See https://snl.no/idiosynkrasi_-_psykologi. Accessed 7 March 2019.

Fig. 2. A Janus-face. © From internet

One way a characteristic can be understood is as a Janus face, as shown in figure 2,[12] which captures the act of simultaneously looking backward and forward. Janus means door[13] in Latin and therefore also evokes gates, passages or doorways which symbolise beginnings and endings as well. The process of composing new material as a response to existing material captures a transformation that is Janus like in its own character.

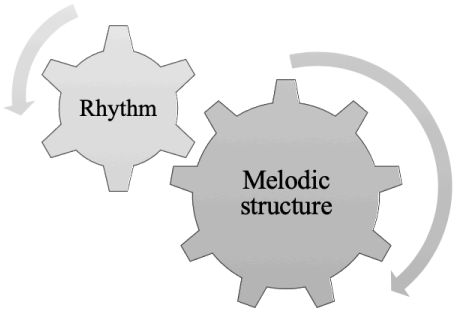

Fig. 3. The two groups of tools.

I will gather the relevant Hardanger characteristics into two groups, *rhythm* and *melodic structure,* as shown in figure 3. The use of cog wheels in the figure is intended to capture how intertwined the groups are. The different sizes of the cog wheels reflect their relative degree of emphasis in this study.

The rhythmic characteristics will principally involve the footstomp and bowing, and the melodic characteristics derive from *fingering,* which the Oxford English Dictionary defines as ‘a manner or technique of using the fingers, especially to

[12] See https://en.wikipedia.org/wiki/Janus. Accessed 2 Oct. 2019.

[13] See https://snl.no/janusansikt. Accessed 2 Oct. 2019.

play a musical instrument'.[14] Here, fingering is understood as an action of the left hand for right-handed fiddlers, and of the right hand for the left-handed fiddlers. Various examples indicate the relevance of fingering as a framing perspective for traditional fiddle tunes. In Setesdal, they say that a tune is put together 'from finger to finger' (Stubseid, 1992, p. 57). In my own experience with oral transmission, a master demonstrates the parts of a fiddle tune using 'finger talk', in reference to specific finger placements on specific strings. These tunes, that is, can be learned through where the fingers are placed, not what pitches the fingers produce. This is useful, in fact, as many Hardanger fiddlers do not read music or draw upon traditional music theory's terminology in their work.

Given that the Hardanger fiddle is the most central instrument of the Norwegian folk music tradition, one might wonder why fingering plays such a small part in research on folk music in general. There is a parallel in Eivind Groven's theories regarding tone pairs on the willow flute, which link playing technique to the form and development of a musical work.[15] Fingering is mainly associated with studies of tonality (Ahlbäck, 1989; Gurvin, 1958–1981; Kvifte, 2012; Nyhus, 1973, 1993; Ofsdal, 2007; Omholt, 2008; Sevåg, 2006; Westman, 1998), which represent most of the publications on folk music in Scandinavia in recent decades. This study intends to fill this research gap by exploring how this music is fingered rather than what it sounds like. I therefore place less emphasis on tonality and intonation. The act of fingering will be further discussed in chapter 2, section *fingering,* and in chapter 5. The fingering characteristics are based on the Setesdal tradition but apply as well to the general folk field.

From composing to a finished CD

In this study, I have composed both during fieldwork and at home or in my office using a practical and portable unit consisting of a laptop, Shure X2u adapter and a microphone. I have been able to more or less intuitively record different musical sketches and ideas for the reference in relation to each tool that I experienced as meaningful, in relation to both my personal aesthetic and my research question. I typically did not transcribe the new compositions, but I did

[14] See https://en.oxforddictionaries.com/definition/fingering. Accessed 7 March 2019.

[15] Groven shows how different blow forces are linked to an open or closed hole at the end of the willow flute to produce different tone pairs; see more in (Groven, 1927).

review interpret and process my recordings. In time, I was able to discern the rough form of each new tune and go on to complete its rhythmic and melodic details, as well as mark parts in its arrangement, in the context of the relevant tool.

Bjørn Ole Rasch then completed the arrangements and contributed to the process of making demos to share with the musicians in the band. In this way, the main form, melodic structure and arrangement of the new tunes were available to the other musicians as they considered their own contributions. The demos were built with a click track because live sessions were not possible, so we recorded one musician at a time. The CD with new tunes was further produced by Bjørn Ole Rasch and mixed and mastered by Roald Råsberg. My work in this research therefore primarily considers the compositions, and less the arrangements and the production of the CD. The term *composing* will be further discussed in chapter 1, and the process of composing will return in chapter 7.

Setesdal and source

So, why is this study based on Hardanger fiddle music from Setesdal? I have been interested in the Setesdal tradition for several decades and enjoyed collaborations with strong artists from this valley. I chose to take a deep dive into this tradition by exploring the work of Hardanger fiddle master Andres Rysstad (1893–1984), to whom I frequently listened when I was younger. I heard in his playing a sort of strong gentleness and presence of mind, meaning that he was both an aesthetic choice and a meaningful personal memory. Georg Simmel argues that such memories of a particular person's art, habitus, performance and knowledge inform our later lives: 'These images of the past are conditions for the continuations for life itself. Every step of our life rests upon consciousness of the past' (Delanty & Strydom, 2003, p. 102).

Andres was one of the most important bearers of the Setesdal tradition and an institution in its perpetuation from the interwar period to the 1970s (Stubseid, 1992, p. 62). He was the main student of the Hardanger fiddler Knut Jonson Heddi (1857–1938), who brought the oldest Hardanger fiddle music from Setesdal into the modern era through his massive effort to collect cultural history and transcribe traditional folk music from this area. Andres lived on the same

farm as Heddi from a very young age and got to know him better than anyone, both as a musician and as a person, and he learned the most from Heddi in the period when Heddi was playing his best—about 1900 to 1920. Myhren describes the experience of listening to Andres's playing when he was finally recorded by the NRK (the national public broadcaster):

> Andres stayed mostly at home, so there were few in the country who knew how good a fiddler he was. Finally, in 1955, NRK recorded his playing, and the beautiful and old-fashioned music coming from the speakers was a revelation for everyone who listened to it. (Myhren, 1993, p. 308)[16]

Stubseid tells us that Andres was a good teacher, gifted with patience and an ability to explain the music; he also knew exactly where he wanted the fingers to be placed during performances. Andres did not participate in competitions, but he did serve as a judge.[17] Ideally, I would sit at Andres's side and learn from him via oral transmission, but he died in 1984, so his sound recordings will supply the driving force throughout this study.

Corpus for analysis

The data used in the analysis consists of two performances by Andres, in addition to film footage. Such a minimal set of sources is quite unusual in traditional folk music research, where the aim has often been to make general statements as a *national* folk music researcher. Some aim to collect and save as many tunes as possible from the different traditions (e.g., Crøger, Sandvik, Ørpen, Bjørndal); some use a broad selection of sources within regional or national frames (Larsen, 2000; Omholt, 2009); some prepare comparative studies between different countries (Westman, 1998); some even deep-dive into research on *one* fiddler across an entire career's work (Thedens, 2001). Because this study's main goal is to explore tools for composing, it does not try for general statements about Andres's Hardanger fiddle practice or traditional Hardanger fiddle music from Setesdal. It is but one small window into the many different performances done

[16] Translated by the author. Original: 'Andres held seg mest heime, så det var få ellers i landet som visste om ko god han var til å spele. Fyrst i 1955 gjorde Kringkastingen opptak med han, og det vakre og gamalvorne spelet klang ut over høgtalarane og var ei openbaring for alle som lydde på'.

[17] Interview with Gunnar Subseid, 14 Nov. 2017, at Rysstad, Setesdal.

by Andres, and into the other viable idiolects within the Hardanger fiddle tradition from Setesdal. Its set of sources is simply one abstraction of Andres's larger musical practice.

The performances are of the traditional (that is, composer unknown) tunes *Skjoldmøyslaget* and *Reisaren*, and they are taken from the 1950s, when Andres was in his heyday as a fiddler. Both performances are in the type of *gangar,* which is the only style used in Setesdal today. This loyalty is quite rare elsewhere in the country, where most other Hardanger fiddle traditions draw from a variety of different types (*gangar* but also *springar*, *halling*, *lydarslått* and so on). To begin with, the selected performances differ in tuning, meter and melodic structures. They are transcribed in grip notation, the challenges of which are discussed and described in chapter 2, section *grip notation*. The recordings of *Skjoldmøyslaget* and *Reisaren* are to be found on CD 1, titled *Andres Rysstad*, in appendix G.

The cine film footage included in the empirical material is all that exists of Andres playing, as far as I know. It was filmed in his home at Rysstad by Jan Petter Blom and Gunnar Stubseid (Bjørgum & Sandén-Warg, 2015). Although Andres here performs a different tune, called *Bestelanden*, the footage represents a fine opportunity to study Hardanger characteristics via Andres's fiddle technique. This film of *Bestelanden* is to be found on the DVD, titled *Andres Rysstad,* in appendix G.

In the analysis, I have used the computer program Anytune to slow down the tempo of the sound recordings, from approximately 100 to 60 beats per minute. This lengthens the tones without changing the pitch, making it easier to perceive musical details such as the rhythmic placements of the foot stomp, the bow shifts and the fingering. Because I am analyzing sound recordings of relatively poor quality, I place less emphasis on timbre and overtones, timbre strong and weak tone places,[18] and acoustic conditions connected to the Hardanger fiddle.[19] How the analysis is constructed will be discussed, tested and argued in chapter 5.

[18] See more in (Westman, 1998).

[19] See more in (Ofsdal, 2007; Stubseid, 1992, p. 97).

Mapping the field

As a performance study in popular musicology, the present project has interesting implications for folk music research. Today, the borders between folk music and popular music have grown very fuzzy, thanks to changing performance practices, and especially increased collaboration, in both genres. There are several common themes, such as the earlier mentioned oral transmission. Middleton pointed this out already in his 1990 book *Studying Popular Music,* arguing that artistic practice is generally consistent across musical genres and should be approached this way. By investigating the *process* of musical practice, its value and meaning is moved away from commerce, and the object to the work of composing and playing music itself (Middleton, 1990, pp. 125–126). Also, in the introduction to *The Ashgate Research Companion to Popular Musicology,* Derek Scott argues that the popular music field is at once open and very sprawling, and that it includes folk music, among other genres. He notes: 'Popular musicologists will never be satisfied with discussion of genres or styles that avoid reference to musical detail and are therefore driven to make a case for the importance and relevance of musical terminology and analysis. Crucial to popular musicology is the desire to understand popular music qua music' (Scott, 2009, p. 21).

Nicholas Cook and Mark Everist (1999) argue that performance studies is a vital and profound addition to scholarly thinking about music, especially in light of other recent developments in the field. The musicological agenda in academic studies of music has grown to include a broad range of sociological and ideological issues above and beyond the traditional hegemony of music theory. As Bohlman (1999, pp. 17–18) states regarding various ontologies of music, 'Music may be what we think it is; [or] it may not be'. He then sharpens his point: 'Music, however, may be something other than an object about which one thinks or can think; it may be a practice extrinsic to musical thought'. He urges the reader to 'perceive … metaphysical routes that connect self to others that ultimately lead back to self. Along these routes each individual encounter multifarious musics with complex metaphysical meanings, which contribute in turn to individually constructed ontologies'. When one experiences and thinks about music entirely through the act of interpreting it, one's musicology is both described and prescribed, whereas the exploration of a personal musical practice

can break this feedback loop. For example, Moore (2001, p. 8) argues that the internal consistency of rock's rules and practices enable the rock history to be written in an immanent manner: 'The concept of style is crucial to an understanding of these rules and practices, since it is in this context that their consistencies are most clearly exhibited'. Moore distinguishes the terms genre and style as 'that between the *what* of the meaning of the song (genre) and *how* it is articulated (style)' (Moore, 2001, p. 3). Based on Moore's definitions, the present project can be understood more as a style study than a genre study.

By revisiting and acknowledging a meaningful traditional source, this study celebrates the fact that there will always be inspiration from someone, something or somewhere when one is composing music, no matter the genre. As Bob Dylan stated, 'the songs didn't get here by themselves'.[20] The actual creative process involved in *how* new tunes or songs are made based on such inspiration, appears to be a gap in the field. Collin (2011) states: '[Projects] researching the act or process of musical composition … have been very few and far between'. In his article 'Towards the Remodeling of Ethnomusicology' (1987), Rice observes: 'I now believe that ethnomusicologists should study the 'formative processes' in music, that they should ask and attempt to answer this deceptively simple question: How do people make music or, in its more elaborative form, how do people historically construct, socially maintain and individually create and experience music?'. Lucy Green, in turn, stresses the value of informal learning practices, or 'ways of passing on and acquiring musical skills and knowledge' (Green, 2002, pp. 5–7). Often, pop, folk, or other traditional musicians teach themselves or pick up skills and knowledge about repertoire by watching and imitating the musicians around them and turning to recordings, performances or other live events. Green notes that little is known about how popular musicians learn or what they think about their practice, and she seeks to shed light upon these informal learning practices, attitudes and values, as they have existed over the past forty years or so, in the interests of complementing the established priorities of formal music education. With the phrase *informal music learning,* then*,* she points to the variety of approaches to acquiring musical skills and knowledge which exist outside of these formal educational settings—to the

[20] From internet. Https://www.nytimes.com/interactive/2016/10/14/arts/music/bob-dylan-influences-playlist-spotify.html. Accessed 2 Oct. 2019.

'practices' rather than methods which consciously and unconsciously inform popular music (Green, 2002, p. 16). My study attempts to do the same in its pursuit of creative process involved in exploring characteristics in Hardanger fiddle music and composing new fiddle tunes.

Methods

One of the opportunities offered by a longer study such as this one, is that new knowledge and perspectives about one's practice are able to develop, and this hermeneutic process could be understood through the notion of the Möbius band phenomenon.[21]

Fig. 4. A Möbius band. © From internet

A band of paper has two sides—it is orientable. By turning the band halfway and gluing its ends together, we produce a Möbius band with only *one* surface and *one* outer edge (that is, it is non-orientable), as shown in figure 4. If we then picture walking on such a band, we find ourselves in an eternal loop where outer and inner or past and future influences become *one*.

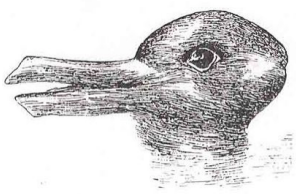

Fig. 5. The figure can be perceived as either a duck or a rabbit. © From internet

[21] The image used in figure 4 is collected at https://www.deviantart.com/hammerofsilver/art/Mobius-Tattoo-113672192. Accessed 28 Aug. 2019. The phenomenon was discovered in 1858 by German mathematicians August Ferdinand Möbius (1790–1868) and Johann Benedict Listing (1808–1882). See https://snl.no/Möbiusbånd. Accessed 7 March 2019.

Of course, the sense and understanding of musical qualities can differ among the different people who 'walks' on such a band. In any research process, then, it is therefore important to be aware that qualities can be interpreted in at least two different ways, as illustrated by Wittgenstein's example in figure 5.[22]

Embodied phenomenology

As part of my autoethnographic approach, I will apply embodied phenomenology as the main method for this work. Based on own experiences as a Hardanger fiddler, I will use my body to test and explore characteristics of the genre by imitating and repeating Andres's performances, then introducing those characteristics to my own compositional process. The body influences how we remember, think, feel and experience the world, and it works closely with our consciousness. An embodied phenomenology of sorts arises the moment we are born, when we mirror meaningful bodily experiences from our parents.

Many of Husserl's findings in his phenomenology of embodiment were taken up by later scholars, such as the phenomenologists Heidegger and Merleau-Ponty, who interpreted them ontologically. Husserl's main focus was epistemological; from his perspective, 'lived embodiment is not only a means of practical action, but an essential part of the deep structure of all knowing'.[23] Polanyi argues that the body is the basis of all thought, including our highest creative powers: 'Our own body is the only thing in the world that we normally never experience as an object, but always through a world that we focus on from our body. It is by this intelligent use of the body that we experience it as our body and not an object outside' (Polanyi, 1966, pp. 15–16). He points to a blind man who feels his way by tapping with a stick. As the man learns to use a stick to feel his way along, his awareness of its impact on his hand is transformed into an experience of touching the objects he is encountering (Polanyi, 1966, p. 12). In this way, interpretive effort transposes meaningless impulses into meaningful ones, moving them some distance away from the original feeling. Blacking adds, 'to feel with the body is probably as close as anyone can ever get to resonating with another person. I shall not attempt to discuss the issue of musical communication as a

[22] The image used in figure 5 is collected at https://en.wikiversity.org/wiki/Aspect_seeing. Accessed 9 March 2019.

[23] See https://www.iep.utm.edu/husspemb/. Accessed 9 March 2019.

physiological phenomenon; but if music begins, as I have suggested, as a stirring of the body, we can recall the state in which it was conceived by getting into the body movement of the music and so feeling it very nearly as the composer felt it' (Blacking, 1973, p. 111). Along these lines, piano player and researcher Sudnow (2001) starts with *I* as the *strategist* who is aware of how the hands moves but ends by releasing the I so as to move forward with a jazz hand which knows at each moment how to reach for the music.

Folk music terminology

One term that seems to be used by folk fiddlers in different Norwegian traditions is *tak*, a melodic unit related to technical fingering issues. Its use varies, which is entirely in accordance with the inherent imprecision of an oral tradition. An exploration of how this term is used will start to shed light upon Hardanger fiddle characteristics which can operate as compositional tools related to melodic structure. In the literature, some examples indicate that traditional Hardanger fiddle music is based upon *taks*:

> Knut Dahle stayed at Grønli mountain farm and cut the grass in the summer. Then there was a fiddle tune he finally got the opportunity to learn from Håvard Gibøen. He travelled to Førnes in Møsstrond to meet Håvard. There it became fiddle playing instead of hay making. On the way home, Knut forgot much of the fiddle tune he had learned, but then the tune came back *tak* by *tak*: *When I passed Hondle on my way to Grønli in the night, I had kind of put the tune back together again,* Knut said. (Buen, 1983, p. 185)[24]

The exchange of fiddle tunes in olden days often happened through private visits with fellow fiddlers, and *taks* could be the melodic units which allowed those tunes to be remembered or reconstructed. In short, the music was perceived, understood, memorised and fingered based on such building blocks like *taks.* These units could also inform slight or extreme variants of these original tunes.

[24] Translated by the author. Original: 'Knut Dahle låg på Grønlistaulen og slo om sumaren. Så var det ein slått han endeleg ville få lært av Håvard Gibøen. Han reiste til Førnes på Møsstrond for å treffe Håvard. Der vart det speling istadenfor høyonn. På heimvegen gløymde Knut mykje av slåtten han hadde lært, men så kom han att tak for tak: *Da e kom heim om Hondle på væg te Grønli om notte hadd`e liksom fingji låtten inn* - sa Knut'.

The term *tak* also informs a learning process involving the fingering. For example, 'In this *tak*, the first finger should be placed on the second string together with the second finger on the third string'. Later on, I will include an investigation into how this term is used by folk fiddlers today, generating some empirical data on the *tak* and its fingering implications for melodic structure and punctuation in the composing of new tunes. The term *tak* will be further explored and discussed in chapter 4.

Fieldwork

My intimate knowledge of and experience with the repertoire in question may mean that I miss alternative perspectives upon it, which can lead to a study which is introverted and generally irrelevant. I pursued fieldwork to restore that balance between my own insight and the objective qualities of the culture itself. In this way, I approached my research issues with a mixture of emic and etic perspectives. My approach was practice based, in that I used my practice to gain new knowledge, and practice-led, in that the research hopefully contributed in turn to a new understanding of how to practice.

The fieldwork took place mainly during the years 2015–2018. First of all, I brought the fiddle and recording unit (laptop, adaptor and microphone) north to Bykle in Setesdal, where I got the opportunity to stay in *Flatelandsstoga* for a period of time. This cabin is part of a collection of old historical buildings at the open-air museum Lislestog, some of which date back to the 1600s.[25] Such a stay contributed meaningful resonance to my sense of the Setesdal tradition.

Fig. 6. Flatelandstoga to the left. © Leonhard Jansen/ Setesdalsmuseet

[25] See more online: http://www.setesdalsmuseet.no/faste-utstillingar/lislestog/.

It was also practical to the stay in Flatlandstoga, as Bykle is close to Rysstad, one hour to the south, which holds the Agder Folk Music Archive, as well as the homes of both Torleiv Bjørgum and Andres Rysstad. Sylvartun[26] is also there along with my main informants. On later visits to the valley, I received a generous invitation to stay private with one of the key folk artists in Rysstad, which gave me the opportunity to observe the environment and cultural mindset more closely. In addition to conducting interviews, I learned traditional tunes from the Hardanger fiddle masters Gunnar Stubseid and Hallvard Bjørgum, both of whom studied in turn with Andres Rysstad, among others.

My informants were fiddlers, singers and other people who worked in cultural organisations in the valley. All were informed about the purpose of the interview and the ways in which the information would be used. My formal interviews lasted two to four hours apiece and were recorded on an iPhone and/or notated in a logbook to be transcribed later. The interview method was open form (not guided), and the conversations generally began with the informant's history and practice with the tradition. The aim was first to get to know them and their tradition from a relative broad perspective; later, in additional interviews with the same informants, I would steer the conversation to certain themes and findings. My questions were neutral, which sometimes lead to interesting, unexpected and unintended outcomes and perspectives. Follow-up questions varied based on the given informant's background, personality, practice and responses. Informal chats with the same informants also arose at times in pubs or on the street. Photos and videos were captured on the iPhone for documentation purposes.

In addition, virtual fieldwork was done with the same informants via e-mail and SMS, as well as on the closed 'Facebook's forum for the Hardanger fiddle*'* (FfHf)*,* whose members were contacted for the purposes of including the general Norwegian folk music field in this study. This web forum mainly consists of fiddlers from different Hardanger fiddle traditions.

[26] Sylvartun was the central silversmith and folk music arena in Setesdal from 1961 into the 2000s. Today the place functions as a cultural museum for the tradition from Setesdal and also house different local cultural activities.

Ethical issues related to the interviews and inquiries in this study were reported to the Norwegian Data Protection Office for Research, or NSD,[27] which told me that the research was not part of the reporting obligation.

Outline

Briefly, chapters 1 and 2 situate the research from the perspective of *tradition* and *the Hardanger fiddle* from a historical perspective. Chapters 3, 4 and 5 present the framework for exploring Hardanger signature characteristics as tools for composing, detailing, respectivelym, *rhythm*, *tak,* and *parsing and variability*. Chapter 6 includes the analysis, and chapter 7 defines the toolbox and informs the process of composing. More detailed chapter summaries follow.

Chapter 1, titled tradition, discusses the concept of tradition, as the project's analysis is based on traditional material and the new compositions can be understood as responses to the tradition. The chapter also includes discussions of the object versus the process; the way on which the fiddler's practice has changed from olden times to today; the value of emphasising the performer within the tradition; and the way in which different musical response methods can be categorised, including *bluecopy*, *variability* and *composing*.

Chapter 2, the Hardanger fiddle, supplies the historical backdrop for the development of the instrument from its origins to its the modern version, which is today built on several continents (Europe, America, Asia) based on the work of Norwegian Hardanger fiddle makers. The chapter also reviews the characteristics of the Hardanger fiddle as an instrument, including its technical playing conditions and tuning, which leads to a fingering model, including designations of fingers and their placements. A discussion of transcription challenges concludes this chapter.

Chapter 3, rhythm, explores characteristics of Hardanger rhythm primarily in relation to *setesdalsgangar*, presenting related theory and methodology in this regard and introducing compositional tools concerning the foot stomp and bowing which will be tested in the analysis.

[27] Personvernombudet for forskning - NSD, Norsk senter for forskningsdata AS.

Chapter 4, *tak*, presents empirical data on the term as part of the search for characteristic tools related to melodic structure and punctuation from a fingering perspective. The investigation encompasses Jenstad's empirical material (1995), in addition to my own inquiry with members of FfHf (Facebook's forum for the Hardanger fiddle), in this way touching upon the general folk music field rather than exclusively the Setesdal tradition. The chapter closes with a reflection on the collected data and a conceptual clarification to be used in the analysis.

Chapter 5, parsing and variability, explores different perspectives on the acts of variability and punctuation from the perspective of *tak* and fingering, in the interests of isolating characteristic tools for composition involving melodic structure and form. It also discusses perspectives on the conduct of the analysis.

Chapter 6, analysis, presents my understanding of the way in which different characteristics of the genre are used by the Hardanger master Andres Rysstad.

Chapter 7, composing, defines the tools in a toolbox and narrates the process of applying these Hardanger tools to the generation of new tunes.

Chapter 8, summary, presents some backward- and forward-looking perspectives on the research work which has been carried out, including the most important arguments, tendencies and findings, as well as highlights of the project's contributions to the field and recommendations for further research.

Appendix G includes a CD (CD 1) and a DVD, titled *Andres Rysstad*, in addition to a CD (CD 2), titled *Janus*. CD 1 contains the recordings of *Skjoldmøyslaget* and *Reisaren* used in the analysis. The DVD contains the cine film footage of *Bestelanden* used in the analysis. CD 2 consist of the new tunes which resulted from my testing of the different Hardanger characteristic tools.

The thesis, the DVD and CDs document my research, whereas the relatively extensive work of composing and recording the music to be found on CD 2 is understood as the artistic part of the study (together with the written words in chapter 7). I do not claim that my retune process will resonate with others' artistic practices, but this work does capture a performer trying to put words to—

and make sense of— a creative process in a very old but very viable musical genre.

1. Tradition

Introduction

The notion of tradition is particularly meaningful for this research, which includes the analysis of traditional performance practice as well as an exploration of this traditional music's characteristics and compositional process. This chapter situates the study in a historical context, via discussions of issues such as the object versus the process; changes in the fiddler's social structure from olden times to today; the value of reconciling the moment of a performance to the long reach of tradition; and the research's interest in both the act of variability and composing as responses to tradition.

The process

Tradition evokes cultural qualities which are primarily orally transmitted across generations and in this way mirror society at different times. Momentous changes in society impact these cultural qualities (Ledang, 1979, p. 3). The process within a tradition raises epistemic discussions regarding *how* traditional fiddle tunes change over time and what they may be exposed to during transmission from fiddler to fiddler. Märta Ramsten (1992) states: 'A process of change can be seen as continual, where innovations are confronted with what is established and 'lasting', and create changes within the framework of acceptance. At the same time, there are clear breakpoints or paradigm shifts, which are initiated by individual, institutional, sociocultural and aestheticizing forces and phenomena.'

Since the 1950s, the term traditional has been activated to distinguish certain folk music from its contemporary counterparts. The International Council for Traditional Music (ICTM) defined traditional folk's necessary qualities as *continuity*, *variation* and *selection. Continuity,* in this case, emphasized this music's function as a link between past and present; *variation* was the result of the particular creative impulses of a traditional fiddler or group; and *selection* referred to outsiders defining what tunes that should be included in a tradition. An overall criterion for tradition is oral transmission (Blom, 1993a, p. 10).

Rolf (2012) describes tradition as a social process performed within a social system and involving *content*, *actors* and *social structure*. Through the transmission and legitimization of patterns of thought and action, tradition links generations and produces cultural continuity. Rolf also points to Shils (1981, p. 14), who argues that one may receive tradition without being aware of it, meaning that the continuity of tradition is more readily apparent to the external observer rather than the cultural insider. Rolf finds this view problematic, as different external observers can disagree about *approximate identical* and ask what guidelines that should be applied by external observers. Rolf argues that such guidelines must be derived from the functioning of a social process—the observer should be returned to the question of how transmission functions among the actors *within* the tradition. Continuity arises when communication in the same tongue extends across generations, Rolf concludes. Blacking agrees:

> Music is a product of the behavior of human groups, whether formal or informal: it is humanly organized sound. And, although different societies tend to have different ideas about what they regard as music, all definitions are based on some consensus of opinion about the principles on which the sounds of music should be organized. No such consensus can exist until there is some common ground of experience, and unless different people are able to hear and recognize patterns in the sound that reach their ears. (Blacking, 1973, p. 10)

Folk music competitions can represent such common ground, wherein certain frameworks are established as to what is traditional and what is not. These frameworks tend to change, of course—what is considered traditional today most likely differs from what was considered thus in the early 1900s. Or, from another perspective, the art music-inspired compositions made by late 1800s concert fiddlers would probably be considered innovative by today's standards, even though they are now part of the tradition.

Today, many Hardanger fiddlers compose tunes indistinguishable from those of the past. Such compositional work demonstrates a thorough knowledge of traditional characteristics and their original context. Whether these new tunes will become themselves 'traditional' will be determined by their future use and

the contexts in which they one day find themselves. It will be interesting to see, some decades hence, what types of tunes have acquired this stature. Will they recall the practice of cultivating international collaborations and welcoming the influence of other countries' traditions, or will they favour local cultural characteristics and priorities, whatever those have become by then? Alver argues that it is this process of at once evoking and reinventing the traditional which both creates and maintains tradition in the guise of a once non-traditional material. Tradition will perish if it is no longer amenable to this process (Alver, 1974).

Social structure

The folk fiddler's social structure has changed over the centuries. In olden days, folk music was part of the farmer's culture, and the fiddler her/himself mainly emerged from the low-status groups in society, both morally and socially, trying to earn some extra money by playing the fiddle to supplement what income would derive from a small farm. Farming and fiddle playing were awkward bedfellows, the latter typically dismissed as something less than *real* work (Groven, 1971b, p. 205). Nevertheless, there was a persistent need for fiddlers in common and quite disparate social situations, such as weddings and funerals. Because fiddle tunes were the only music available in a time long before, for example, the accordion, electric guitar, radio or internet, you had to have a fiddler at your wedding, even if you were against fiddling (you also had to have beer at your wedding, even if you were 'against' beer). Stubseid informs that Andres Rysstad once played in a wedding in Valle in Setesdal and was told: 'I never think it is nice that you come'.[28] Performing music—and cultivating what has proven to be hardy tradition—in such a fraught atmosphere could not have been easy, even if the music itself supplied a welcome psychological respite for the fiddler. Interestingly in this regard, Groven points out that, out of the thousands of traditional fiddle tunes we know, only fifteen to twenty are attributed to an actual composer (1971b, pp. 206–208). He asks why the composer's name has seldom been part of the transmission process and points to cultural negativity as a possible answer. Maybe the composers did not want to be

[28] Interview with Gunnar Stubseid, 14 Nov. 2017, Rysstad in Setesdal. Translation by the author. Original: 'tykje alli de e gama at du kjeme'.

known? Maybe it was more comfortable to pretend that one's original tunes were someone else's.

Traditional musical branches

Cultural authorities have identified three traditional musical branches in Setesdal, based upon the work of the leading fiddlers in each area: the *Hylestad tradition* (upper part of the valley), *Austad tradition* (middle part) and *Bygland tradition* (lower part). [29] Figure 7 shows a photograph of fiddle masters from different musical branches gathered in Setesdal in 1934.[30]

Fig. 7. Fiddlers from Setesdal. © Agder Folk Music Archive

These musical branches are all intertwined to some degree, given that most fiddlers tended to study with several masters, particular branch notwithstanding.

[29] The main fiddlers in the different traditional branches are as follows: Hylestad tradition: Olav (b. 1788) and Tarjei Faremo (b. 1791), Knut Jonson Heddi, Hallvard Rysstad, Andres Rysstad and Såvi Rysstad. Austad tradition: Tallak Haslebakken (1781–1834), Tarkjell Aslakson Austad (1802–1875), Olav Tarkjellsson Austad, Såvi Ose, Olav Heggland, Dreng Ose, Thomas and Gunnar Liestøl, Anders Olsen and Olav K. Sandnes. Byglands tradition: Eivind G. Frøyrak, Torjus Odden, Pål O. Frøyrak, Grunde O. Frøyrak, Eivind Hamre, Eivind Aakhus, Neri Neset and Nils Horverak. Today, these traditional branches are generally associated with Hallvard Bjørgum (upper), Gunnar Stubseid (middle) and Vidar Lande (lower), respectively. The next generation consists of several foreigners who have moved to Setesdal primarily because of the area's Hardanger fiddle music.

[30] The fiddlers in the photo are Andres Hovet, Andres K. Rysstad, Thomas Liestøl, Gunnar Austegard, Torleiv Frøysså, Knut Jonson Heddi, Jørund Nordgaard, Hallvard S. Rysstad and Dreng Ose. They were gathered at Rysstad to witness a gold medal presentation to Knut Heddi from the local *spelemannslag* in 1934.

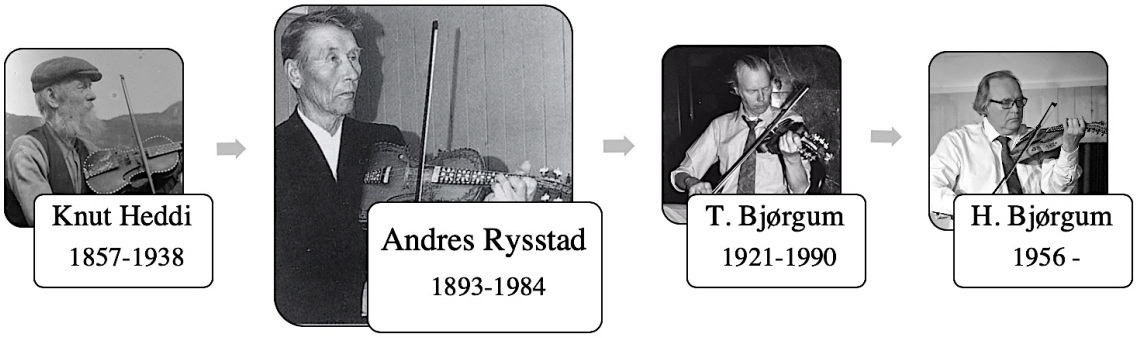

Fig. 8. Example from the Hylestad tradition. © Agder Folk Music Archive and Setesdalsmuseet/ Leonhard Jansen

Andres is part of the Hylestad tradition, as shown in the figure above, because he learned primarily from Knut Heddi, then handed the tunes on to both Torleiv and Hallvard Bjørgum. Heddi would often circle his house before he started to play to assure himself that no one was listening, so Andres learned most of the tunes by placing his ear to Heddi's walls when he got the chance.[31] Heddi's behaviour demonstrates his intense personal relationship with this music, as well as the potential fear that younger fiddlers would steal his tunes and take over his practice. On the other hand, Heddi was also interested in preserving these tunes for posterity, as he made a huge effort to transcribe them as well.

Fiddle practice today

Fiddle performances at marketplaces or in weddings are long gone, and the local *spelemannslag,*[32] along with competitions and festivals, have become the new arenas for fiddle-driven interaction and socialization, as well as anchors of the traditional fiddle style. In 1997, Goertzen noted that fewer and fewer active fiddlers were choosing to participate in competitions (1997, p. 184), but this has changed; today, competitive fiddlers are becoming more common and professionals seem to appreciate the value of participating in these contests.

Happily, the folk fiddler's practice today crosses all social divides, and one is as likely to learn to play the Hardanger fiddle in the city as one is in the country or

[31] Interview with Gunnar Stubseid, 14 Nov. 2017, at Rysstad, Setesdal.

[32] A *spelemannslag* is a group consisting mostly of fiddlers whose interest is generally in preserving the local traditional fiddle music of a geographical area; recruitment of others often takes place there as well.

town, as many rural masters have relocated to practice their craft in more populous places. City dwellers therefore also have the opportunity to learn from several sources and experience different traditions, if they want to, which introduces the possibility of a (Nordic) city tradition—or even a Tokyo tradition, for example, as the Hardanger fiddle is now practiced in Japan, among other places—taking its place among the other fiddle traditions in the future. Likewise, online master classes and increased international travel and collaboration will contribute to new traditions as well. Bohlman (1988) argues that folk music thrives in a dialectic relation with its various social and cultural environments, lending more significance to the force of folk music urbanization and the digital media revolution, for example. Folk fiddle practice today generally involves staged performances rather than recitals in private homes—recordings, gigs and tours, both nationally and internationally, have professionalized this art form and brought it thoroughly into the present day.

Still, oral transmission represents the principal means of teaching the Hardanger fiddle, whether in private sessions or in academic settings involving folk music studies. Based on information from commenters on Facebook's forum for Hardanger fiddle (FfHf), performers today often start out by learning directly from a master, then continue learning new tunes from scores and/ or sound recordings. Rolf (2012) sees no reason to limit the transmission of tradition to the oral and unwritten so long as the tradition's cultural significance continues to exhibit continuity with the past.

The object

Traditional tunes played on a fiddle (either Hardanger or regular) are called *slåtts*, most likely from the Old Norse *slagr,* meaning to strike on something, such as a drum, the lamella on a Jew's harp or a harp string (Bjørgum & Sandén-Warg, 2015). Groven (1971a, p. 115) characterizes the *slåtts* on the Hardanger fiddle as *free*, *improvisational* and *narrative,* and they are constructed of short melodic units (often one or two bars); in contrast, he characterizes regular fiddle tunes as *uniform* and *locked* and constructed of doubled four-bar phrases. Of course, there is great variation in style within both fiddle traditions.

The traditional Hardanger fiddle tunes can be sorted and grouped by geography. O. M. Sandvik (b. 1919) was probably the first music researcher and collector to introduce the expression *dialects* from linguistics to this issue (Aksdal, 1993a). The tunes can also be grouped by factors such as time signature (e.g., *springar, gangar, listening tune*), common tuning, the source (e.g., *rull after Ola Mosafinn*), associated with supernatural legend (e.g., *Fanitullen, Skjoldmøyslaget),* accidents and criminal events (e.g., *Sordølen*), life events or holidays of the year (e.g., *Gravbakken, bridal march*), possible gypsy influence (e.g., *Reisaren, Fanten*) and nature (e.g., *Nordafjells*). Hardanger fiddle tunes are generally used for dance and referred to as *bygdedans,* in contrast to *gammeldans* (old-time dance). Bygdedans are considered to be the oldest dance tunes in Norway, representing an unbroken tradition going back hundreds of years (Blom & Kvifte, 1986) and divide by meter into *springar* (3/4 meter) and *gangar* (2/4 and 6/8 meter).

Gangar

The performances chosen for analysis in the present study (*Skjoldmøyslaget* in 2/4 and *Reisaren* in 6/8) are both *gangars*. Etymologically, the name derives from the verb *gange* (to walk).[33] The apparent distinction in meter among *gangars* (2/4 and 6/8) is not normally made explicit by fiddlers; the two types are simply considered *gangar* and fulfil the same function for dancing, so meter does not distinguish among *gangar* as such. Things that do indicate the difference between the two types of *gangar* include tune title (e.g., *Skjoldmøyslaget*) and geographic links (e.g., *setesdalsgangar*). The 6/8 *gangar* represents the archetype of the genre and has persisted via an unbroken tradition of practice in Norway since the 1800s (Omholt, 2009), with roots which are traceable to the Middle Ages (Aksdal, 1993a, p. 130). *Gangar* material represents three out of the seven volumes in the *Hardingfeleverket* (Gurvin, 1958–1981).[34]

[33] See https://www.naob.no/ordbok/gangar; accessed 7 March 2019.

[34] The *Hardingfeleverket* is the main collection on Hardanger fiddle music, or *Norsk folkemusikk;* it consists of seven volumes. Olav Gurvin (1893–1974) was the editor for the five first volumes; the editorial committee for the series consisted of Truls Ørpen (1880–1958), Arne Bjørndal (1882–1965) and Eivind Groven (1901–1977). The series was completed in 1981 by Reidar Sevåg (1923–2016), Sven Nyhus and Jan Petter Blom.

Setesdalsgangar

Around one hundred of the known *gangars* are used in Setesdal (Myhren, 1993, p. 286). While visiting the folk music pub in Rysstad[35] for fieldwork purposes, I witnessed most of the village's inhabitants was found *walking* on the dance floor while a single Hardanger fiddler performed a *setesdalsgangar*. This music, then, demonstrated its broad appeal to both educated fans and ordinary pubgoers—one regular even came up to me as I waited beside the dancefloor and assured me, 'If you can walk, you know how to dance *gangar*'. This night was filled with music which perhaps resonated more with traditions from Arabia, India or Africa than with most European fiddle traditions. In this regard, it is worth noting that some of these gangars may reveal the influence of gypsy music, the Telemark tradition or certain American traditions, due to the fact that musicians have always travelled both out of and into the valley. These tunes may also be inspired by other instruments in use in Setesdal, such as the *Langeleik*, the drum, the flute and the Jew's harp. Many fiddle tunes survived the pietism as Jew's harp tunes; as the fiddle was banned and even burned, the Jew's harp survived, hidden in people's pockets.[36] Its tunes were later transferred back to the fiddle, and the Hardanger fiddle and the Jew's harp remain the main instruments in the Setesdal tradition today. The form of a *setesdalsgangar* often consists of several relatively small melodic units of one to three bars in duration. On a steady and strongly fundamental pulse primarily made by the fiddler's foot stomping, the fiddler can vary these small units in a way that they more or less intertwine in each other, creating a continuous soundstream. Levy describes this music as follows:

> The *slått* music is both highly organized music, and thus complicated music, and that it offers special difficulties to its describers, difficulties outside the areas of current conceptions of theory and form in music. It concerns the tonal relations in many *slåtts* in which the tonal organization can neither be identified as major-minor nor be referred to the modal system … It concerns the metric freedom … and the special way in which each single *slått* progresses. (Levy, 1989, p. 6 [vol. 1])

[35] Once a month at Sølvgarden Hotel at Rysstad, local artists take over the pub to perform traditional fiddle music, dance and folk singing.

[36] Interview with Folke Nesland, 9 Aug. 2016, in Bykle, Setesdal.

Levy therefore situates these tunes outside current conceptions of theory in music. He continues, 'In the Hardanger fiddle music I meet not only an artistic, but also a material incomprehensibility' (Levy, 1974, p. 6).[37] As this study will likewise demonstrate, it is therefore best to engage this music primarily from a folk music perspective, rather than a Western music theory perspective.

Moment versus concept

Because this study considers two performances in depth—one each of the *setesdalsgangars Skjoldmøyslaget* and *Reisaren*—I will next discuss my approach to the performance practice of this repertoire in general. From the perspective of the concept of a Hardanger fiddle tune*, one* performance must be framed as a small gesture in much larger transmission process, one involving multiple fiddlers who have tinkered with it over time. The *tune,* then, should be understood as a collective composition embracing, in one way or another, all of the variations ever introduced into it. Levy (1989) takes this perspective in his research into Hardanger fiddle music from Setesdal, wherein he analyses the structure of 119 performances of four different tunes done by thirty-two different performers, then describes the given tune's many shadings and performance possibilities. The *tune* is the sum of all the different performances, which Levy describes as a *shimmering field*.

> If you follow a *slått* from player to player, *the slått*—understood as a well-defined piece of music—will disintegrate to you. Instead, a different concept appears. *The slått* has become a vibrating, shimmering field, which in the performance of each single player acquires ever new contours, new details, new expressions, being in each case performed with a varying degree of fixed form. *The slått* is no longer a piece of music but a system and a composition practice developed through centuries, giving birth to ever fresh entities. Indeed, many players play so freely on the possibilities of this system that the shimmering field seems to stand out even in the single performance. The describer must therefore necessarily specify the *slått* as a collective composition, indeed as one single composition. (Levy, 1989, p. 6)

[37] Translated by the author. Original: 'I hardingfelemusikken møder jeg ikke bare en kunstnerisk, men også en stoflig ubegribelighed'.

Levy's suggestive description ably captures the sheer possibility of an oral (rather than written) tradition like Hardanger fiddle music, whose tunes are the product of many individuals and social and cultural contexts over decades and even centuries. Of course, such a perspective tends to foreground the *object* at the expense of the *performance* (or artist). An alternative perspective would acknowledge the name of the performer and the quality of ones playing ahead of the repertoire chosen as such.

These are two sides of the same coin: the value of the tradition and the value of the performer who is realizing it at a given moment in time. At times, it may seem as though they conflict or, at the very least, compete: How important the tradition of these tunes in relation to the fiddler's perception and experience of the actual music in her or his own moment? Within the culture, there is great respect for those masters who dedicate their lives to furthering the process of tradition, but that process can become a yoke as well, 'more and more fiddlers believe their function is to preserve faithfully their share of a precious heritage' (Goertzen, 1997, p. 185). Johansson (2009a) simply asks whose music it is which we hear, noting that the question of authenticity pits the individual fiddler's dept to tradition against her or his desire to express artistic individuality. Johansson points to Berge's (2008) argument that this issue is highly relevant in today's Nordic folk music, which has come to value individuality and creative contribution in tandem with tradition. Likewise, the value of preserving a tradition typically enters the conversation only when someone finds the change is happening too quickly. And a fiddler can even be criticized for being too faithful to tradition—copying too much and not developing her or his own voice. This was likely true in the past, just as it is today.

Returning to the question of the relative meaning of the individual performance within the much greater context of an ongoing tradition, we likely owe credence to both aspects. To understand a given performance of a traditional tune, one must know the tradition in question. Of course, one can enjoy it regardless, and one might even find other forms of purchase upon it. In conversation, my national and international folk colleagues often say, 'it is not my tune. It is not my story. I am just bringing the music forward'. In this sense, the instrument or voice becomes a medium and the music becomes a sort of spiritual force. But

whose force? The earlier fiddle masters or the individual contemporary performer? The audience's response to a performer's versions of traditional material can be to impactful force in this regard; comments such as 'this is not how my father played it' or 'you are mixing the forms' can serve to limit an artist's perceived degree of freedom. Hardanger fiddle master Bjarne Herrefoss reacts to such feedback as follows 'I do not play traditional fiddle tunes, I play music! … I'll play life, because we do not know anything about that' (Maurseth, 2014, pp. 70–72).[38] Perhaps the answer, then, is to focus on the specific fiddler and the music in the performing moment in order to foreground the process of tradition over the product—that is, the countless individual contributions to the traditional repertoire which at once sustain and expand it.

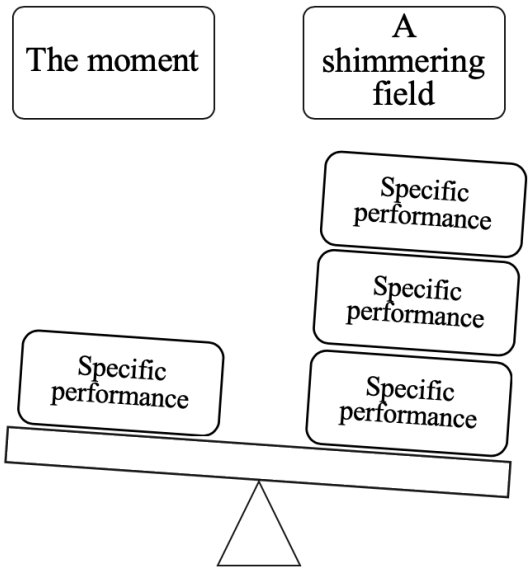

Fig. 9. Balancing moment and concept.

Balancing these two perspectives—that is, valuing both the moment of an artist's traditional performance *and* the tune within the tradition—is good for the researcher and for the performer, allowing both to accept the spotlight and claim that this insight or interpretation is mine. After all, 'In reality, every single communicative situation will happen only once … it is an unique event' (Alver,

[38] Translation by the author. Original: 'Eg spilar ikkje slåttar, eg spilar musikk! … Eg skal spela livet, for det veit me ingenting om'.

1974, p. 99).[39] In addition, every new performance benefit from an awareness of the previous performances which defined both the tune and the cultural context in which it developed.

Scientific procedures

Though fiddlers generally work within a particular musical branch, as mentioned earlier, their particular musical interpretations and responses will vary based on personality, background, era and memory or experience. Such variation, over time, brings change to tradition, to the extent that one might wonder whether one can even point to a given consistent tradition as such. Bohlman (1988, p. 74) emphasizes the importance of value the individual musician as an agent of creativity and change within tradition, and Rolf agrees: 'There are no traditions without human bearers, through personal knowledge, patterns for feeling, thinking and acting' and further argues that the scientific tradition's heart resides not in *what* has changed (the fiddle tunes) but in the *procedure* for change (Rolf, 2012). Different responses to tradition from different fiddlers can in this perspective be understood as different *scientific procedures*.

Two kinds of fiddlers

According to Groven (1971b, p. 208), there are two kinds of fiddlers: the *cultivated* and the *innovative*. The cultivated fiddler delivers the tune to the next fiddler in the way in which she or he has learned it, without changing the content, as a *bluecopy*. The innovative fiddler delivers the tune subject to two kinds of interpretation: *variability* and *composing* (see fig. 10).

[39] Translation by the author. Original: 'I røynda vil kvar einskild kommunikativ situasjon gå føre seg berre ein einaste gong … det er ei einestående hending'.

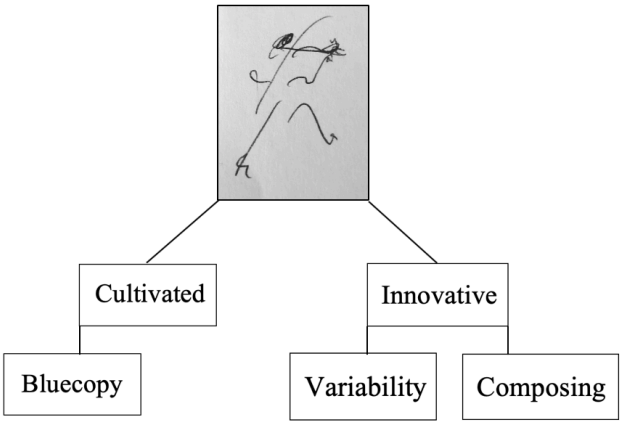

Fig. 10. Different response methods.

I began this study by trying to learn the two tunes chosen for the analysis, specifically as Andres performed them, as a form of bluecopy. Because both variability and composing are among the topics of this study, it is worth lingering upon these two methods of response to tradition.

Variability

Because Hardanger fiddle practice is primarily a solo undertaking, it encourages variation in the music, both from performance to performance and even within a given performance as we shall soon see. As master Knut Hamre said about Eivind Moe, 'There was a constant urge in his playing, all the time on, onward and rarely or never a repeat of the same motif' (Maurseth, 2014, p. 106).[40] The degrees of variation depends on the given fiddler's personality and style, as well as the given tune's amenability to variation. The setting also matters—concerts privilege consistency, whereas dances privilege variation. Some artists might even shape or twist tunes to make them harder for others to imitate, according to Groven (1971b, pp. 208–210). Kvifte (1985) argues that variation enables the fiddler to explore different modes of expression and enhance her or his resonance with the audience and the dancers, introducing creative interpretation to the otherwise fixed bounds of the art form. The ability to vary one's performances also indicates one's skill level, according to Hardanger fiddle master Tarkjell Aslaksson Austad from Setesdal: 'He is not a good enough fiddler until he

[40] Translation by the author. Original: 'Det var en konstant uro i spillet hans, hele tiden videre, videre og sjelden eller aldri en gjentaking av det samme motivet'.

manages to create nine new tunes out of one' (Skar, 1961, p. 171).[41] Nevertheless, variability can contribute to develop tunes to larger compositions or at least sign an own version of a traditional tune.

Kvifte (1985) finds that the twentieth century largely saw the fading of interest in variation in Hardanger fiddle performance practice, and it remains endangered today, thanks to certain aspects of the field. For example, the archive visit has led to a certain reverence for the 'original state' of a given tune. What these fiddle tunes sounded like before the advent of sound recording has come to obsess those interested in the tradition, and oftentimes, in the absence of any indication otherwise, early recordings come to stand for the canonical versions of the tunes. That is, audio tracks shift from representing one out of many possible performances to representing the definitive performances. Every single track by Andres in the Agder Folk Music Archive (approximately five hundred in all), for example, is fixed in his time and place, then interpreted by a sound engineer through certain recording choices (included Andres's distance from the microphone, the type of audio equipment used, and the space in which the recording was done). This canonization of particular recorded performances, of course, tends to quash the drive to variation which once characterized the repertoire—that is, the very tunes now received as 'completed' thanks to the archive mentality. Concerts and competitions also quash the kind of creativity that produces variation, because the most lauded performances tend to be optimized in terms of locking the tune into a perfect form.

Despite these challenges, variation is one of the main engines of change within tradition, ensuring that fiddle tunes do not harden into a fixed canon but instead manage to resonate with different fiddlers in different times. Through variation, among other things, familiar tunes remain alive within a viable tradition rather than dead in an archive.

Three levels of variability

Research on the variability which is inherent to the Hardanger fiddle tradition should address *collective*, *personal* and *performance levels*.

[41] Translation by the author. Original: 'Han e inkji fullt go'e spilemann'e, fyrr `an kann gjere ein slått'e ti' nie'.

The *collective level* involves the variability among fiddlers. Analyzing one or more performances of the same fiddle tune by different fiddlers (in the same and different eras) shed light on this type of variation of a fiddle tune, within a particular dialect, across different geographic areas (including tunes from other traditions) or within a certain period of time. Variability on a collective level supplies information about a fiddle tune's age—great variability, for example, can indicate great age. In *Hardingfeleverket* (Gurvin, 1958–1981) the tunes are arranged by variants on a collective level.

The *personal level* involves the variability among different performances of the same tune by a given fiddler. The degree of variability at a personal level sheds light on how free the fiddler might be, as a performer, and on the extent to which the fiddler sees a tune as locked a tune into a canon. Some fiddlers begin to vary their interpretations of tunes early in their careers, while others wait until much later or never vary them at all, and Kvifte, among others, laments the lack of research into fiddler's careers in this regard (Kvifte, 2007). Such an approach would foreground the artistic process and practice over the tune. Andres Rysstad adopted an approach like this while exploring Heddi's performances, learning his variations on tunes and then reinterpreting them as new variations. This work required great knowledge, musical understanding and presence of mind to balance the interpretations of a master with one's own performative instincts, as well as the traditional frameworks of the tradition itself.

The *performance level* involves the variability within a given performance. This level does not necessarily concern itself with how the performance relates to any historical context or tradition but instead focuses on the music itself in the moment of performance. This study generally addresses fiddle-tune variability at the performance level in the main purpose to explore characteristics for composing. Further *how* to vary will be discussed together with related reviewed theories in chapter 5, primarily in section *More on variability*.

Composing

Terms such as *composer*, *composing* and *composition* are ill suited to most folk musicians, given the overriding force of tradition, practice, and, as mentioned

above, the archive. Hallvard Bjørgum informs that Andres Rysstad was considered the 'architect' of Heddi's tradition in the wake of his work with the master's variations, constructing them into new own versions, but known today as *Heddi originals,*[42] most likely due to the respect Andres had for his source. On the recordings for this work, Andres describes his variants as *learned from* Heddi. Relatedly, a fiddle tune in Setesdal might also be known as a *Faremoe* when performed by the Hardanger fiddle master Olav Faremo, whether he actually composed the tune or simply heard, reproduced and reinterpreted it (Stubseid & Løkken, 1986, p. 63). It is not easy to determine whether a performance should be understood as composed rather than simply 'processed'. Standard practice, nevertheless, is to say that the tune is *as played by* or *after/ from* Andres Rysstad, for example, if the composer is otherwise unknown and one has learned the tune from Andres. If the composer is known, standard practice is to say that the tune is *by* or *made/ composed by*.

Another reason for a resistance to the term composing among folk fiddlers is its obvious association with written tradition and, consequently, the well-defined and unchangeable—that is, the composed tune should be *played as written,* and the Oxford English Dictionary defines a composer as 'A person who writes music, especially as a professional occupation'.[43] In an oral tradition, the practice instead involves *playing/ creating from memory.* The force of its tradition favours variation over fixity and eschews the canon. An alternative term for composing might be 'music-making', though it seems like the use of this term is aimed more towards a general activity of doing music (Green, 2002).

On the other hand, Nettl (1983, p. 29) argues, 'It is widely believed that there is a difference in essence between composing art music, with notation or at least a background of theory, and folk or tribal music … Yet to me there seems no reason to regard composition in cultures with oral and written traditions as different species'. Collins (2011) notes that most studies related to composing have concentrated on the object itself (in terms of analysis, musicology, performance and so on) rather than the actions of the object-maker. Collins used

[42] Interview with Hallvard Bjørgum, 12 Oct. 2016, at Rysstad, Setesdal.

[43] See https://en.oxforddictionaries.com/definition/composer. Accessed 7 March 2018.

an imaginary conversation between a human music educator (H) and extra-terrestrial visitor (ET) to illuminate his point:

> ET: So, as semi-intelligent life forms, you must know and understand how your people create this phenomenon you call 'music'—how a human behavior you call 'thinking' leads to the creation of such sonic events?
>
> H: Not really, unfortunately. In fact, although we revere this time-based art form, and consider it to be one of the greatest achievements of human civilization, we have not spent much energy discovering how we actually do it. Despite the 20,000 year lifespan of what we describe as 'music', it is probably only in the last twenty or thirty years that our research-humans started to explore how people think when they create such sonic events.'
>
> ET: This is very strange—especially since you humans invest such large amounts of time and energy on this phenomenon, which is quite unrelated to your species' materialistic and militaristic tendencies. We see that you even make this music for nothing but personal enjoyment. Perhaps we will come back in another thousand years to see what your research-humans have discovered …'

In this work I will try to attach words to the 'actions of an object maker', and in this regard I will favor the term composer, despite its aforementioned limitations.

2. The Hardanger fiddle

Introduction

The intention for this chapter is primarily to frame scope the Hardanger fiddle's main characteristics from a historical perspective—one which encompasses notes on the instrument's origin and a discussion of its construction, strings, tuning practice and playing style. In addition, I will address Hardanger fiddle fingering and describe grip notation in the context of the challenges of transcribing this music.

Historical backdrop

The Hardanger fiddle was designated Norway's national instrument by the bourgeoisie in the mid-1800s and soon became both a necessary and a popular Norwegian symbol in its nation-building efforts. The name refers to the fiddle's source, *from Hardanger,* and Henrik Wergeland is held to be the first to use the term, in 1840 (Aksdal, 2009, p. 71). Isak Nilsen (Skaar) Botnen (b. 1669) and his son Trond Isakson Botnen produced 'Hardanger fiddles' in Hardanger on the west coast long before the term came about:

> It is a little paradox that at the time when the Hardanger fiddle term was established, there was a completely different district that took over as the leading area for the development and modernization of the Hardanger fiddle. It was John Eriksen Helland's son Erik Johnsen Helland who led the development that placed the hegemony in the Hardanger fiddle building in Bø in Telemark for a very long period. (Aksdal, 2009, p. 127)[44]

Even if Hardanger and Telemark are understood to be the main areas for Hardanger fiddle making as such, the instrument's origins have been widely discussed, and research points to two possibilities (Aksdal, 1993b, p. 21):

[44] Translation by the author. Original: 'Det er imidlertid et lite paradoks at akkurat på den tiden hardingfelebegrepet var blitt etablert, var det et helt annet distrikt som tok over som det ledende området for utviklingen og moderniseringen av hardingfela. Det var John Eriksen Hellands sønn Erik Johnsen Helland som førte an i utviklingen som plasserte hegemoniet innen hardingfelebyggingen i Bø i Telemark for en svært lang periode'.

- It developed from European fiddles (i.e., violin, viola d'amore).
- It developed from medieval instruments (i.e., *fidla*, *gigja*).

Given that the west coast of Norway has always invited international communication and trade, it is likely that both cultural impulses and knowledge of the craft came from Europe to Norway via the sea, and that such knowledge can be linked back to the Middle Ages. Aksdal (2009, p. 50) refers to recent research showing that fiddles with resonance strings were present in the British Isles in this period, especially in connection with travelling Jewish musicians. Sevåg (2006) insists upon the likelihood of foreign inspiration for the Hardanger fiddle's distinctive features.

In contrast to the widespread dissemination of the regular fiddle both nationally and internationally, the Hardanger fiddle was originally found only in areas along the southern part of the west coast, and in neighboring areas inland from that coast, as shown in figure 11.

Fig. 11. Original Hardanger fiddle areas in Norway. © (Bjørndal & Alver, 1985, p. 13)

The Hardanger fiddle areas are black in the figure, and the regular fiddle areas are white. The northernmost area on the map, marked with small circles, is Nordfjord, which inherited a mix of regular and Hardanger fiddle traditions; the southernmost, marked with dots, is Setesdal.

Setesdal

Until recently, the Hardanger fiddle was thought to have arrived in Setesdal as late as the 1860s with the fiddler Neri Neset. Before that time, the regular fiddle reigned supreme; the locals called it the *Dusi fiddle* (that is, produced by the dozen). Setesdal inhabitants also remade the regular fiddle into a hybrid version with a shorter neck, flatter bridge and resonance strings which they called the *Bastard fiddle.*[45] Why the Hardanger fiddle came to Setesdal so late has long been a mystery, as there was regular communication regarding trade and taxes westward across the mountains via the 'Leather road'. A recently discovered article from the newspaper *Politiken* dated 7 April 1900 sheds new light on the issue. Hardanger fiddle master Eivind Aakhus (1854–1937) lived in America for a long time, in effect becoming a living archive of early Hardanger fiddle tradition by virtue of his physical remove from its changing cultural context in Norway. In this article, Aakhus points out that there were Hardanger fiddles in smaller sizes with weaker sounds in Setesdal already in the 1700s. Perhaps this early Hardanger then faded from popularity when faced with skilled gypsy fiddle master Petter Strømsing (1759–1836) and his group *Vardalsfantane,* who began to frequent the valley playing the regular fiddle.

Today, Setesdal fiddlers follow a practice which draws upon Dusi, Bastard and Hardanger fiddle traditions.[46] The area's folk culture, including its singing, dancing and playing traditions, is inscripted this year (2019) on the UNESCO's Representative List of the Intangible Cultural Heritage of Humanity.

Construction

The Jaastad fiddle (figure 12) is the oldest preserved example of a Hardanger fiddle; it is dated 1651, and the name Ole Jonsen Jaastad is written inside the fiddle's body.[47]

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[45] Interview with Hallvard Bjørgum, 22 Sept. 2018, at Rysstad, Setesdal. He noted that the hybrid fiddle was also called the 'Setesdals fiddle', but he prefers 'Bastard fiddle', because it was also made in places other than Setesdal.

[46] The leading Hardanger fiddle makers in Agder (the county of Setesdal) in the 1900s were Gunnar Røstad, Sveinung Gjøvland and Torleif Frøysaa. Today, the handcraft is done by Salve Håkedal, Birkeland.

[47] See more about these pieces of information in (Anmarkrud, 1975) and (Aksdal, 2009, p. 51).

Fig. 12. The Jaastad fiddle. © UIB/ Svein Skare/ Bd_04670

Though there is some uncertainty surrounding the actual production year of this specific instrument, it nevertheless indicates an existing Hardanger fiddle-maker tradition in Norway—one generally favouring small fiddles with round bodies and two to three resonance strings. It changed fiddle history:

> A main perspective in Norwegian fiddle history is this: When the Hardanger fiddle arose, fiddle music already existed which it could take up and bring forward to the rural environment of the West Coast. The new element which the Hardanger fiddle brought was the resonance strings. Their task was, of course, to increase the instrument's fullness of timbre, primarily by amplifying the effect of its drone basis. (Sevåg, 2006)[48]

Fig. 13. The *Kristiane* fiddle. © A. Lien/ Knut Bry

[48] Translation by the author. Original: 'Vil et hovedperspektiv i norsk felehistorie være dette: Da hardingfela oppstod, eksisterte det allerede i bygdemiljø på Vestlandet en felemusikk som hardingfela kunne overta og føre videre. Det nye som hardingfela umiddelbart bragte, var resonansstrengene. Deres oppgave var selvsagt å øke instrumentets klangfylde, først og fremst ved å forsterke virkningen av bordungrunnlaget'.

The Hardanger fiddle, which came about in the 1860s, was bigger, and became more powerful. Figure 13 shows the author's Hardanger fiddle 'Kristiane',[49] built by Olav G. Helland of Telemark in 1898.

Structural characteristics

It can be hard to distinguish the defining characteristics of the modern Hardanger fiddle from those of the regular fiddle, given that there are various Hardanger and regular fiddle iterations, as well as the aforementioned hybrid versions. Using today's versions of both, we can see that the modern Hardanger fiddle has four to six resonance strings placed beneath the playing strings, special Hardanger fiddle playing strings made of a mix of gut and steal, a flatter bridge and finger board, a shorter scale length, raised f- holes to bring out the sound made by the resonance strings, a rounder body which is often decorated with acanthus leaves and inlays of mother of pearl and ebony or horn, and a fiddle head which is often carved in the likeness of a woman, dragon, lion, or even more exotic creatures. The Hardanger fiddle is made of different wood types (e.g., maple, pine, birch), depending on the availability in its various geographical homes, whereas the regular fiddle is usually spruce (Aksdal, 2009, p. 29). Today, there are Hardanger fiddle makers on several continents (Europe, America, Asia) who were all likely inspired by Norwegian Hardanger fiddle makers. Fiddlers from around the world also now travel to Norway to buy Hardanger fiddles, thanks to these craftspeople's international reputation.

String pairs

Compared to a regular fiddle, the Hardanger fiddle's flatter bridge and fingerboard reduce the bow angle between a string and its neighbouring string, inviting the fiddler to play on *string pairs,* a signature technique of Hardanger fiddle style.

[49] I named the fiddle 'Kristiane' after an earlier owner, Kristiane Lund (1889–1976), one of the few female Hardanger fiddlers of her generation.

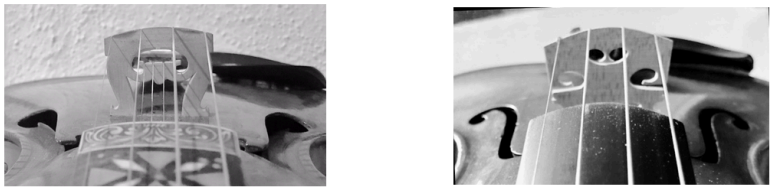

Fig. 14. Differences in bridge, fingerboard and f-holes between the Hardanger fiddle and a regular fiddle.

Figure 14 shows a few millimetres' difference in measurement between the highest and lowest points in the curves of both the bridge and the fingerboard between Hardanger and regular fiddle types. The flatter bridge and finger board on the Hardanger fiddle actually complicate the fiddler's ability to play on one string at a time, demanding, in turn, less bow pressure to avoid touching a neighbouring string. This means less variability in volume and dynamics. It is of course harder to play on one string on the middle strings than on the end-strings (s. 1 and s. 4). The flatter bridge and fingerboard also invite the fiddler to frequently jump to opposite strings (e.g., playing on bright strings, then jumping to dark ones), which is another common technique in Hardanger fiddle performance. Due to the flatter construction, such jumping requires less vertical rotation in the elbow when one is moving from the dark to the bright strings, and vice versa. We must remember, though, that this double-string technique is also used in some regular fiddle traditions (e.g., parts of Østerdal and Røros), and that certain Hardanger fiddle traditions do cultivate one-string playing (e.g., parts of the West Coast, Hallingdal and Valdres) (Aksdal, 1993a, p. 147). Some fiddlers combine one- and two-string playing styles. Because my own practice consists of playing both traditional Hardanger fiddle tunes and tunes from other fiddle traditions on the same instrument, I have modified my Hardanger fiddle's construction by raising the bridge a few millimetres under the two middle strings, to allow me the flexibility in bow pressure to shift between the styles.

Strings

In general, there are thus two levels of strings on the Hardanger fiddle, the playing strings and the resonance strings beneath them. The four playing strings are designated s. 4, s. 3, s. 2 and s. 1, with the latter understood to be the brightest string. The instrument's characteristic sound derives from its shorter and thinner playing strings, in relation to a regular fiddle, which enables its

relative high concert pitch, normally in the area between B and C#. Some Hardanger fiddles even need to be tuned up to D to *open up*—that is, to contribute the desired timbre and volume—and they can be tuned down to A or even lower as well, often via thicker strings to better resist the requisite bow pressure. Hardanger fiddle strings generally require less bow pressure than the regular fiddle strings.

Today's string types include some combination of pure gut strings (s. 2), gut strings with loosely or tightly spun steel (both types available for s. 3, and tightly spun available for s. 4) and pure steel strings (s. 1 and as an alternative for gut type on s. 2). Some fiddlers even use only special gut strings if they want a more Baroque sound. There are though advantages and disadvantages to the different string types. The loosely spun steel string for s. 3 often digs up the fingerboard after a while, which means regular maintenance. The tightly spun steel string available for s. 3 solves this problem and offers more resistance to breakage. In my own practice, I tend to use steel strings on s. 2 instead of pure gut strings for their superior durability and ability to stay in tune. On s. 3, I use tightly spun steel string for the reasons just discussed. String type impacts sound and stability of tuning most of all.

Tuning

Fiddlers make individual choices about which string level (the playing strings or the resonance strings) to tune first.

Fig. 15. Andres listening to Torleiv Bjørgum's tuning. © Agder Folk Music Archive

If the tuning process starts with the playing strings, s. 2 is usually tuned first to the desired concert pitch, and then the remaining strings are tuned in fifths,

fourths or thirds, always in pure intervals (i.e., equal steps between each interval).[50] The resonance strings are then tuned to whatever tones and intonation one wants to amplify, which will vary depending on which tuning is being used.

If the tuning process starts with the resonance strings, the brightest (no. 1) is often tuned to the desired concert pitch and then serves as a reference for s. 2 (the second playing string). The remaining playing strings are then tuned, followed by the resonance strings, tuned according to which drones and finger placements are to be amplified. The advantage of tuning the resonance strings first is that they usually hold their tuning better than the playing strings, especially if the latter are gut strings.

Tunings

The *standard tuning* (vanlig stille) used on the Hardanger fiddle is a-d-a-e, and the actual pitches, in this case, would be b-e-b-f# with a concert pitch of B. Note that a Hardanger fiddle's tuning usually refers to interval patterns rather than absolute pitches (i.e., a-d-a-e as representing fourth-fifth-fifth). These intervals also set the framework for the fingering, as we shall see. This standard tuning is also labelled *vanlig oppstillt* (standard tuned up) to describe its relationship to the standard tuning of the regular fiddle (g-d-a-e), with s. 4 tuned up from g to a.

Several other tunings are also used in the Hardanger fiddle tradition; such a retune practice also appears in other traditions, such as the American old-time tradition.[51] Anmarkrud (1975, p. 44) links some of these tunings to American traditions via Marion Theden's *The Fiddle Book,* which contains 140 tunes featuring eleven different tunings. He also notes that the Swedish tradition featured several tunings early in its history. According to Sæta, retuning fiddles has a broad and long history, though much of our knowledge about fiddle music's earliest days in Europe is largely obtained via sources with art-music biases. In this regard, then, retuning is framed in relation to the Baroque period and instruments such as the *gambe* and *viola d'amore* (Sæta, 2006). When a

[50] Ofsdal (2007, p. 116) explains that a pure interval will not display any audible oscillation. If the interval is adjusted a few cents larger or smaller, an audible oscillation will occur. The farther away the interval is from the pure position, the faster the oscillation will be.

[51] Online interview with Bruce Molsky, 20 April 2017. Molsky acknowledges using about fourteen different tunings, where some of which are traditional, and others invented by him.

fiddle relies on non-standard tunings, it is often labelled an *omstillt fele* [retuned fiddle].

As the Hardanger fiddle tradition has shifted from dance to concert settings, retuning has tended to happen less. Practical reasons for this might involve limiting the effort of retuning while on stage or of carrying several fiddles with different tunings on the road. In my own practice, I try to train my fiddle to cope with retuning, even in mid-gig, because I find it good for the instrument—it seems to keep the wood alive rather than stiffened into one tuning alone. Interestingly, retuned fiddles are often described as *scordatura,* which means tuning error in Italian (Nyhus, 1993, p. 197), but his verbiage dismisses the perfectly sound musical reasons for the practice—variability in timbre and mood.

Tunings for analysis

In what follows, I will focus in particular on two tunings used in Setesdal with relatively large discrepancies, in order to explore how fingering can be impacted by tuning as well.

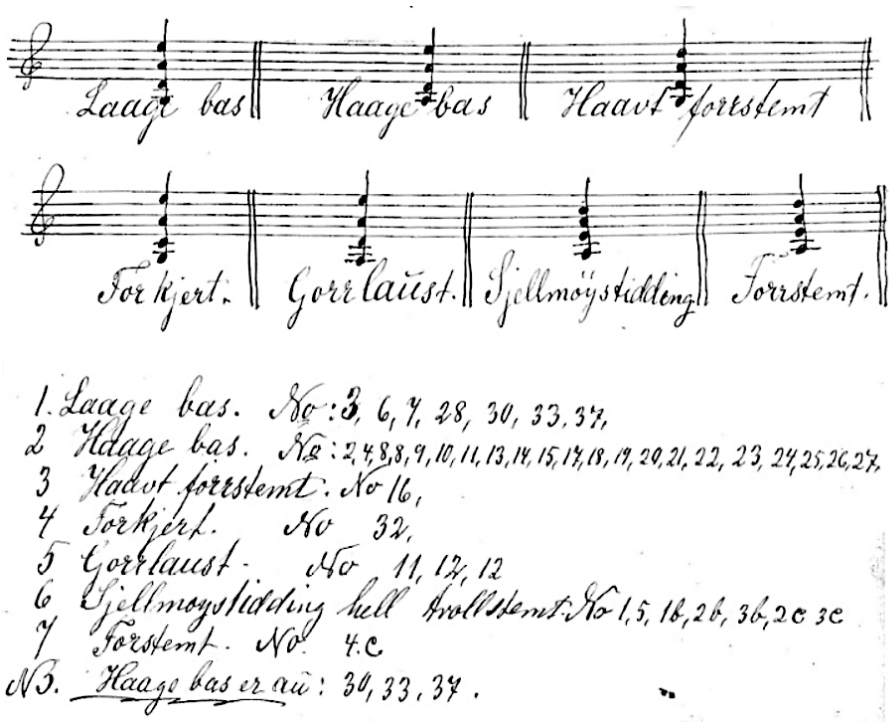

Fig. 16. Different tunings used in Setesdal. © (Heddi, 1901, p. 37)

In his manuscript, Heddi identifies seven different tunings used in Setesdal, as shown in figure 16, in addition to the number of tunes transcribed in each tuning.[52] His survey indicates that *standard tuning* (Haage bas) dominates the repertoire, with *nedstillt bas* (Laage bas) as the next most used. Because those tunings are rather similar, I will focus on the third most used tuning, *Sjellmoystidding* (a-e-a-c#), to complement the standard tuning.

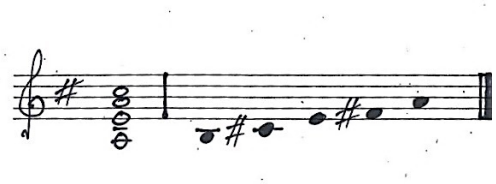

Fig. 17. *Sjellmoystidding* (a-e-a-c#) in *Skjoldmøyslaget*.

Figure 17 shows the tuning of the main strings (left) and an example of a tuning of the resonance strings (right) in *Sjellmoystidding,* together representing a relatively tight framework of a fifth, fourth and third between the strings. *Sjellmoystidding* is used elsewhere in Norway as well and also called *Trollstillt.*[53] The tune '*Skjoldmøyslaget'* seems to typify Sjellmoystidding music, as Setesdal fiddlers refer to various other tunes in this tuning as *Skjoldmøyslått.* Anmarkrud (1975, p. 34) argues that *Sjellmoystidding* might have been borrowed from another, much older instrument, such as the *Langeleik*, which uses a similar tuning.

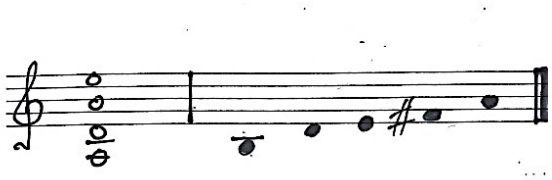

Fig. 18. *Standard tuning* (a-d-a-e) in *Reisaren*.

Figure 18 shows the tuning of the playing strings (left) of the Hardanger fiddle and an example of a tuning of the resonance strings (right) in *standard tuning*, which includes intervals of fourth, fifth and a fifth between the strings. Anmarkrud (1975, p. 12) argues that *standard tuning* is by far the most

[52] Knut Heddi's manuscript in Agder Folk Music Archive is copied by Harald Knutsen from the National Library in Oslo and registered there as Ms.fol.640 – *Liv og Leikar*.

[53] The well-known Hardanger fiddle tune *Fanitullen* [The Devil's tune] uses this tuning.

commonly used tuning, with 80 to 90 percent of all Hardanger fiddle tunes made in it.

Support points

On the chest versus between chin and shoulder

The Hardanger fiddle is traditionally being held in different positions with different physical support points. Historical photographs of folk fiddlers show the instrument placed on the chest, perhaps because most of those fiddlers were men.

Fig. 19. The fiddle placed on the chest, 1950s. © Rolf Myklebust, NRK/ Grappa

In the photo showed in figure 19, Andres uses the sleeve of his jacket to hold the fiddle in place on his chest. In this position, the fiddler could hear all of the strings fairly clearly and see both the left hand's fingering and the right hand's bowing. Chest placement also allows the shoulders to relax, and it is generally used when the fiddler is sitting while playing (sitting, of course, allows for activity in both feet as well, as we shall see).

> Keeping the fiddle under the chin and standing upright while playing is heavy-handed and uncomfortable. To play the best possible vibrato, trills and polyphony, the fiddle must be kept as described. Not under the chin, but against the left chest bone, and turn it alternately to each ear as the ears tire. (Heddi, 1901, p. 6)[54]

[54] Translation by the author. Original: 'Halle Felon punde Hoka aa stande uppe, me ann spilar, e for tvungje aa strómpe. For aa spile beste Sjælvingan, Trillo aa gott Samljo, so maa Fela hallast, som hera e fyresætt; inkje up unde Haka, men imot vistre Bringebeind aa vende imise Øyra at Musikkje, ette som Øyro trøytne'.

The choice of standing versus sitting while playing also depends on the individual fiddler's mentor/ playing ideal. Andres mainly had Heddi, not a concert fiddler as such (i.e., someone inspired by a classical violinist). Of course, the categories are not pure—Heddi mentions vibrato above, which is rarely found in the Hardanger fiddle style.

Fig. 20. The fiddle placed between chin and shoulder, 1955. © Rolf Myklebust/ Setesdalsmuseet

Figure 20 is another photo of Andres from approximately the same time with the fiddle placed between chin and shoulder. My informants have indicated that Andres initially favoured chest placement but experimented with the chin and shoulder for a time, until he found it to be too loud.[55] We can assume that such experimentation has always taken place, even up to the present, though contemporary folk fiddler practice generally has the fiddle placed between chin and shoulder.

Left hand's wrist

In both placements, but especially when placing the fiddle on the chest, the fiddler needs a counter support point, so that the fingers do not have to keep the instrument in place in addition to fingering the music itself. This point is the left hand's wrist (at the pulse point), and often we will see a red mark on the skin at this spot. Hardanger fiddle style is particularly reliant on this support point, for several reasons: the left hand is generally kept in the first position, the instrument features a shorter scale length and shorter neck, and the playing technique accommodates either an angle in the wrist or a straight wrist.

[55] Online interview with Daniel Sandén-Warg and Leonhard Jansen, 24 Oct. 2018.

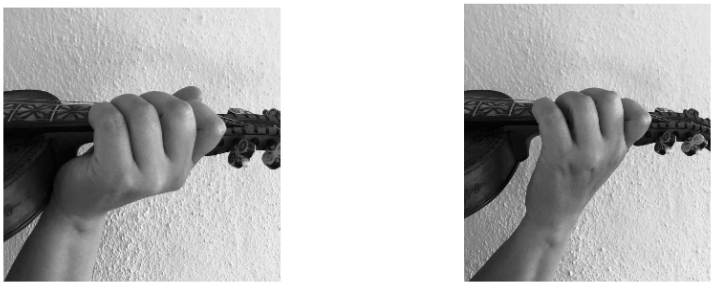

Fig. 21. Different angles in the left hand's wrist.

Figure 21 shows an angled wrist in the left photo and a straight wrist in the right photo. The straight wrist position allows the wrist more release from operation as a support point for the fiddle, freeing up the left hand to move more readily between bright and dark strings via elbow rotation. Even with a straight wrist and a fiddle placement low on the chest, however, the Hardanger fiddle may still touch the pulse point, due to its aforementioned shorter scale range and fiddle neck. Wrist angle and fiddle placement generally operate independently, depending upon the musician's needs and preferences, but, again, contemporary fiddle practice favours the higher fiddle position and, because this position keeps the fiddle in place all on its own, a straighter wrist position.

Pinkie and thumb

The alternative wrist angles present different possibilities for the pinkie, or little finger on the left hand. An angled wrist sees the fiddler primarily playing with three fingers, because the pinkie ends up relatively removed from the fingerboard, whereas a straight wrist places all four fingers more or less an equal distance from the fingerboard.

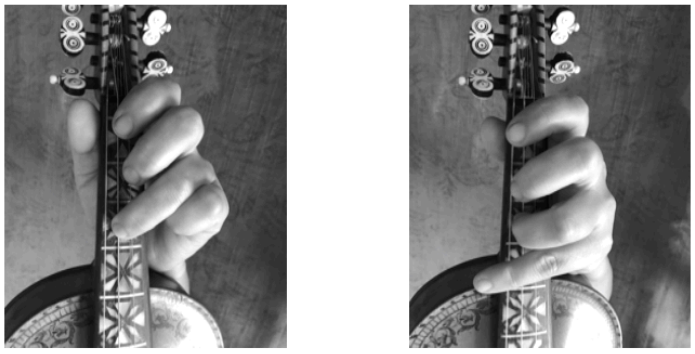

Fig. 22. Different finger angles in relation to the strings.

When using an angled wrist and three fingers, the fingers tend to operate more *down and up* on the strings at a 45-degree angle. A straight wrist positions the fingers at an approximate 90-degrees angle, allowing the pinkie to be more prepared for use on all of the strings (but especially the dark strings). In such a hand position, the fiddle neck often touches the thumb more towards the tip, as we see in the righthand photo in figure 22; this is because the hand is placed more to the *side* of than *beneath* the fiddle neck. In the left photo, then, more of the thumb is visible.

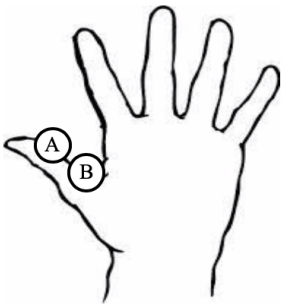

Fig. 23. Different fiddleneck support points on the thumb.

The thumb should be understood to function as a support for the instrument at one of two points (A and B), as shown in figure 23. Point A responds most readily to a straight wrist technique, and point B to an angled wrist technique, but the points and wrist positions are ultimately interchangeably. The thumb points have unique advantages and disadvantages. Placing the fiddle neck at point B can limit the range of motion to the dark strings, as it becomes more harder to place the fingers (especially 3. f. and 4. f.) on s. 3 and s. 4 without switching to a straight wrist. Long fingers, of course, help the cause here; my fingers are relative short, so I must place the fiddle at point A and use a straight wrist to be able to reach my desired placements of 3. f. and 4. f. on s. 4 without having to vertically over-rotate my elbow. Position B allows the performer to simply stretch the fingers to the dark strings, as they are more prepared to be placed in the desired position. By using an angled wrist and a placement of the fiddleneck at position B, the hand is more or less locked, and 3. f. and 4. f. will probably have trouble reaching over to the dark strings. The thickness of the fiddle neck and angle at which the fiddle is held also impact these adjustments.

If we were to trust the preponderance of photographic evidence, which indicates that an angled wrist and a chest placement of the fiddle were more common in

the early days, we might then frame the accommodation of effective pinkie use as an exclusively modern phenomenon. Heddi reminds us, however, that this is not so:

> They cannot be good fiddlers if they have problems using the pinkie. 'Faremoan' boasted a lot about their pinkies and said: The others do not have the pinkie that 'Faremoan' do. It should be so firmly flexible and soft that they could bend it all the way onto the back of the hand; they thought the pinkie made the most beautiful tones. (Heddi, 1901, p. 9)[56]

Heddi's manuscript indicates that pinkie use was also valued early on. The degree to which Andres uses the pinkie in his playing style will be discussed in the analysis.

Fingering

As described in the introduction, the term fingering is here understood as referring to an action of the left hand (for a right-handed fiddler) which encompasses effective finger placements and the relationships among those placements. In the folk music field, Hardanger fiddle music lends itself very well to an understanding of it obtained *through the fingers*—hence my emphasis on this topic here. I have come across little theory on fingering for the fiddle, though Wiegestrand's study (2004) of jazz fiddler Didier Lockwood's system of fingering improvisation is an exception. Wiegestrand's main purpose was to explore an alternative technique for performing jazz violin by engaging various ways for string players (including the fiddle) to broaden their musical horizons via Lockwood's improvisations, and to expand upon Wiegestrand's own improvisations (2004, p. 62). Wiegestrand's reference to Lockwood's system labels the left hand's movement up and down the finger board while alternating among ten different finger patterns or 'finger schemes', as shown in his tablatures (2004, pp. 82–83). As the left hand in Hardanger fiddle practice is traditionally fixed in the 1. posision, motion up and down the fingerboard is less

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[56] Translation by the author. Original: 'De kan ingjen vare goe Spilemanne, dersom ann lie vondt me aa bruke Lislefing. Faremoan kjytte so felt af sikkaa Lislefing aa sae: Dei eire hava kje den Lislefingjen som Faremoan. Den sille vere so framifraa bøygjeleg aa mjuke ti aa legje alt at paa Handebakje; for me Lislefing totte dei, at da toka dei venaste Tonon'.

relevant to this study, but it does evoke the act of moving finger patterns between string pairs. Wiegestrand concludes that elite jazz performers should embrace all techniques and mental models as tools in the search for artistic 'truth'. This truth, as Wiegestrand sees it, does not exist exclusively within any given phrase or rhythmic figure but instead in *search* for these musical elements: 'And if this search is to be at the highest artistic level, one cannot limit the tools in use to an either-or. The performer must be prepared to use tools on a yes-to-all basis' (2004, p. 201).

Conceptual clarification

Hardanger fiddle fingering is quite particular, principally because one's fingers are always physically closer together than they are on a regular fiddle, due to the earlier mentioned shorter scale length. Likewise, because the left hand is fixed in the first position, its four playing fingers determine their respective working areas in relation to the open strings on the finger board. On the regular fiddle, the hand often assumes several different positions, and the fingers therefore have a variety of placements as well.

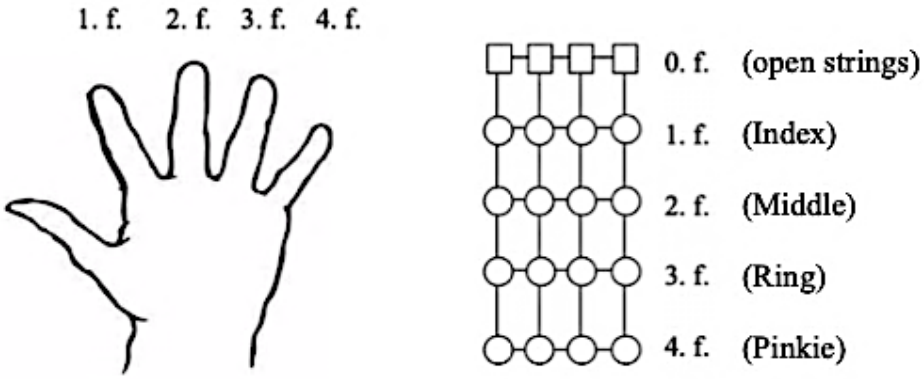

Fig. 24. Designation of fingers and finger placements.

The tablature in figure 24 represents a means of visualizing finger placements using guidelines to form a grid. These guidelines are not the same as the frets on, for example, a guitar, because the Hardanger fiddle is fretless, and limits the study to not include theory on guitar grips. In the Hardanger tablature presented here, the four playing fingers will have separate finger placements or working areas on each string. All of the possible intonations which could be made by each finger (e.g., minor, major or micro intonation) will be collected into *one* spot, as

varied intonation is not included in this study (though it is certainly part of Hardanger fiddle style). The four open strings have fixed tones based on the instrument's tuning.

Coincident pitches

This study will consider *which* finger is producing the given tone in the music, as pitches sometimes *coincide*, depending on the chosen tuning. Due to such coincident pitches, there are performances which are missing certain finger placements, because the coincident pitches render them unnecessary. As a starting point, a left hand in a fixed first position supplies up to twenty different finger placements.

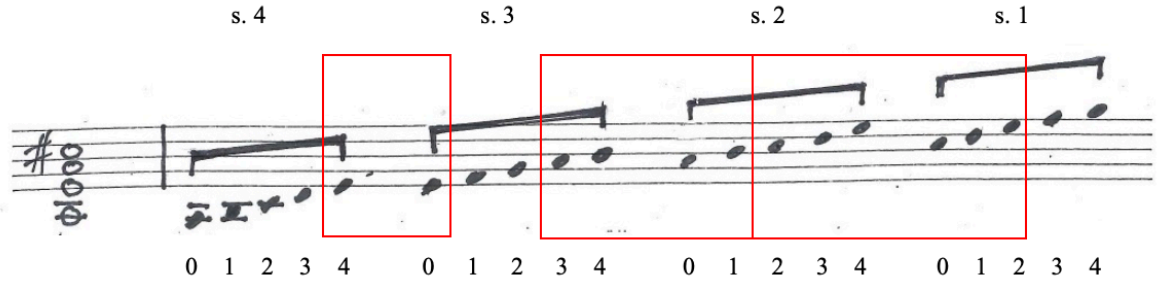

Fig. 25. Coinciding finger placements in *Skjoldmøyslaget*.

Figure 25 shows all of the finger placements available in *Skjoldmøyslaget,* and the red squares mark the coincident pitches—that is, 4. f. on s. 4 coincides with an open s. 3 (0. f.), and 4. f. on s. 3 coincides with 1. f. on s. 2, etc. This tuning produces in this way fewer pitches (14).

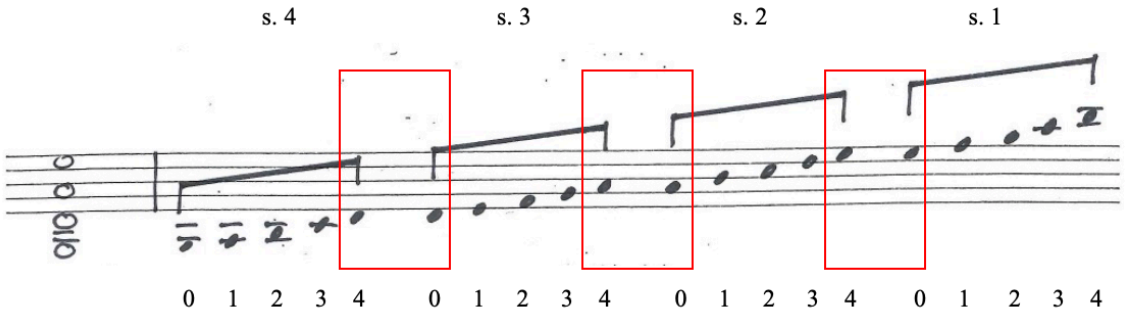

Fig. 26. Coincident finger placements in *Reisaren*.

In *Reisaren*, fewer pitches coincide, as the intervals between the strings in this tuning are bigger. We do find that the pinkie's placement on s. 4, s. 3 and s. 2 coincide with neighbouring open strings, as marked with the red squares in figure 26. The pitches are in this tuning reduced to 17.

Fingering for more unusual tunings such as a-e-a-c# of *Skjoldmøyslaget* evokes the process Sudnow (2001) describes in his book *Ways of the Hand.* When fiddlers try out tunings to which their fingers are unaccustomed, they must initially focus on the new finger placements in relation to what they know from a regular tuning. After some time and practice, fiddlers will simply allowing their fingers to find the new placements on their own.

How to identify a finger

How does one determine whether a note is fingered or produced by an open string, with only an audio recording to go by? The timbre of the tone can help—an open string sounds richer in timbre than fingered string, which can sound muted, though if the fingered tone is supported by a resonance string, it will closely approximate an open string.

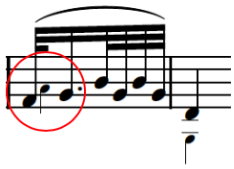

Fig. 27. A forefall in front of a finger placement in *Skjoldmøyslaget*.

A forefall (grace note) in front of the main note (see the red circle in figure 27) can also indicate a fingered note, as such an ornament seldom anticipates an open-string note. In figure 27, 3. f. is the *carrier* of the melody and is coincident with an open s. 2, though one could also use the open s. 2. as a melody carrier with, for example, an open s. 3 as a 'drone buddy'. Typically, the fiddler's body will choose the alternative (fingered or open) best suited to the fiddler and the situation at hand. The act of fingering will be further explored in chapter 5.

Grip notation

Because this study focuses on how a performance is fingered rather than how the music sounds, it relies upon a transcription method which shows where the fingers are placed. Carl Schart introduced the *grip notation* method in 1865 in his edition of Norwegian tunes for the Hardanger fiddle, and it has proven so effective that others have since developed and improved it in many decades since.[57] This notation system is based on an unambiguous relationship between note and grip, regardless of the fiddle's tuning. In the tuning of a-e-a-c# (*Skjoldmøyslaget*), then, this system notates the pitches on s. 1 two steps higher than they sound, and the pitches on s. 3 and s. 4 one step lower than they sound. In the tuning of a-d-a-e (*Reisaren*), it notates the pitches on s. 4 one step lower than they sound; the rest of the pitches on the other strings stay the same as a regular notation model. The two performances chosen for analysis (*Skjoldmøyslaget* and *Reisaren*) are transcribed principally to function as a guide for the reader, and the notation should be understood as a 'map' of the central processes happening in the music.

Meter

As mentioned earlier, the two types of *gangars* chosen for analysis are traditionally transcribed in 6/8 and 2/4 meter, though such an expression of meter may disguise music better understood as variously accented duple rhythmic groupings.

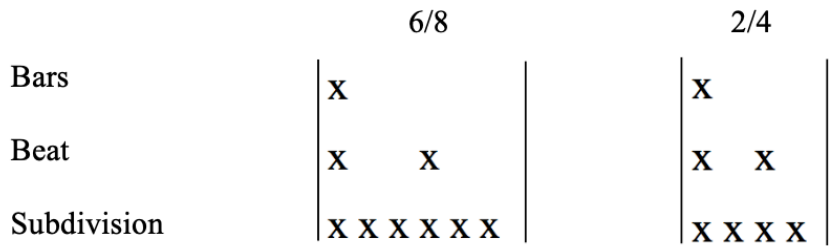

Fig. 28. Different levels of rhythmic signals in 6/8 and 2/4 meter.

As different rhythmic signals in the music can be organized at different levels (bar, beat and subdivisions), as shown in figure 28, the various organisations of signals within these levels defines the respective meters. A bar in 6/8 contains six

[57] See more in *Hardingfeleverket* (Gurvin, 1958–1981, p. 12 [vol. 6]).

beats within two groups of three, and a bar in 2/4 contains four beats within two groups of two. In both meters, the first group is often accented relative to the second. From a dance perspective, Blom (1993b) argues that the 6/8 *gangars* should be notated in 3/8 and the 2/4 *gangar* in 2/8, so that the pulse would be equal to the eighth notes. Kvifte (2008, p. 44), in turn, argues that neither the dance nor the music display any accented differences between the groups in a two-bar scheme; instead, the beats have equal weight throughout. He therefore agrees with Blom in renotating 6/8 as 3/8 but argues that the *gangar* in 2/4 should be notated in 1/4. The main difference between the two types of *gangar*, then becomes the subdivision of the beats—the 1/4 *gangar* in 2 and 4 and the 3/8 *gangar* in 3. Here, I will follow Kvifte's advice and notate *Skjoldmøyslaget* in 1/4 and *Reisaren* in 3/8, unless circumstances dictate otherwise.

Octave equivalence

The next issue regarding notation relates to the key signature which is normally associated with a score. The key assigned to a given transcription in turn implies the principle of octave equivalence, which states that all tones in all octaves used in the melody follow the markings of the chosen key signature. In Hardanger fiddle tunes, however, the melody often uses the entire range of the fiddle; that is to say, there are often different pitches in use between the lower octave and the bright octave which do not produce octave equivalence.

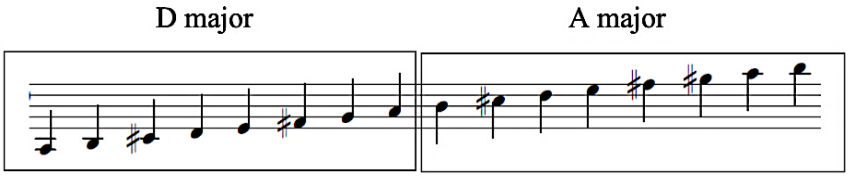

Fig. 29. The generally used pitches in the tuning of a-d-a-e.

Figure 29 presents the pitches generally used in the tuning of a-d-a-e, and we can see that the lower octave is in D major and the bright octave is in A major. Because Andres often uses a higher pitch for 3. f. on s. 3 and a slightly lower pitch for 2. f. on s. 1, the difference between g and g# will though in this perspective be less than a semitone between the two octaves. Because Hardanger melodies also favour frequent jumps between the lower and bright octaves, we cannot simply reclassify the melody as a change of key. Reference tones over the

course of the melody may consist of an open string, a finger placement or something remembered but not even sounded as such. In other words, there is no concrete basis for determining a single key as such. Because the computer program used for transcribing the performances in this study does not accommodate alternatives to a standard key signature, the most pragmatic way to notate the Hardanger fiddle tunes is to assign a key based on the perception of the main reference tones in each performance, then to manually mark each tone which deviates from this key.

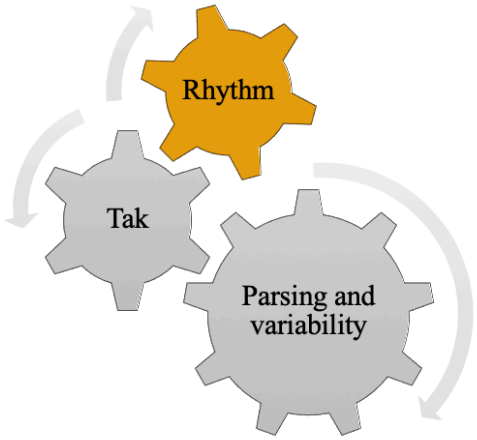

Fig. 30. Focus on rhythm

3. Rhythm

Introduction

The figure above proposes the framework for exploring signature characteristics of Hardanger fiddle playing in this work, and I will dedicate a chapter to each, in this order: *rhythm*, *tak,* and *parsing and variability*. The present chapter, focusing on rhythm, will include an examination of organic rhythm, a discussion of the music's relation to dance, and a specific engagement with both foot-stomping and bowing.

Organic rhythm

As a topic in musicology, rhythm studies have ranged from exploring timing (Bengtsson, 1974; Dybo, 1989; Gurvin, 1958–1981; Kvifte, 2013) to including measurements (Danielsen, 2010). Etymologically, the word's Greek origin (*rhytmos*) means flow or wave motion but also often describes characteristic rhythmic patterns.[58] Rhythm is part of the signature of a genre (such as *setesdalsgangar*) because it denotes how the sound is organized in characteristic patterns of short and long, accented and nonaccented, pulses over time. It is important to clarify what kind of rhythm one is adressing. This work intends to explore the internal rhythm in Andres's performances—that is, the ways in which

[58] See https://snl.no/rytme_-_musikk. Accessed 3 June 2019.

the different rhythmic signals relate to one another, not to a metronome. The term *musical* rhythm often seems to be used in relation to this type of internal rhythm: 'Musical rhythm are meaning differences that add to the tone's duration within the framework of metric devices' (Grabner 1924 in (Blom, 1993b, p. 162). Though, as music can be experienced as musically even if *not* relating to a metrical framework, I will label internal rhythm as *organic rhythm* in this study, 'which is a harmonious, natural part of a larger (orderly) whole; as part of an inner, natural necessity'.[59]

The question is *how* to best define these organic rhythmic markings in relation to one another. Kvifte (2013, p. 13) notes that something flexible can serve as a reference for something else which is perceived flexible. Still, some kind of normative framework is the best way to distinguish expressive from aberrant variations in rhythm. One such normative framework for the Hardanger fiddle tradition is dance.

Dance relation

Given that the Hardanger fiddle music arose as an accompaniment to dance, the fiddler's highest priority was most likely to keep the rhythm therein.

Fig. 31. A dance session in Setesdal. © Knut J. Heddi/ Setesdalsmuseet

The dancers probably had favourite fiddlers in this capacity—those who could keep a good dance rhythm and communicate effectively as well. The photograph in figure 31 shows a dance group at Rysstad around 1910 dancing to the fiddle playing of Andres Rysstad. It appears clear that rhythm was an exchange rather

[59] See the Norwegian academic dictionary: https://www.naob.no/ordbok/organisk. Accessed 3 June 2019.

than an imposed external framework in such settings, and that rhythmic communication went both ways. In a given musical culture, the way in which rhythm is sensed rather than articulated is a product of training and experience. This is why a Nordic dancer might struggle with Latin hip movements, and a salsa dancer might struggle with the *setesdalsgangar* (or a west coast fiddler such as myself trying to do the foot stomp and bowing in the style of Andres). Given the aforementioned connections between fiddler and dancer, the foot stomp most likely had a bearing and driving position on which the bowing was shaped. It is to the signature Hardanger foot stomp from Setesdal that we will next turn.

Foot stomp

The fiddlers in Setesdal generally uses a double-stomp technique, or *tvitrøing,* in the local lingo, which consists of alternating the feet in distinct stomp pairs. In this study, the first foot stomp is F. 1 and the second foot stomp is F. 2. Stubseid informs us that the double-stomp technique is an important part of the learning process in Setesdal,[60] though it is relatively rare elsewhere in Norway. The fiddle tradition's relation to dancing likely brought about the practice. Either foot can lead the pairing, and individual preference in this regard seems to derive from the fiddler's training or mentor. Aforementioned Hardanger fiddle master Torleiv Bjørgum used the left foot as F. 1 because it was on the same side of the body as the fiddle; he also tended to lean the body toward the fiddle side while playing. Stubseid uses the right foot as F. 1, most likely because he studied with the Hardanger fiddle master Dreng Ose, who did the same. Heddi used a pronounced and quite loud foot stomp with whichever foot: 'When the fiddler Knut Jonsson Heddi played for dance, the foot stomp was the first thing heared when one approached the dance venue' (Stubseid, 1992, p. 99).[61] Heddi was an old-time fiddler, not a *concert folk fiddler,* and had no reservations about the stomp as a central part of his practice. Though Andres learned from Heddi, he favoured less volume on his foot stomp.

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[60] Interview with Gunnar Stubseid, 18 Sept. 2018 at Hedde, Setesdal. Some fiddlers in Setesdal even practiced a *triple-stomp* technique; The Hardanger fiddle master Olav Heggland used toe and then heel on one foot, then the toe on the other foot, in his triple stomp (he needed special shoes to do so).

[61] Translated by author. Original: 'Når spelemannen Knut Jonsson Heddi spela til dans, høyrde ein fyrst trampinga når ein nærma seg danseplassen'.

The double-stomp can contribute several rhythmic markings within a bar. In my own practice, based on the west coast tradition, I mark only the first beat in each bar in *gangars* with my foot stomp. I often use both feet simultaneously while sitting down, therefore, to maintain balance in my body. If I am standing, I alternate relatively frequently between right and left foot, to keep my body moving and not start to stiffen on either side. Having experimented with the double-stomp technique from Setesdal, however, I can see why it takes time to perfect. By separating the feet into disparate rhythmic attacks, physical operations such as the fingering and the bowing can be impacted as well. One challenge of the practice, is to understand where to place F. 2 in relation to F. 1 in the two meters most relevant to the repetoire (1/4 and 3/8). My Setesdal informants were ambivalent about whether F. 2 should follow the rhythmic marking of the meter or operate almost independently. An analysis of the actual placement of F. 2 in practice will also inform the rhythmic grid I will use in relation to the act of bowing. It is in this regard of value to have a look at other schoolars work, as it is not clear what method might supply a framework for Andres's foot stomp in relation to his bowing and expressive deviations from the structure of this music.

In Ekgren's (1981) study of the double-stomp technique in the *nystev* (stanza) tradition from Telemark and Setesdal, she discusses where to put the relevant barlines, based on where the performer stomps the beat. Because nystev seldom aligns with a regular meter of any sort, barlines do not enforce the time signature but instead accompany the foot stomps, with a heavy barline placed just before F. 1 and a dotted barline just before F. 2. Using this method, Ekgren finds that (1) the foot stomp falls on important words in the text; (2) it appears only on accented syllables and never on unaccented syllables; and (3) the stomps occur in pairs. Ekgren also defines accented tones as tonal centres suing F. 1 as the most important foot stomp in the pair.

Note that an accent has no necessary association with volume at all; it is often a psychological device, an accident of perception, or even a structural by-product. When music is syncopated, the first beat in a bar is often unplayed but remains 'accented' in the mind or ears. Cooper and Meyer suggest that a rhythmic accent is often theoretical or experienced rather that actual:

> Though the concept of accent is obviously of central importance in the theory and analysis of rhythm, an ultimate definition in terms of psychological causes does not seem possible with our present knowledge. That is, one cannot at present state unequivocally what makes one tone seems accented and another not. For while such factors as duration, intensity, melodic contour, regularity, and so forth obviously play a part in creating an impression of accent, accents may occur on short notes as well as long, on soft notes as well as loud, on lower notes as well as higher ones, and irregularly as well as regularly. In short, since accent appears to be a product of a number of variables whose interaction is not precisely known, it must for our purposes remain a basic, axiomatic concept which is understandable as an experience but undefined in terms of causes. However, while we cannot stipulate precisely what makes a tone seems accented, we can define accent in terms of its operation within the musical context. (Cooper & Meyer, 1960, p. 7)

My analysis will examine the rhythmic placements of F. 2 in relation to F. 1 in terms of accentuation and overall volume. I will also account for the whole performance's variation in tempo.

In Groven's (1971a) research back in the 1930s, he sought a way to visualize the *rhythmic waveways* in asymmetric springars (3/4 meter) from a performance perspective, which meant tracking how the three beats in each bar varied throughout a given tune. He used a Morse-code receiver to measure several tunes from different parts of the country, including the Telemark springar *Markedsmåndagen* as performed by Gunnulf Borgen. Groven marked each of Borgen's foot stomps by punching the button on the receiver and thereby adding holes to a strip of paper. He then divided the bar into 100 parts in order to best discern the durations of the three beats: 39, 33 and 28 parts, respectively. He then measured the same tune as performed by Kjetil Løndal and received the same result. Groven concluded that the assymetry is less with the individual fiddler than with the individual tune, which derives its rhythm from its tradition (in this case, the Bøherings tradition of tunes from lower and middle Telemark). Though, Groven did not find the rhythmic waveways as he reduced a whole performance

to one formula (39, 33, 28), i.e., he did not include the rhythmic variations between each bar in each performance. Today's research shows that there is considerable variety in the asymmetry of *springars.*[62] Still, Groven's method of precisely tracking rhythmic attacks over the course of a tune seems useful. If we manually mark F. 1 in Andres's foot-stomp pairs within the framework of a defined meter, we can position F. 2 as well, then track any deviations in placements, tempo or volume. Such insights might generate tools for composing new Hardanger fiddle tunes.

Bowing

Bowing is a very important part of the learning process on the Hardanger fiddle, as a tune is not considered mastered until the bowing is correct. In folk music contests, as well, group performances with perfectly synchronized bowing are often awarded prizes. Kvifte (1986) describes a *bow stroke* as the bow's movement over the strings in whatever directions: a *down-bow* is when the frog moves away from the strings, and an *up-bow* is when the frog moves towards the strings. One down-bow or one up-bow is *a single bow stroke;* its exact length will be relative to tune's pulse or meter (e.g., in a 3/8 gangar, a bow stroke will be one, two or more eighth notes). He further describes the *folk music stroke* as generally containing several notes without a change in direction, though the so-called *ristetak* involves a change of direction for each new note. The folk music bowing is mainly *on* the string, so that the characteristics of the bow stroke depend on the variation in pressure rather than the bow leaving the string between each stroke. Hardanger bowing style, however, can also incorporate bow intermissions, where the bow moves from one point to another without touching the string. Stubseid describes Setesdal bowing as follows: 'Characteristics of the Setesdal playing is a constant change between short, sharp bow strokes and long bow strokes across the barline' (Stubseid & Løkken, 1986, p. 67).[63] In Andres's playing, bow strokes often establish a counter-rhythm to the foot stomps, which can be found in other parts of the country in the 6/8 *gangar* as well.

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[62] See more in (Egeland, 2016; Johansson, 2009b; Omholt, 2007).

[63] Translated by author. Original: 'Karakteristisk for setesdalsspelet er ei stadig veksling mellom stutte, skarpe strøk og lange bogedrag på tvers av taktstreka'.

Bow types and style

A bow stroke reveals both melodic inclinations through qualities such as weight, length, emphasis and texture. Such qualities can be shaped based on what type of bow that is used.

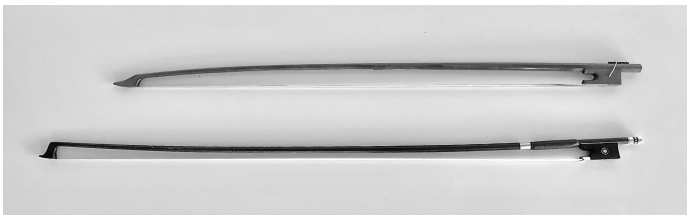

Fig. 32. A violin bow and a barrel bow.

Figure 32 shows two types of bows. The barrel bow is shorter than the violin bow and was often a homemade equivalent to the 'real' bow in the early days of Hardanger fiddling. The name barrel bow derives from the concave shape of the stick.[64]

Fig. 33. Fiddlers using a barrel bow. © Agder Folk Music Archive

Figure 33 shows the fiddlers (from the left) Petter Veum (1811–1889) from Fyresdal in Telemark, Knut Jonson Heddi (1857–1938) and Hallvard Rysstad (1870–1937) all using a barrel bow. The bow strokes made by a barrel bow could be shorter than those made by the violin bow, and its attack could be more pronounced. By the mid-1800s, more fiddlers started to use violin bows as part of the *concert period* within Norwegian folk music,[65] which saw the classical violinist become the playing ideal for the instrument. The violin bow brought about longer, smoother bow strokes, but fiddlers sometimes regressed. During

[64] Interview with Gunnar Stubseid, 18 Sept. 2018, in Hedde, Setesdal.

[65] The concert period is seen to begin with the concert Myllarguten shared with Ole Bull in Kristiania in 1849. See more at https://nbl.snl.no/Myllarguten.

this transition period, as well, the fiddler's right-hand grip was often two or three fingers holding the bow stick near to the frog. This grip shortened the length of the bow stroke and eased the weight of the violin bow, making it behave like the barrel bow. Another technique involved gripping the bow by the frog and shortening the bow stroke by using smaller sections of the violin bow. Stubseid (1992, p. 81) concludes that the change from barrel bows to violin bows had a major impact on the style of the traditional music in Norway. Today, many folk fiddlers have returned to the barrel bow to complement the violin bow.

Fig. 34. Andres using a violin bow. © Paal Vollen 1965/ Agder Folk Music Archive

The photo above shows Andres using a violin bow; he also uses one in the cine film footage included in my analysis. His bow technique in the footage appears to derive from earlier habits with a barrel bow or at least the bow style of his playing ideal (Heddi), as Andres holds the bow by the frog and primarily uses the middle area of the bow. It may also simply be his preferences for the bow, regardless of history or alternatives.

Bow shift

Bow distribution can be understood from two angles: by focusing on the bow shifts as a rhythmic device or by focusing on the length of each bow stroke (the distance between each bow shift). The turning point between bow strokes is the *bow shift*—that is, the attack of each individual bow stroke. The barrel bow generally produces a clearer attack than a violin bow, so fiddlers commit to one or the other depending upon their preferences and personality. Some favour smooth bow shifts, while others dig harder into the strings, which produces a sharper sound (recall the style of Torleiv Bjørgum mentioned in the

introduction). How to identify a bow shift and also where these bow shifts occur rhythmically will be explored in the analysis.

Patterns and cycles

Several successive bow strokes can further form a *pattern*, as can be found in the Jew's harp tradition in Setesdal as well, where the hit on the Jew's harps lamella seems to parallel bow shifts in Hardanger fiddle bowing. Kvifte (1986), in fact, indicates that each fiddle tune is dominated by one or a very few of such patterns.

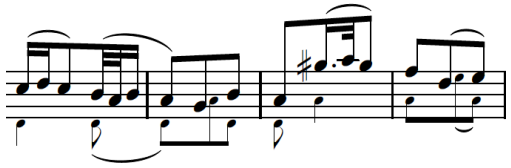

Fig. 35. Example of a bow pattern in *Reisaren*.

The bow pattern shown in figure 35 can be understood as 2+2+1+1+1+2+1+2 if we focus on the length of each bow stroke between the bow shifts using the note values of eighths. When such a pattern is repeated, we see a *cycle*.

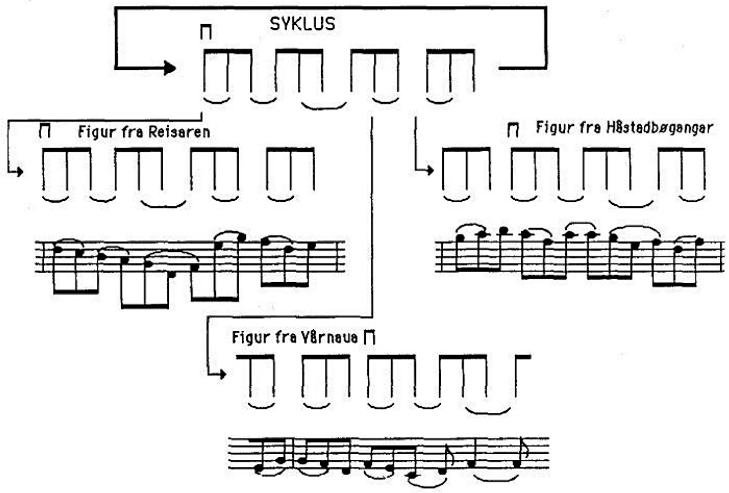

Fig. 36. A cycle of a pattern and its deduced figures from different gangars. © (Kvifte, 1986)

He argues that 3/8 *gangars* are largely dominated by the cycle from *Reisaren* and variants upon it. The figure above shows different figures deduced from *gangars* in 3/8 that begin within the cycle of the basic pattern from *Reisaren*. We might

wonder whether such pattern should be understood to follow the melodic structure and to serve as a tool for punctuating the music itself. In Kvifte's 1988 reprint of his thesis, interestingly, he states:

> If I had understood more of the nature of bowing patterns when I wrote the thesis, I would probably had saved much time that I used to pursue the idea that bowing patterns could be used to parse tunes into motifs and motif-parts. As bowing patterns to a large extent are regularities across motif and motif-parts, this is not possible. (Kvifte, 2007, p. 86)

As a point of departure, I will follow Kvifte's lead and approach bowing as an entity independent from melodic structure—one which has, first and foremost, a rhythmic function and used as a variability tool. *How* my analytical findings regarding bow patterns and cycles can become tools for composing will be further discussed in chapter 7.

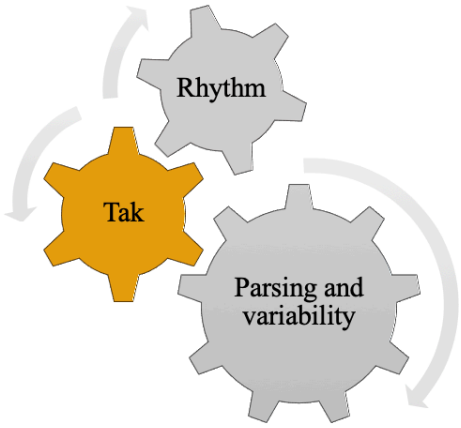

Fig. 37. Focus on *tak*

4. Tak

Introduction

The figure above proposes the framework for exploring signature characteristics of Hardanger fiddle playing for this work, and the present chapter will focus on the term *tak,* which was in the introduction defined as a melodic unit. The term is central to the fiddler's language in several Hardanger fiddle traditions, though its meaning varies slightly, as happens within oral traditions. The chapter will accumulate empirical data on the *use* of this term, with the intention to explore if such investigation could contribute with Hardanger-specific perspectives on form, melodic structure and punctuation in a fingering perspective.

This chapter consists of two parts. Part 1 reviews the empirical material from Jenstad's (1995) research on Norwegian folk music terminology, which engages the fiddle tradition from a historical perspective. Part 2 discusses my (virtual) inquiries to today's folk performers who are members of FfHf. The chapter concludes with a conceptual clarification that will inform the analysis's exploration of compositional tools.

Historical perspective

Jenstad's (1995) research describes the use of the term *tak* in different fiddle traditions, often with reference to both collectors and geographic areas. Arne Bjørndal argues that *tak* rendered as *tolotak* in Setesdal (that is, *tak* as a part of a tune played by the fiddler Torkjell Tolo); collector Johannes Skar has heard *føretak* (prelude) in the same area. In addition, Skar identified its plural form as *tok* or *tøk*, as in the example 'Dei toki kunde han ikkje taka' ['He could not do those *taks'*] (Skar, 1961, p. 190 [vol. 1]). Jenstad also finds that the collector Rikard Berge coined variations on the term in order to describe certain musical characteristics, including *klagetak* and *kviletak* (moaning-*tak* and resting-*tak*), *sidetak* (side-*tak*) and *særtak* (special-*tak*) (Jenstad, 1995, pp. 230–231).[66] Interestingly, it is thus worth noting that the use of the term can in this way be colored by the language of the *collectors* and not necessary the culture studied. When I presented findings to an informant, I was given to understand that *tak* is not commonly used in Setesdal today,[67] even if it had been at one time.

Jenstad's empirical material also indicates that the term has been used in various regions in relation to technical playing issues such as fingering (e.g., *dobbelttak* [doublegrip], bowing (e.g., *bogetak* [bow stroke] *and ristetak)*[68] and bow stroke direction (*nedtak* [down-bow] and *opptak* [up-bow]. In relation to *tak* specifically as a melodic unit, *nytak* [new-*tak*] refers to something new happening in the music. As to the *size* of a *tak* (a *tak's* extent in time), Jenstad demonstrates that the term seems to span from 'part of the slått' (i.e., a short period or division) to the whole tune (e.g., *bruratak* [a wedding tune]) (Jenstad, 1995, p. 225). Jenstad argues that the term *tak* originates from the term grip (1995, p. 231), and can in this way contribute with valuable information on fingering within a melodic unit. According to the Norwegian Academy's dictionary, a grip is defined as the 'way the fingers are placed when playing on certain instruments'.[69] Both terms (grip and *tak*) are therefore included in the following inquiry.

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[66] Terms translated by the author.

[67] Interview with Gunnar Stubseid, 18 Sept. 2018, at Rysstad, Setesdal.

[68] Fast changes between up and down bows.

[69] See https://www.naob.no/ordbok/grep. Accessed 14 June 2019.

Virtual inquiry

FfHf is a fine forum for reaching out to a variety of fiddlers. I informed forum members that the inquiry was part of my research, and that they would remain anonymous. All live responses to the questions were available to all members of the forum to read (like a real-time chat). Some of the responses, as well, relate to previous replies on the rolling chat wall, not my initial questions. The extracts below were selected for their relevance. The informants are numbered from 1–12. The questions were as follows:

- How do you understand the terms grip and *tak*?
- Do you use the terms today, and, if so, *how* do you use them?

1. I do not use the term *tak* in my dialect but can still talk about what has a synonymous meaning, in my understanding … I understand *tak* as a *vek*/ *skifte* [section], or part of one. And further, when a *tak* is placed after a specific fiddler's name, it is a *tak* he has shaped differently, like a variation or maybe a brand-new version, compared to the tune as it is otherwise known … I do not understand it as a grip … More like a melody line and a rhythmic course.[70]

2a. I think the term *tak* may be related to something that is repeated. A *tak* as I understand it in the fiddle music is a melody line that one repeats once or several times before moving into another *tak*. Old fiddlers in Telemark said that one should only repeat a *tak* in the same way twice; if one repeats it several times, variations should be included. I know that [name redacted] came in last in a competition in Oslo because he repeated a *tak* four times, according to the judges, but it is probably not that rigid anymore … One may talk about *taks* that are standard for the fiddle tune, while other *taks* are individual and local which the fiddlers either collected from other fiddlers or made themselves. There is great room for

[70] Translated by author. Original: 'Eg brukar ikkje omgrepet tak i mi dialekt, men snakkar likevel om det som er synonymt meininginnhald i mi forståing. Eg forstår eit tak som eit vek/ skifte eller delar av det. Og vidare at når eit tak er etter ein spesifikk spelemann, så er det eit tak han har forma annleis, som variasjon, eller kanskje som heilt nytt, samanlikna med slåtten slik den ellers er kjend … Eg forstår det ikkje som eit grep … Meir som ei melodilinje og eit rytmisk forløp'.

improvisation here; good fiddlers probably have a bank of different *taks* for the same tune, where one can choose what one wants to use—it may be planned or spontaneous.[71]

2b. I usually use it [grip] to refer to a single position of a finger on the finger board. Two fingers on the finger board I name a double grip … Another variant is when one grabs two strings with one finger—is it usually called a strangle-*tak*? … In Hallingdal, it is common to use an open string as a drone. In other districts, it is more common with double grips in larger parts of the *slått*, and it is most likely that grip is used synonymously with double grips in this regard … But I argue that one can call a finger together with an open string a grip. One grabs around the fiddle's neck. In addition, it is also the case in some tunes that one holds a third finger as a drone on one string and plays a melody line based on the first finger, second finger and open string on another string. I don't know if such an operation has any name.[72]

3. I use both *tak* and *vek* but understand a *vek* as a larger part of the tune than a *tak*. Therefore, there are several *taks* in a *vek.*[73]

4. I use the terms *tak* and *vek* a little interchangeably … It depends on how one defines the term *vek*. As I understand the word, a *vek* may contain

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[71] Translated by author. Original: 'Eg trur omgrepet tak kanskje har samanheng med å taka opp att. Eit tak slik eg forstår det i slåttespel er eit parti/ melodilinje som ein tar opp att ein eller fleire gonger før ein går over i eit anna tak. Gamle spelemenn i Telemark sa at ein berre skulle ta opp eit tak to gonger likt, skulle ein ta opp fleire gonger måtte det inn variasjon i taket. Veit [navn] tapa ein kappleik i Oslo fordi han tok opp same tak fire gonger ifølge domsnemnda, men er vel ikkje så firkanta lenger. Det er vel gjerne desse variasjonane som er individuelle eller lokale. Ein kan kanskje snakke om tak som er standard for slåtten medan andre tak er individuelle og lokale som spelemenn enten henta frå andre eller laga til sjølv. Og stort rom for improvisasjon her, gode utøvarar har vel gjerne ein 'bank' av ulike tak til same slått, der ein kan velge kva ein vil bruke, det vere seg planlagt eller spontant. Nye tak kan bli til der og då og'.

[72] Translated by the author. Original: 'Eg brukar det vanlegvis om ei enkeltplassering av fingeren på gripebrettet. To fingrar på gripebrettet kallar eg eit dobbeltgrep (engelsk double-stopping). Ein annan variant er når ein grip to strenger med ein finger, det kallas vel vanlegvis kvelertak? … I Hallingdal er det vanleg med åpen streng som bordun. I andre distrikt er det vanlegare med dobbeltgrep i større deler av slåtten, og det er vel slik at grep blir brukt synonymt med dobbeltgrep her og … Men eg meiner no ein kan kalle ein finger med åpen bordunstreng eit grep. Ein grip kring felehalsen. Ellers er det jo og i nokre låttar at ein held tredje finger som bordun på ein streng og spelar ei melodilinje basert på førstefinger, andre finger og åpen streng på ein annan. Veit ikkje om dette har noko namn'.

[73] Translated by author. Original: 'Eg brukar tak og vek, men eit vek er for meg ein større del enn eit tak. Altså, det er fleire tak i eit vek'.

several variations. When [name redacted] talked about *taks*, then I perceived that a *tak* could apply to one such variant, but never only a grip, ornament or part of a phrase. He was quite strict with the forms of the tunes, and occasionally I smuggled in *taks* I had heard from other fiddlers to see if he reacted. It went well. But once I took something that the brother [name redacted] had at the end of the tune … I got a clear message: 'Those *taks* there should not be in this tune. My father did not play like that'.[74]

5. The different forms of the tunes are often a sum of a basic form and the best *taks* and turnings the different masters have transmitted. Also, one may even convert good *taks* that one hears from other users into the form one has learned. That may be a double grip, a little variant of a *vek*, another version of ornamentation or the bowing. This may be an addition to the tune, or a new way to vary a *vek*. Some use *tak* about parts of a *vek*, while other may use *tak* about a whole *vek*. It is probably used a little differently.[75]

6. What is named strangle *tak* in Telemark, is named *tvi* grip in Hallingdal—thus one finger on two strings.[76]

7. My masters have used the word *tak* about a small motif, or a little part of a *vek* … Therefore, usually something more than a grip.[77]

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[74] Translated by author. Original: 'Jeg bruker tak og vek litt omhverandre … Det kommer litt an på hvordan en definerer vek. Slik jeg forstår ordet, kan et vek inneholde flere variasjoner. Når [navn] snakka om tak, så oppfatta jeg at det kunne gjelde èn slik variasjon. Men aldri bare et grep, ornament eller del av en frase. Han var jo ganske streng med slåtteformene, og av og til 'smugla' jeg inn tak jeg hadde hørt av andre spelemenn for å se om han reagerte. Det gikk gjerne bra. Men en gang tok jeg med noe som broren [navn] hadde med på slutten av slåtten … Da fikk jeg klar beskjed: 'Dem takja der ska ikkje vøra i den slåtten, slik spølå'kje far'.

[75] Translated by author. Original: 'Slåtteformene er ofte summen av ei grunnform og de beste taka og vendingene de ulike brukerne og slåttekildene har levert videre. Og gjerne plukker en sjøl gode tak som en hører andre bruker, inn i den forma en har lært. Det kan være et dobbeltgrep, en liten variant på et vek, en annen utforming av ornamentikk eller strøkvariant. Det kan komme som et tillegg i slåtten, eller som en ny måte å variere et vek på. Noen bruker tak om deler av vek, mens noen og kan bruke det om et helt vek. Det blir nok brukt litt ulikt'.

[76] Translated by author. Original: 'Det telemarkingane kallar kvelertak, kallar hallingane tvigrep—altså ein finger på to strenger'.

[77] Translated by author. Original: 'Mine læremestere har brukt ordet tak om et lite motiv, eller en liten del av et vek … Altså som oftest noe mer enn et grep'.

8. [Name redacted] talked about a release *tak*. It is a double grip/ strangle grip which is released into open strings.[78]

9. There are dialect differences here. The word grip is, as far as I know, unknown in West Telemark, at least traditionally … I'm used to saying *tak*. This word then refers to both a melody phrase and a grip. In Vinje, one says *kvævetak,* whereas many others say *strangle tak*. A word like double *tak* means, then, the same as double grip. Eventually, I also—even as a person from West Telemark—have begun to use double grip. The latter is usually used on *taks* where one has more than one finger on the strings. If it is traditionally called double *tak*/ double grip when one has two strings under one finger, I would hesitate. Then I would rather say *kvævetak.*[79]

10. I do not think the word grip exists in olden times in Telemark. It may have occurred in relation to organized training.[80]

11. I have done some interviews with *torader* [diatonic button accordion] players, and they use the word double grip when they press two buttons simultaneously. There is a grip where one presses the belly inwards, pushing down two buttons at the same time and then drag the belly outwards. It sounds like when fiddle players do a strangle grip with the first finger, but the torader players name this operation therefore double

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[78] Translated by author. Original: '[name] om sleppopptak. Det er eit dobbeltgrep/ kvelertak som vert sleppt opp til lause strengjir'.

[79] Translated by author. Original: 'Det er dialektskilnader her. Ordet grep er så vidt eg veit, framandt i Vest Telemark, iallfall tradisjonellt … Eg er van med å seia 'tak'. Dette ordet viser då BÅDE til ei melodivending OG eit grep. I Vinje heiter det 'kvævetak' der mange andre seier 'kvæletak'. Eit ord som dobbelttak viser då altså til det samme som dobbeltgrep. Etter kvart har nok eg og—endå eg er vesttelemarking—teke til å bruke dobbeltgrep. Sistnemnde er vel til vanleg nytta om tak der ein har meir enn ein finger på strengene. Om det tradisjonelt heiter dobbelttak/dobbeltgrep når ein har to strenger under ein finger, tvilar eg litt på. Då ville eg heller seia kvævetak'.

[80] Translated by author. Original: 'Trur ikkje ordet grep finns frå gamalt av i Telemark … Det har kanskje kome med organisert opplæring'.

grip. Everyone that was interviewed had the Hardanger fiddle as a playing ideal, even though they played torader.[81]

12. I do not understand a single finger on the string as a grip. I do not talk about grips before having at least two fingers on the string at the same time, or at least one finger on two strings. Then I name it double grip and strangle *tak* … I note that it is very illogical not to speak of other grips than double grips, but that's the way it is. I have not thought about it until now … I use them [grip and *tak*] interchangeably. I have now, like most others, learned to play both here and there, and then you get used to several terms.[82]

Reflection

Based on Jenstad's reviewed empirical material and the completed inquiry, I will now reflect on how to understand a *tak* in a fingering perspective and clarify the terms that will be used in the analysis's exploration of compositional tools.

The answers from the informants at FfHf varied according to individual experience and, as importantly, training. Both *tak* and grip were used interchangeably by some people, depending on their teachers. One informant used the term *tak* for both grip and *tak*. One informant also argued that the term grip might have arisen in more modern times due to institutional training. In some traditions, the term double grip can imply strangle grip as well, as can the term double-*tak*, according to Jenstad.

Some informants understood certain *taks* to be typical for a given tune (or 'standard' *taks*), whereas additional *taks* were original variations or additions by

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[81] Translated by author. Original: 'Eg har gjort nokre intervjuar med toraderspelarar, og dei brukar ordet 'dobbeltgrep' når dei trykkar ned to knappar samstundes. Det finst eit grep der ein pressar belgen innover, trykkar ned to knappar samstundes og så dreg belgen utover. Det høyrest ut som når felespelarar tek 'kvelargrep' med peikefinger, men toradarspelarar kallar det altså 'dobbeltgrep'. Alle som eg intervjua hadde hardingfela som ideal, sjølv om dei spelte torader'.

[82] Translated by author. Original: 'Eg tenkjer ikkje på ein enkel fing på strengen som eit grep. Eg snakkar ikkje om grep fyri eg har minst to fingrar på samtidig, eller i det minste har ein fing på to strenger. Så kallar eg det dobbeltgrep og kvelertak … Merkar at det er veldig ulogisk å ikkje snakke om andre grep enn dobbeltgrep, men slik er det nå eingong. Har ikkje tenkt på det fyri nå … Eg brukar dei ialle høve om einannan (grep og tak). Har nå, som dei fleste andre, lært å spela både her og der, og da blir ein vane med fleire nemningar'.

the fiddler. *Tak* also seems to label something that is repeated (in Norwegian: *å taka opp att*)—in most cases, twice at most—before being changed. One informant characterized a release *tak* as a move from a grip into open strings. Note as well that the operation of pressing one string with one finger together with a drone is generally *not* understood as a grip, save by one informant. The same informant further described a finger operation involving one finger holding its position while other fingers worked around it through placements on neighbouring strings. These are all interesting information regarding how to clarify the term for my analysis as we shall soon see.

Regarding size (a *tak's* extent in time)**,** some of the informants understood the *tak* to be relatively small, though generally bigger than a grip. *Tak* also seems to be related to the term *vek* (section) in various ways. In traditions which favour relatively long motifs (i.e., four bars), a *vek* is considered 'long' and might include several *taks*. In traditions which favour relatively short motifs (i.e., two bars), a *vek* is considered 'short'. In Setesdal, these short motifs are named *vensls,* and 'a vek is then like a vensl'.[83]

Clarification

In point of departure, it is necessary to define the difference between a motif and a *tak*. A motif is understood as a meaningful musical entity which includes both melody and rhythm. *A tak* is understood as a meaningful musical entity related primarily to fingering operations; it does not have to include rhythm. A *tak* can contain both a motif and parts of a motif.

Further, while the original meaning of the term *tak* may be grip, and *tak* presently encompasses both a grip and a melodic unit, I have distinguished between the terms for clarity's sake. As a point of departure, as well, the operative difference between the two terms is that a grip is fingered in the moment, *not* over time, whereas a fingered *tak* includes time. The following further clarifications on grips and *taks* will be used in the analysis.

[83] Interview with Gunnar Stubseid, 18 Sept. 2018, at Rysstad, Setesdal. Translated by author. Original: 'Et vek er altså som ei vensl'.

Grips

A grip primarily consists of two distinct finger placements played simultaneously as a chord, and creates tension and offer resolution in the music.

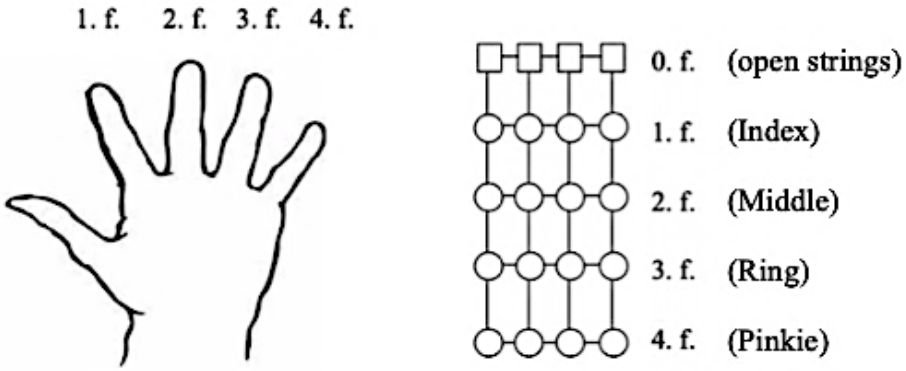

Fig. 38. Designations of fingers and finger placements.

The figure above returns us to the conceptual clarification for fingering, as proposed in chapter 2, section *fingering*. The two finger placements in a grip can be made by any fingers on two strings. The most common used grips are the *strangle grip* and the *double grip.*

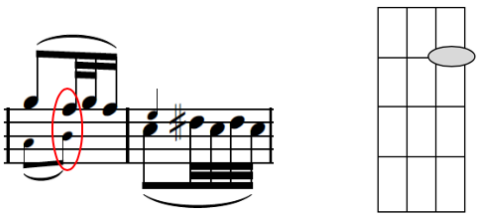

Fig. 39. A strangle grip in *Skjoldmøyslaget*.

A strangle grip is understood as the operation of placing *one* finger on two different strings, as marked with a red circle and indicated on the tablature in figure 39. This operation raises the harmony tone one step and is primarily fingered by 1. f. in the Hardanger fiddle tradition. Hardanger fiddle master Dreng Ose from Setesdal described it as *cleaving the tone* (Stubseid, 1992, p. 96). Strangle grips can be done by other fingers—for example, 2. f. pressing two strings—but such fingering is almost unknown within Hardanger fiddle practice (it is more common in other traditions, such as Celtic music). When other fingers are involved, however, the grip becomes *fingered* as a strangle grip but not

played as a chord, because the bow tends to pivot from string to string, playing the grip as two individual notes.[84]

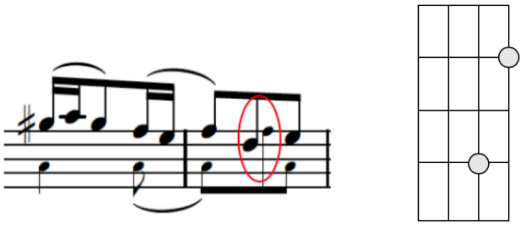

Fig. 40. A double grip in *Reisaren*.

Placing a finger on one string and another finger on a neighbouring string, then playing both notes as a chord, is labelled a *double grip.* In English-speaking fiddle practices (e.g., UK and USA), th¢is grip is often known as a 'double stop'. A double grip can involve different combinations of finger placements. The double grip showed in figure 40 consists of 1. f. on s. 1 and 3. f. on s. 2, as indicated by the red circle and the two finger placements in the tablature.

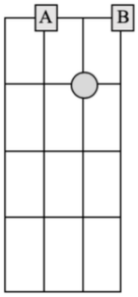

Fig. 41. Possibility for drone variation in a drone grip.

In addition to the aforementioned grips, informant 2 described a *drone grip* as the operation of one finger pressing a string while also sounding an open neighbour string. It is worth noting that if the finger presses one of the middle strings, as shown in figure 41, the fiddler has two fine options for the choice of a drone buddy—either a bright or a dark drone (A or B). A fingered melodic unit played on string pairs without double grips and strangle grips can be understood, from this perspective, as a line of drone grips.

[84] Online interview with Catriona Macdonald, 29 Nov. 2018.

Tak

I will propose a specific *tak* for this study, based on the observation by informant 8 that a release *tak* could be understood as 'a double grip/ strangle grip which is released into open strings'.

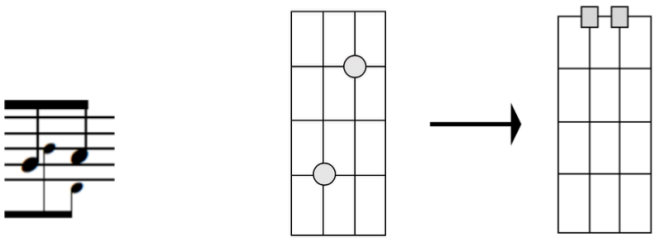

Fig. 42. Example of a release *tak* in Reisaren.

Here, a release *tak* describes the operation of holding a grip (either double or strangle grip), then releasing the fingers (*and* grip) and continuing to play on open strings, as shown in figure 42. The actual act of releasing the muscle tension in the fingers is *a release action,* which will be further discussed and explored in chapter 5, section titled *Fingered signs*.

Fingering

The inquiry also contributed with other information specifically related to the act of fingering. The new term *finger bridge* describes one finger sustaining tension on a string while other fingers works around it (see the description of informant 2).

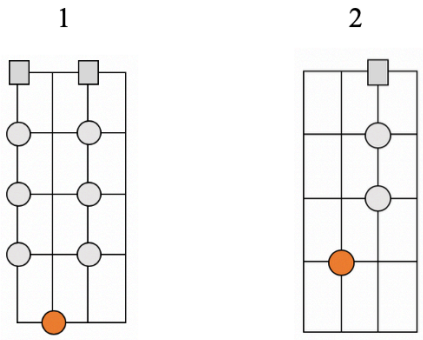

Fig. 43. Two examples of finger bridges.

The figure above shows two finger bridges. The orange in the tablatures marks the finger that sustains the most muscle tension and is in this work named the

gravity finger. The finger placements marked with grey are other potential finger placements.

Intertwined fingering is another new term, describing finger bridges *without* a release action (that is, *two* open strings). In other words, this operation involves two or more consecutive finger bridges that overlap or intertwine, without a release action between them.

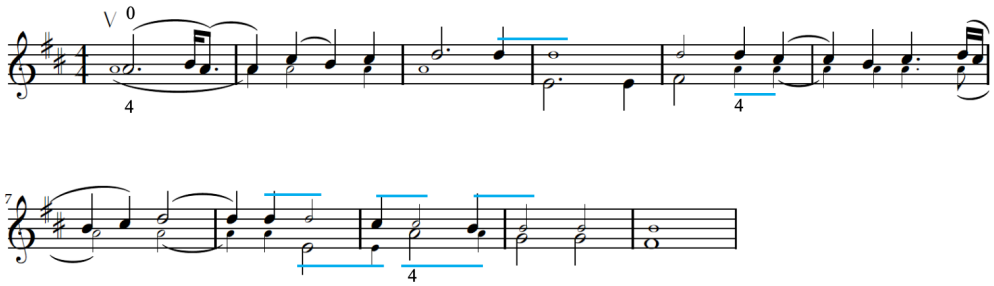

Fig. 44. Example of intertwined fingering.

Figure 44 shows how different finger bridges can intertwine. For example, in bar 1, 4. f. on s. 3 holds the finger bridge (operate as the gravity finger) until bars 3 and 4, when 3. f. on s. 2 creates a new finger bridge. These different finger bridges can be long or short. The figure illustrates some of the different changes between finger bridges (marked with blue lines). The term highlights combinations of finger bridges in two-strings playing and can operate as a fine tool for composing. If Andres uses intertwine fingering will be explored in the analysis.

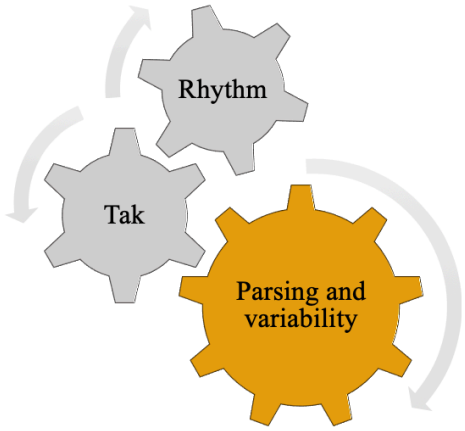

Fig. 45. Focus on *parsing and variability.*

5. Parsing and variability

Introduction

The figure above proposes this work's framework for exploring signature characteristics of Hardanger fiddle playing. *Parsing and variability* is the focus of the present chapter, which primarily considers issues related to form, melodic structure, punctuation and variability from a fingering perspective. As the act of punctuation is based on one's understanding of variability, these matters will be presented as intertwined. This chapter also presents various perspectives on ways to approach the analysis, the conduct of the analysis, a testing process which includes different fingering principles and an overview of fingering mechanics.

Punctuation

Parsing a complete performance using some kind of smaller units allows the researcher to compare its different parts most productively. Of course, it can be challenging to punctuate a *setesdalsgangar,* thanks to melodic phrases which can be either repeated or changed seemingly at whim, and which intertwine with each other and supply, at best, ambiguous borders between themselves. The music, that is, will be experienced as a continuous soundstream rather than a sequence of parts. This is fine for the fiddler and the casual listener, but not for the researcher, who must strive to 'punctuate' this soundstream to generate insight, as Marvin Minsky argues:

> Most people in our culture feel a conflict between (a) explaining thinking in terms of discrete symbolic description and (b) the popular phenomenology in which the inner world seems continuously colored by magnitudes, intensities, strengths and weaknesses—entities with the properties of *continua*. Introspection or intuition is not very helpful in this area. I am convinced that the symbolic models are the more profound ones and that, perhaps paradoxically to some readers, continuous structures are restrictive and confining … There would be no actual power in such a continuous awareness; for only a process that can reflect on what it has done—that can examine a record of what has happened—can have any consequences. (Minsky, 1975)

To produce any insight, signs and contrasts in the music must be identified within its temporal unfolding, so that the *relationships* among the different parts can be understood. Louis Hjelmslev observes:

> Naïve realism would probably suppose that analysis consisted merely in dividing a given object into parts, i.e. into other objects, then those again into parts, i.e., into still other objects, and so on. But even the naïve realism would be faced with the choice between several possible ways of dividing. It soon becomes apparent that the important thing is not the division of an object into parts, but the conduct of the analysis so that it conforms to the mutual dependence between these parts and permits us to give an adequate account of them. In this way alone the analysis becomes adequate and, from the point of view of a metaphysical theory of knowledge, can be said to reflect the *nature* of the object and its parts. (Hjelmslev, 1966, p. 21)[85]

[85] Translated by the author. Original: 'Den naive realisme vilde antagelig mene at inddelingen simpelt hen bestod i at dele en foreliggende genstand i dele, altsaa i andre genstande, derefter disse igen i dele, altsaa i igen andre genstande, og saaledes videre. Men selv for den naive realismen vilde valget komme til at staa mellem flere mulige maader at dele paa. Man naar hurtig til den erkendelse, at hovedsagen egentlig slet ikke kan være at dele en genstand i dele, men at indrette analysen saaledes at den underordner sig og tillader fyldestgørende at gøre rede for de forbindelseslinier, de afhængigheder, der bestaar mellem disse dele indbyrdes, hvorved delingen alene bliver adækvat og ud fra en metafysisk erkendelsesteori kan siges at afspejle genstandens og dens deles *natur*'.

Hjelmslev thus emphasises the *conduct* of the analysis—that is, how the analysis behaves in relation to its purpose—over the actual act of punctuation involved in it. This act certainly demands sensitivity, because one's choices will be critical to both its conduct and its outcome. The goal of the act of punctuation is to discern significant shifts in the melodic structure so as to construct borders and relationships between its sections, and ultimately capture something about the 'nature of the object and its parts'.

Hierarchy

A hierarchy is often used in music analysis. Of course, music can also be perceived as a flat structure, but its events then register as purely local and are unable to inform any larger understanding of the relationships among the parts and any given part's relationship to the whole performance. Researchers generally apply a hierarchical structure using a *top-down perspective*. The punctuation starts by defining bigger groups, which are subdivided into smaller parts, according to what is appropriate to the analysis.

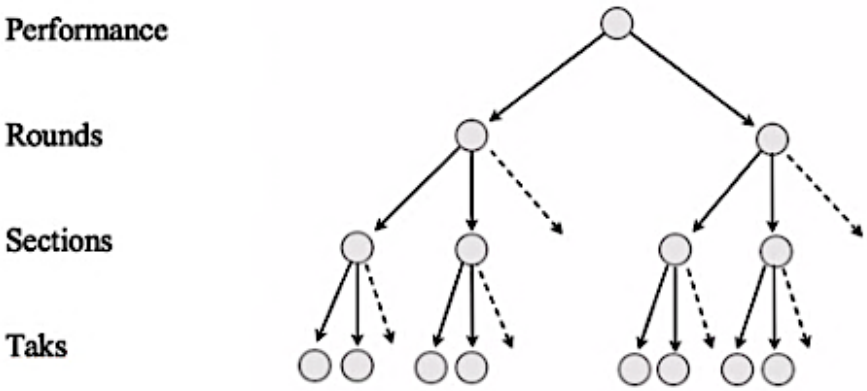

Fig. 46. Hierarchical structure with a top-down perspective.

Decisions made at the upper levels determine the content and presentation of content at the lower levels. As shown in figure 46, the top level here is the entire *performance,* and the next level involves the number of *rounds* in it.[86] The following level involves those rounds' *sections,* which in turn contain *taks*.

[86] A performance consisting of two rounds is traditionally the most common form used in both competitions and concerts. When played for dancing, a performance often contains more rounds.

Ambiguity

The main requirement of this hierarchy is to distinguish each *tak* unambiguously. If there are no clear boundaries between *taks*, there will be no clear boundaries between units at the upper levels. Barlines are helpful in this regard, but, of course, they are not traditionally part of orally transmitted music but instead added only in the act of transcription. Because different rhythmic signals mark the beat through the music's timeline, the first beat of a bar can be experienced in different ways.

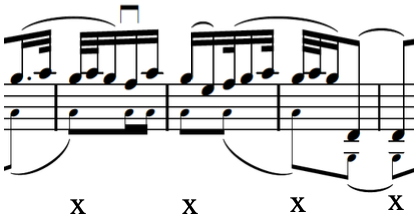

Fig. 47. Barlines in front of F. 1 in *Skjoldmøyslaget*.

If one positions a barline before the initial foot stomp in the stomp pair, as shown in figure 47 (F. 1 marked with an x), the bow strokes, ornaments and tones with equal pitch following one another in the timeline often cross the barline, which leads to an experience of the *tak* being *offset*.

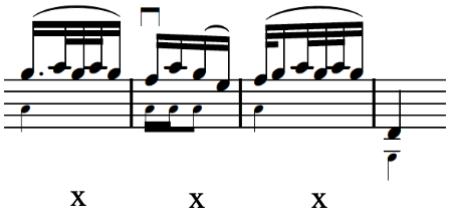

Fig. 48. Barlines primarily following the bowing in *Skjoldmøyslaget*.

An alternative barline placement is shown in figure 48, primarily following the bowing (i.e., each bar starts with a bow shift). This is a less common way to understand this music, however, because its pulse is most readily equated with the dancing it accompanies.

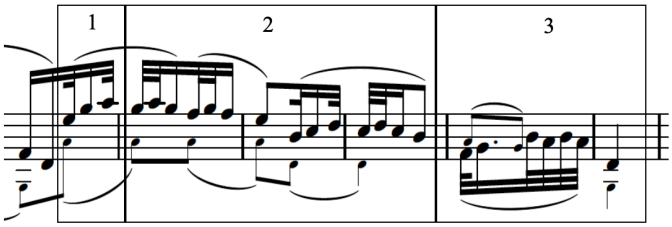

Fig. 49. Example of parsing in *Skjoldmøyslaget*.

Figure 49 shows an example of how to punctuate *Skjoldmøyslaget* despite the inadequacy of its barlines. The question then becomes whether the musical excerpts within the squares marked 1 and 2 should be understood as one *tak* which crosses the barline, or whether 1 should be understood as part of the previous *tak* in the timeline, and 2 should be understood as an independent *tak*. Because 1 contains parts of an ornament period which continues over the barline into 2, it would appear to be part of the same *tak*. A further question is whether 3 should be understood as part of (1 and) 2 or considered to be an independent *tak*.

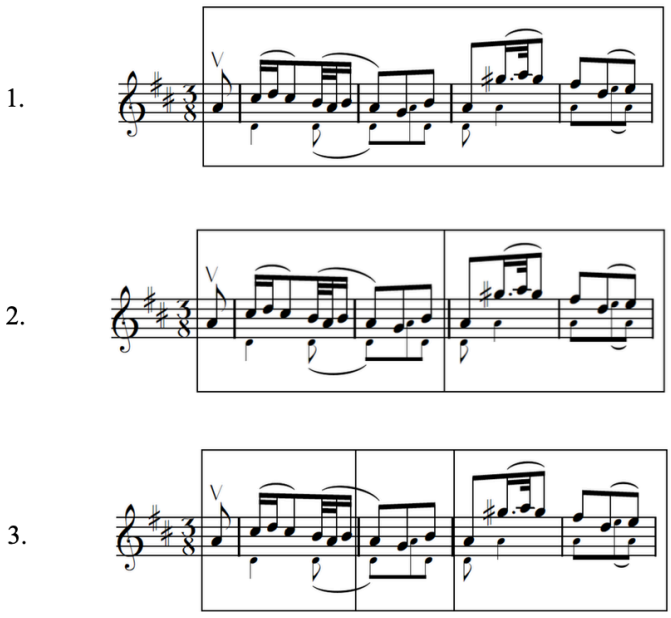

Fig. 50. Different ways to parse *Reisaren*.

Figure 50 shows three ways to parse *Reisaren*, and the choice between them depends upon what the analysis seeks. The present analysis seeks to explore characteristic tools for composing in the Hardanger fiddle repetoire, primarily from the perspective of fingering. The act of fingering will therefore guide it as to how to best parse the two performances involved here, as we shall soon see.

More on variability

Before looking further at the act of fingering, we must linger upon variability, a central aspect of the fingering process. In chapter 1, I framed variability as a means of response in traditional tunes. I will now review different researchers' theories concerning variability, in order to generate a relevant clarification for my own analysis.

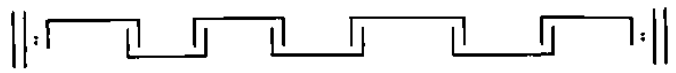

Fig. 51. The chain motif principle. © (Stubseid, 1992, p. 89)

Due to the fact that motifs or *taks* are repeated and often changed, they often intertwine with one another, as shown in figure 51. Stubseid categorises the Hardanger fiddle music from Setesdal which consists of several short motifs (two bars) chained together in this way as the *chain motif principle*.

Groven (1971a) notes that folk fiddlers refer to variability using the term *brigde* ('change', from the Old Norse *brigdi*):[87]

> In the fiddler's terminology such minor changes in the strophe are called *brigde* … In this way, the *brigde* can gradually change the melody so that we can say that we transform to a new *tak* … Such a row of *brigdes* we can call a cycle. (Groven, 1971a, p. 115)[88]

In Groven's explanation, though, the meaning of the term is unclear. Does *brigde* refer to only *what* has changed or the new variant as a whole? He gives no clear answer to this question. The main point though, is that a *tak* can change. Groven further defines a period consisting of a *tak* which is directly repeated (with changes) as a *cycle*, then argues that 'we can say that we transform to a new *tak'*, though he does not describe this transformation. My analysis will examine the

[87] See https://ordbok.uib.no/perl/ordbok.cgi?OPP=brigde&nynorsk=+&ordbok=nynorsk. Accessed 12 March 2019.

[88] Translated by the author. Original: 'I spelemansterminologien heter slike små endringar i strofa brigde … På denne måten kan brigdi gradvis endre melodien slik at me kan segje at me gjeng over til eit nytt tak … Ei slik rekkje med brigde kan me her kalle ein syklus'.

nature of this transformation more closely as an interesting tool for composing. Groven continues:

> The 12 first bars are included in cycle A. But here we meet part B that is not *brigded*. When coming to bar 17, we get a one-bar period which is repeated. This is cycle C. This initially contains six repetitions of the one-bar period, which is delimited by a rhythmic resting point. Then we get cycle C one more time. And thus, we come to part D, which is a fixed, *unbrigded* two-bar period. Finally, we get section E, a double three-bars period. (Groven, 1971a, p. 115)[89]

Here, the term *brigde* is now also used as a verb. If a *tak* is *not* repeated, it is therefore unchanged or *unbrigded*. What if a *tak* is repeated but unchanged? If *brigde* means change, then this *tak* is likewise *unbrigded*. From this perspective, we now have two kinds of cycle: *non-varied* (*unbrigded*) and *varied* (*brigded*). Later in his text, Groven seems to characterise certain *taks* as main *taks* (*gjennomgangstak*), which are those which appear most over the timeline of the performance, as delimited by other *taks*. A main *tak* might also be understood as the *tak* which is most repeated and/ or most changed. Such a main *tak* I will name *a core unit* in my analysis.

Heddi (1901) also discusses variability in his manuscript. In the following paragraph, he uses the local term *vensl* for a motif as well:

> It is rare for a *vensl* to be played only once; and if this happens, it functions like a ladder or a bridge into a new main *vensl*. The main *vensls* must be repeated until the emotion comes to rest, having enjoyed the best of it. (Heddi, 1901, p. 16)[90]

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[89] Translated by the author. Original: 'Dei 12 fyrste taktene kjem under syklus A. Men her møter me so vending B som ikkje er brigda. Når me so kjem til takt 17, fær me ein 1-taktsperiode som tek seg uppatt og uppatt. Dette er då syklus C. Denne inneheld i fyrste omgang 6 uppatt-tak av 1-taktsperioden som blir avgrensa ved eit rytmisk kvilepunkt. So fær me syklus C ein gong til. Og dermed kjem me til vending D, som er ein fast, ubrigda 2-taktsperiode. Tilslutt fær me avsnitt E, ein fordobla 3-taktsperiode'.

[90] Translated by the author. Orignal: 'Det er sjella, at ei vensl vare spila barre eigong; og dersom det treffer, so er det sovorne som er liksom ein stige hell bru inn i ei ny hovudvensl. Hovudvenslinn maa tvitakast so lengje, til kjensla heve kvilt ut og noete det beste'.

To Heddi, the main *vensls* are those which are repeated most often. Furthermore, if a *tak* is played only once, it is a *ladder* or a *bridge* to a new main *vensl*. Heddi's *bridge* is *not* the same as Groven's *brigde*; the latter is a melodic unit which has changed, whereas the former is a melodic unit which has *not* changed (it has not even been repeated). Here, I will use the term *Heddi-ladder* rather than *bridge* for a *tak* which is not repeated.

Greni's (1960) research on the vocal tradition from Setesdal, based first and foremost on the Hylestad tradition, also addresses variability. Greni's findings indicates that most of the material from Hylestad can be described according to three basic formulas and their associated variants, and that the differences among the individual melodies derive primarily from variations upon these formulas. Greni does not discuss the musical details in her study, including 'smaller rhythmic variations, repetitions of notes (division of i.e., a fourth in smaller note values consistent with the number of text syllables), main notes and ornaments',[91] as she considers them irrelevant to her theory. At a performance level, she notes that in different recordings of the same lullaby done by the same performer, the combination and order of basic formulas were stable, even as the singer moved freely among the formulas. In this way, Greni can describe what parts of the motif are fixed and what parts change, though she does not discuss *how* these parts interact as such.

Kvifte (2007) studies variability on an individual level by analysing six performances of one tune (*Skårsvikjen*) by Hardanger fiddle master Salve Austenå. Kvifte is interested in the ways in which a Hardanger fiddle tune can vary across performances yet retain its identity, and he proposes an analytical model of variability in this repertoire to account for this quality. He connects his research questions to theories of information and cognitive psychology, uses a hierarchical structure with a top-down perspective in his analyses and notes its obvious impact upon his process, given that each performance had to be parsed into particularly well-defined units (2007, p. 146). Note that in the following

[91] Translated by the author. Original: 'Mindre rytmiske variasjoner, tonerepetisjoner (oppdeling av f.eks. en fjerdedelsnote i mindre noteverdier overensstemmende med antallet i tekststavelser), gjennomgangstoner og ornamentikk'.

paragraph, Kvifte uses the term *vek* to refer to a period consisting of repeated motifs:

> As long as a motif was repeated unaltered, it is easy to identify a repeat; the problem starts basically when the repeat is not exact: Is it a variation of the motif or a new motif, and therefore also a new *vek*? What is the analytical distinction between a variation and a new motif? (Kvifte, 2007, p. 143)

Kvifte discerns the fact that the amount of variability one perceives in a motif can influence one's understanding of different *veks*. He describes variability as the product of a chain of choices and focuses on the motif as the central unit in the change patterns in *Skårsvikjen*. Kvifte sums up the study by proposing three more general rules: (1) A motif variant may be played at most three times in a *vek*. End variants are the exception, as they are played only once. (2) Where the motif variants are used in the *vek*—beginning, middle or end—is marked at the hierarchical level of the motif group, which falls between *vek* and motif level. (3) When a motif variant is played the allowed number of times, it should not be used again in the same *vek*—a condition he labels *the rule of continuous variation*. He continues:

> One obvious connection is that the greater the fiddler difference between two motifs, the greater the possibility for the motifs to be perceived as belonging to separate *veks*. It is worth noting that this is exactly the situation that gives the largest uncertainty in parsing tunes into *veks*. This raises a question of whether there is an observable discontinuity in the amount of difference between motifs? … Is the variation considerably larger (in which case a new *vek* is encountered)? This is an open, empirical question, but my immediate feeling is that there is no such discontinuity. (Kvifte, 2007, p. 162)

Kvifte indicates that there may be more expansive perspectives on variability than that which occurs within a *vek*, which I find interesting. It also appears that he experiences the processes which inform variability in this repertoire as so intertwined that it is counterproductive to form principles regarding *when* a *tak* is

changed. Of course, in his article (1981) '*On Variability, Ambiguity and Formal Structure in the Harding Fiddle Music'*, he notes:

> A precise *vek* marker would also have furnished us with information on the precise beginning of a motif. As it is, the Harding fiddle music provides no such marker, nor other clues to this. (Kvifte, 1981)

Perhaps fingering could indicate such a marker? The following analysis will present one perspective on this possibility.

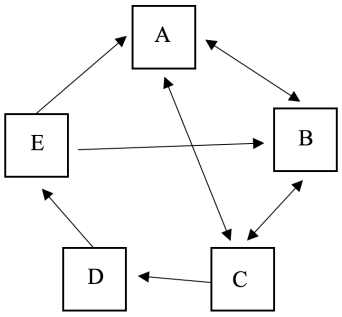


Fig. 52. Example of a network graph.

Kvifte (2007, p. 63) also draws upon a network graph to illustrate musical form via possible connections among discrete melodic units in a given performance, though the order of the different parts remains relatively fixed. In other words, the order of how the parts appear in the timeline does not change to a greater extent. This graph illustrates the number of *taks* in a performance and the connections (and lack of connections) among them. In figure 52, that is, *tak* A connects back and forth to both B and C, while *tak* D only moves to E and never connects with, for example, B. Such connections between *taks* may appear once or many times, depending upon the fiddler's inclinations (e.g., A, B, A, B). A network graph thus demonstrates relations among *taks* and between each *tak* and the whole performance. It does not indicate whether a *tak* is changed, how many times a performer moves between the related *taks* and how long a performer stays with a *tak* before moving to the next.

Circuits and jumping points

Levy (1989) addresses variability in the context of defining clear start and end points for a melodic unit, via *circuits*:

> As long as the repeat structures, as they appear in a *slått*, cannot be shown to indicate their own beginnings and endings, it would be a misplaced act of violence on the part of the describer to introduce such criteria into the music. Instead, the concept of circuits means a closed course, which does not in itself have a beginning or an end. (Levy, 1989, p. 96)

If a fiddler connects two parts (e.g., A and B) in a period, she or he completes a circuit, from which the performance can depart for other parts and circuits at will. The notion of the circuit usefully demonstrates which parts may intertwine, though it does not address how many parts might be involved, or how they potentially transform or intertwine with each other. It is most compelling in its acknowledgment of the inherent variability of musical units in the Hardanger fiddle repertoire.

Omholt (2009, p. 142), however, finds Levy's argument lacking, as it does not address alternative beginnings and endings, instead simply closing the discussion by means of a circle. Omholt also notes that the virtues of the circuit are hard to incorporate into a transcription, which typically presents only one round of a performance. He therefore stays with a hierarchical model, despite his difficulty deciding which level best suited the motif.

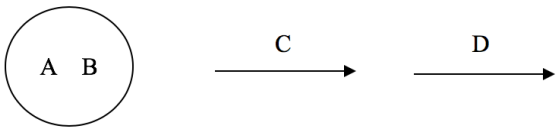


Fig. 53. Example of a circuit within a single round of a performance.

I will in this regard note that circuits can be found even within a single round of a performance, as shown in the example in figure 53.

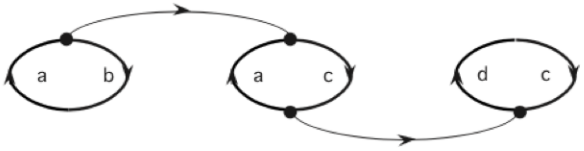


Fig. 54. Example of jump-in and jump-out points. © (Kvifte, 2007, p. 146)

Kvifte furthers the argument for circuit viability by proposing *jump-in* and *jump-out* points on circuits, as shown in figure 54. Still, these jumping points must themselves be defined, introducing another analytical challenge.

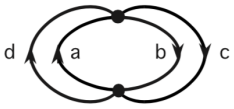


Fig. 55. Motifs sharing motif parts. © (Kvifte, 2007, p. 149)

He concludes with an alternative model which works towards 'letting motif parts be shared by *vek* [section]1 and *vek* 2', as shown in figure 55, though it still does not define exact transition points. The present analysis will try to develop a new perspective on circuits, jumping points and '*vek*-marker' to enhance their specificity and applicability.

How to identify

The identification of different parts of a given musical work is based on the researcher's perception of something new happening in the timeline. What is *new* is not always clearly defined and might even be intuitive and draw from an experience of differences in either structure or musical qualities, as well as the individual parts' particular context.

Alternatively, the researcher can try to allow the music itself to indicate its punctuation. This approach characterises Levy's work (1989) on the *gorrlaus slåtts* from Setesdal, where he investigates the structure of the music as the bearer of its significance—as structure which, he finds, emerges on several levels (Levy, 1989, p. 73 [vol. 1]). As his point of departure, he examines the *tonal* and *rhythmic/ metric* situations separately, noting that, when addressed individually,

‘simpler concepts of constancy seems to be present than [is the case] in their united play’ (Levy, 1989, p. 16 [vol.1]).

Regarding Levy’s tonal space, all the 119 performances included in his research draw upon ‘*gorrlaus’* tuning (f-d-a-e); because two of the pitches in this tuning coincide, he totals the possible pitches at 18, not 20. Levy designates these placements as *steps*, then argues that some of these steps act as *tonal centres* or *stations*, and that one of them, the step f 1, has a special status as a tonal starting point (Levy, 1989, p. 19 [vol. 1]), or *station 0*, given that 88 of the 119 tunes ends on f 1 by using the 2. f. on s. 3 (the other 22 performances end on open s. 3 [d]. He therefore defines f 1 as the *base tone* (1989, p. 28 [vol.1]), then relates all of the tonal events in the 119 *gorrlaus* performances to this base tone via *tonal arches,* or chains of tones ranging from the initial base tone to its next occurrence. He defines 16 groups of these arches based upon their widest swing away from the base tone.

Fig. 56. An f-arch. © (Levy, 1989, p. 29 [vol. 1])

Figure 56 shows an ‘f-arch’ (f being the top note or station), and Levy begins the downside of the arch at the first occurrence of this top note. He further marks the base tones (f 1) with circles in the figure.

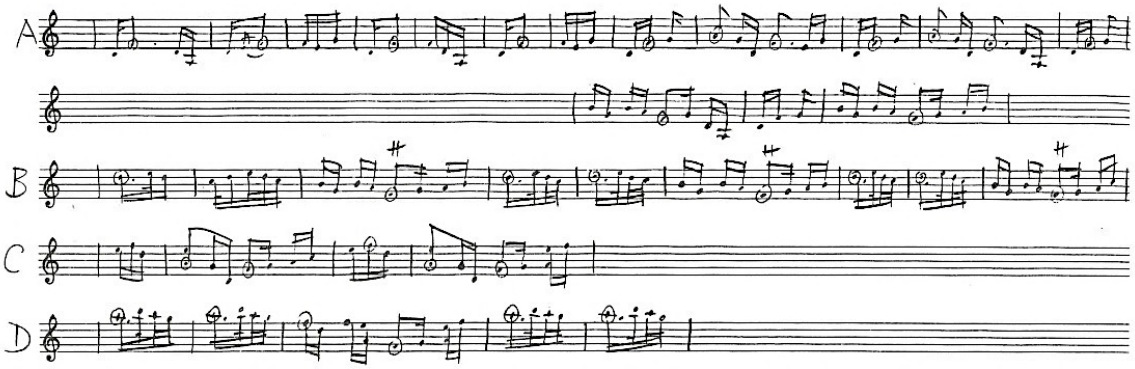


Fig. 57. Levy’s definition of sections. © (Levy, 1989, p. 98[vol. 3])

In Levy' s system, the various tonal arches, in tandem with their respective stations, now define the different sections (A, B, C and D) in the music (Levy, 1989, p. 22 [vol. 1]). The stations are marked with circles in figure 57. His findings demonstrate that A is always present in the 119 *slåtts* he analysed, whereas other sections may be absent. All of the *slåtts* begin and ends with an A sections, with certain minor deviations. The A section must therefore be regarded as central to the structure. Note that Levy transcribes the music in regular notation (not grip notation), as he is interested in what the music sounds like, and less how it is fingered. I will not pursue analyses of tonal arches in this study, as my interest regarding musical structure is to define signature *fingered* characteristics which can serve as tools for creating new tunes.

Regarding Levy's *rhythmic/ metric picture,* his punctuation method involves the insertion of barlines at those moments where foot stomps and bow shifts coincide over the timeline (Levy, 1989, pp. 5–7 [vol. 3]), which he names 'points of interference'. This divides the music into sound chains which Levy names 'interference groups'. Levy does not problematise *which* foot stomp in the double stomp is more important (F. 1 or F. 2), though he notes that, in some of the recordings, it was challenging to even identify F. 2 because 'the *after-stamps* were so weak that they were not audible on the tape'.

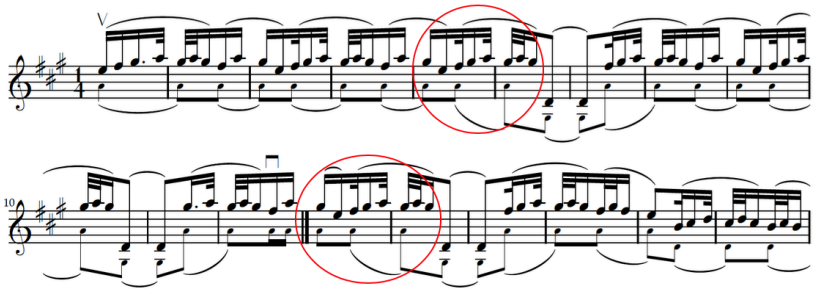


Fig. 58. Points of interference in *Skjoldmøyslaget.*

In *Skjoldmøyslaget,* as shown in figure 58, the point of interference is marked with a thick vertical line between bars 12 and 13. This approach's fine contribution is its engagement with how the bowing works in this performance. Because only one point occurs in the illustrated period, most of the bow strokes must cross the barlines and therefore seldom coincide with F.1. Of course, this punctuation method does place the two *taks* marked with red circles in two

different periods, whereas they probably should be understood as belonging to the same period, because the second *tak* is a repeat of the first.

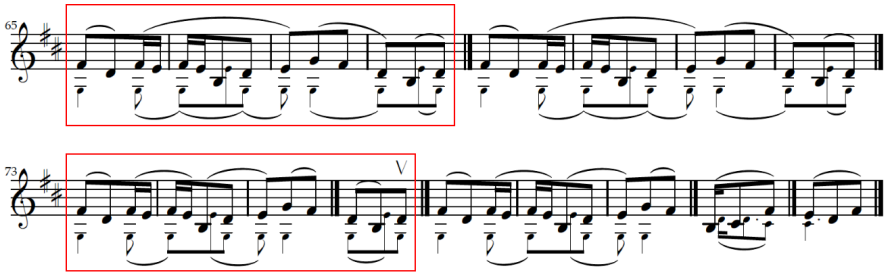


Fig. 59. Points of interference in *Reisaren*.

The same issue arises when we test this method on *Reisaren*. As shown in the squares in figure 59, bowing variations act to divide parts of a *tak* which should be kept together in the same unit, thanks to their earlier appearance in the timeline. In other words, the *tak* marked with a square in bars 65–68 is repeated three times; then, in bars 73–76, a bow variant occurs. If we are marking points of interference, the music should be parsed after bar 75, but this is in the midst of the *tak*. This method, then, does not lend itself to identifying *taks*, as such, because bowing generally operates as a variability tool which is independent of the melodic structure, where the *taks* reside.

Fingered signs

Do any fingered signs contribute to an understanding of how to best parse this music in the context of this study? We will next test various fingering perspectives, first and foremost to enhance awareness of what is fingered and how the fiddler relates fingering to the repertoire's variability. In this way, we may discern a meaningful principle for the following analysis regarding characteristic tools for composing.

I will first test *the principle of release action*. Release action was proposed as a fingered operation in chapter 3, section *clarification,* based on one informant's description of a release *tak*—that is, the release of muscle tension in the fingers when one moves from a grip to open strings. Can release action itself function as a principle for punctuation? The release action allows different type of fingering to anticipate it (e.g., strangle grips, double grips and drone grips)—even one

finger will suffice (one-string playing). The *tak* for this principle will therefore include a fingered period *and* the following open strings, after which the music would be punctuated.

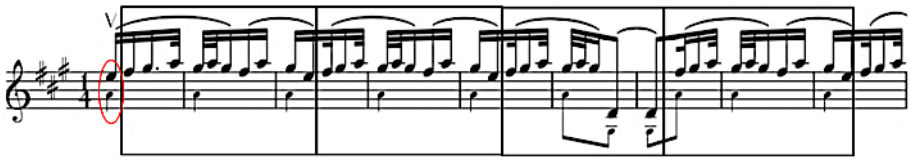


Fig. 60. The principle of release action used in *Skjoldmøyslaget*.

By testing this principle on the performance of *Skjoldmøyslaget*, the punctuation marks occasionally coincide with the barlines but more often fall somewhere *between* them, as shown in figure 60. I have used squares to mark the borders of the different *taks* in relation to the barlines. Because this performance starts with open strings, as marked by the red circle in the figure above, we might wonder whether they should be included in the initial *tak*. The principle of punctuation must then be adjusted to include open strings both *before* and *after* the fingered period. Though, this can most likely also be an issue only happening in the beginning of the performance, so an exception could be made for *tak* 1 in this regard.

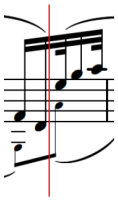


Fig. 61. Different open strings following one another in the timeline.

The question is how to parse this music when two open strings with different pitches occurs after each other in the timeline, as shown in figure 61. Should the principle act to group both open strings in the previous *tak* or punctuate between them, as marked with the red line? In this example, it is preferable to split the two open strings, as the first one (s. 3) is experienced melodically as concluding the previous *tak* and is also part of the release *tak* on this string, while the second open string (s. 1) is experienced melodically as starting a new *tak,* where the fingering continues on the same string.

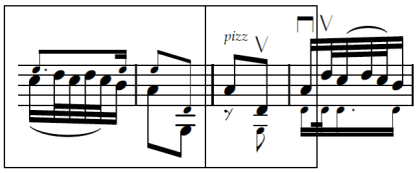


Fig. 62. Example from *Skjoldmøyslaget*.

Another question involves how this principle should address pizzicato played by the left hand's fingers. As long as one finger uses muscle tension to pick up the string this way, it is reasonable to parse the music as shown in figure 62, even though the last of the sixteenth notes inside the square seems more melodically connected to the following *tak*.

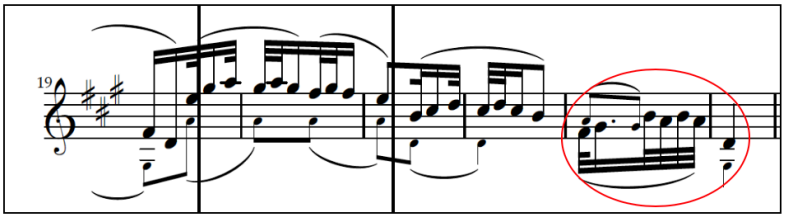


Fig. 63. Example from *Skjoldmøyslaget*.

In bar 23, shown in figure 63 with a red circle, the pitch of 3. f. coincides with the pitch of open s. 2. An argument for parsing the *tak* before bar 23 is that the previous *tak* (bars 21–22) is approximately equal to the *tak* presented earlier in the timeline (bars 19–20). In other words, the *tak* is repeated and transposed, and it is reasonable to understand these two *taks* as related (bars 20–22). Bars 23–24 are not readily perceived as a variant of the previous *taks* and therefore merit independence; the fingering differs as well. This *tak,* then*,* is a *Heddi-ladder*, the punctuation of which falls outside the principle of release action.

It is worth noting that very often a forefall (grace note) is placed in front of the main note when one uses a 3. f. in this way (bar 23), because the forefall (2. f. on s. 3) can support the intonation of the placement of 3. f. during such ascending movements. When one uses the open-string alternative, a forefall is typically not included, because the fingers would have to change strings (e.g., 3. f. on s. 3 as a forefall to open s. 2), which is more unnatural ergonomically. In descending movements, a forefall usually appears before an open string (e.g., 1. f. on s. 2 to open s. 2).

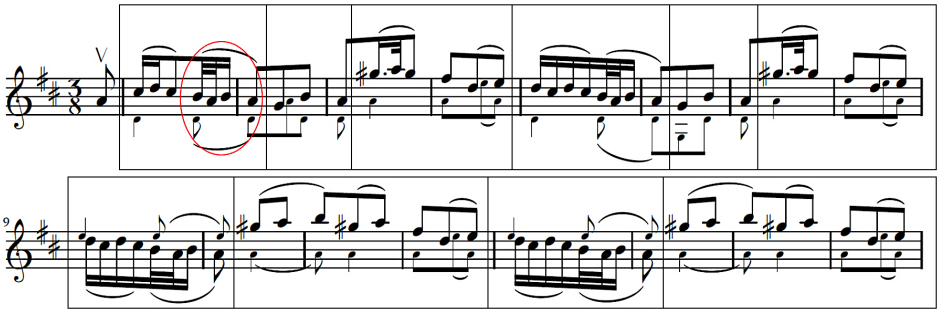


Fig. 64. Example from *Reisaren*.

When we test the principle of release action on *Reisaren,* the 'starting problem' from *Skjoldmøyslaget* recurs, as this tune also starts with an open string, as shown in figure 64. Another fraught fingering issue in relation to this principle is marked with the red circle in the figure—what to do, that is, when an open string is played *within* an ornament period and one must decide when the release action begins and ends. If one tests this issue on a fiddle, it is obvious that the muscle tension remains in the fingers throughout the ornament period shown in the red circle, even if 1. f. on s. 2 is lifted from the string and one plays the open strings *within* the ornament period. The finger movement within the ornament period progresses relatively quickly, and even when the finger is lifted from the string, it holds its muscle tension to prepare for the following part of the ornament period. Not until the ornament period concludes and the longer note falls on the open strings (the first eighth note in bar 2) is the muscle tension more or less released in the fingers.

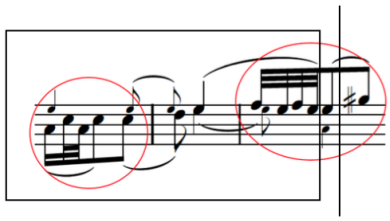


Fig. 65. Example from *Reisaren*.

A similar example can be found in the fingering shown in figure 65, where the ornament period starts with an open string in the first bar, moves into an ornament by 2. f., returns to the open string and then ends on a longer note by 2. f.—all on s. 2—before moving to open s. 1 in the second bar. The last tone played on an open string (s. 1) in the third bar is experienced as part of the subsequent *tak*. Despite all the open strings involved in this fingered period, it is

still reasonable to punctuate it as shown by the square in figure 65. If we follow the principle of release action, on the other hand, the punctuation would fall at the black line, which is less desirable.

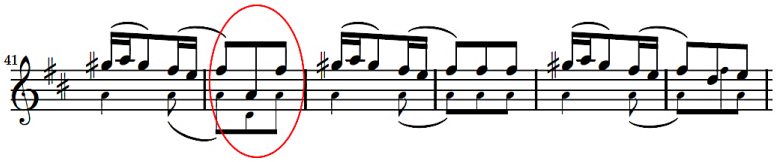


Fig. 66. Example from *Reisaren*.

In figure 66, it is hard to define the spot where s. 3 (within the red circle) in bar 42 becomes released or remains in tension, thanks to what actually happens with the fingering while playing such a part: 1. f. on s. 1 often holds its muscle tension via a *waiting position* on the string (which is not played), because it is going to be used *after* s. 3 is played. The bow leaves s. 1 and plays s. 3, then returns to play 1. f. on s. 1 again. It is inefficient, muscle-wise, to remove the finger (and tension) from s. 1 in this situation. In short, the act of punctuation should not slavishly follow the principle of release action, due to problems such as those discussed above, but testing does indicate that the amount of tension in the fingers can be a valuable contribution to punctuation decisions.

Another approach worth testing is *the principle of excluding open strings* in the interest of clarifying what is fingered and what is not. Of course, actually leaving out parts of the music does not make sense, but the visualization of the fingered periods might also contribute to, if not actually determine, punctuation decisions.

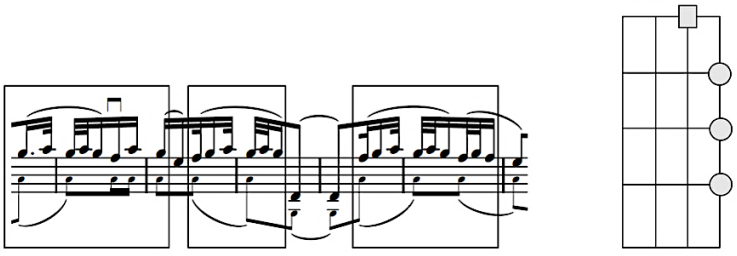


Fig. 67. The principle of excluding open strings in *Skjoldmøyslaget*.

By testing the principle on *Skjoldmøyslaget,* as shown in figure 67, we interestingly find that the three *taks* marked with squares are all realised via the

same finger placements (1. f., 2. f. and 3. f. on s. 1) but in different ways. The tablature in figure 67 therefore represents all three variants.

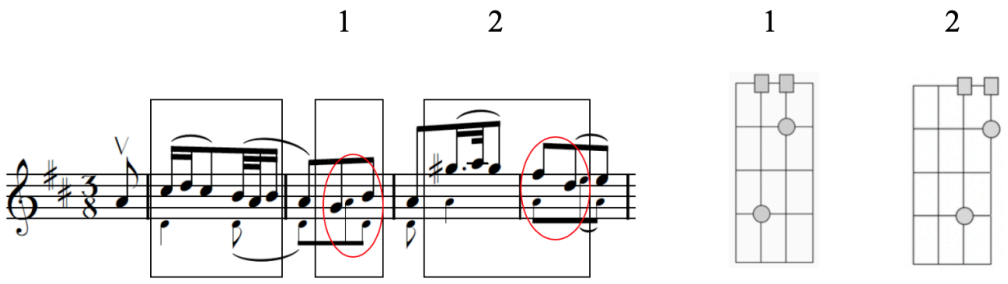


Fig. 68. Finger patterns in *Reisaren*.

Testing this principle on *Reisaren*, different *finger patterns* arise. The red circles in figure 68 show two finger patterns consisting of 1. f. and 3. f. which are experienced as pairs, though the fingers are used on different strings and in different orders. To *cross the strings* in such a way (placing the two fingers on different strings) is experienced as a stronger physical unit that a fingering arrangement on the same string. Tablature no. 1 in figure 68 refers to the fingering shown in the first red circle, and tablature no. 2 refers to the second red circle. This process of testing the principles of *release action* and *excluding open strings* have contributed a valuable awareness of fingering, which leads us to the following principle that will be used in the analysis.

The principle of finger placement

The *principle of finger placement* generally dictates that the first presented version of each *tak* (the analythical *original*) determines which finger placements should be used as a template. A variant of the *tak* would be understood as related to the original if the same finger placements are used. This principle therefore allows variability, in terms of different orders of finger placements and different rhythms and note values. When a *new* finger placement is presented, one must decide whether such a change should be understood as a variant of the original *tak*, a new *tak* or a start of a transformation process from one *tak* to another. As we have seen, perceived finger patterns can also contribute to this reckoning.

Mechanics

When emphasising fingering, an analysis is controlled by the mechanics operating at the bottom level of the hierarchy—that is, we now find ourselves presented with a *bottom-up perspective* (which lets smaller units define the bigger ones). Leonard B. Meyer advocates for such a perspective:

> Hierarchic structure enables the composer to invent and the listener to comprehend complex, inter-reactive musical organizations. If musical stimuli (pitches, durations, timbre) did not produce brief, but partially complete events (motives, themes, etc.), and if these did not, in turn, combine with one another to form more extended higher-order patterns (phrases, sections, etc), all relations would necessarily be transient and purely local. (Meyer, 1994, p. 305)

Because the following analysis uses a bottom-up perspective, we will look closer at certain fingered mechanics contributing the composition and transformation of a *tak*.

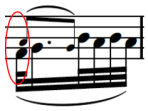
Ornaments

One of the central differences between the Hardanger fiddle technique and classical violin technique is the way in which ornaments are used. In the classical style, the ornaments are generally rather rare and not intertwined with the melody to the degree experienced in Hardanger fiddle music, because vibrato instead functions as a means of embellishing certain tones. In Hardanger fiddle music, there is no such thing as vibrato, at least in a traditional sense. Hardanger ornaments are otherwise known as embellishments by certain scholars (Green, 2002; Kvifte, 2007; Levy, 1989). The Oxford Dictionary defines embellishment as follows: 'A decorative detail or feature added to something to make it more attractive'.[92] In my own experience, Hardanger ornaments carry musical meaning beyond the decorative, however—at times, in fact, it is not clear whether a given finger placement is an ornament or is instead an integral part of the melody. Ornaments are therefore integrated into this analysis as both decorative and substantive aspects of the Hardanger tradition.

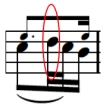
[92] See https://en.oxforddictionaries.com/definition/embellishment. Accessed 5 Jan. 2018.

Ornaments also fill an important rhythmic role. While Celtic musicians are able to use the bow to play triplets as rhythmic variations, I tend to use ornaments to mark a triplet rhythm, because ornaments can be used in this way, as alternatives to bow work, depending upon the individual's playing style and needs. A *tak* in a Hardanger fiddle tune will change according to different ornaments or, of course, a lack of ornamentation. The most common ornament types are as follows:

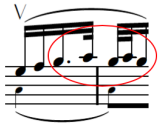
Forefall: One short note in front of the main note in the melody.



Backfall: One short note after the main note in the melody.



Trill: Fast switches between the main finger and another finger.



Transposition

Another quite common mechanical gesture is the aforementioned transposition of (approximately) the same fingering from one string to another, as shown in figure 69.

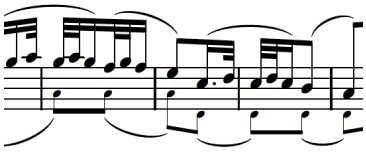


Fig. 69. A transpositioned *tak* in *Skjoldmøyslaget*.

Such a change can be experienced as a movement of the fingers rather than a change of pitch, if the intervals are the same between the two variants.

Other mechanics

Other mechanics in this music involve the use of different grips (e.g., strangle grips, double grips and drone grips), changes of note value, changes in rhythm, pizzicato, the replacement of tones and the use of a fingered tone instead of an

open string. Alternative bowings also serve as a variability tool, as we have seen, but because bowing does not affect the melodic structure as such, it does not contribute to the punctuation of *taks*.

Clarification

A definition of certain terms follows:

A core unit:	A *tak* that is experienced as the main *tak* in a performance, because it is the most repeated, changed or both.
A *Heddi-ladder*:	A *tak* that is not repeated and therefore not changed.
A varied cycle:	A directly repeated *tak* which is changed within its cycle.
A non-varied cycle:	A directly repeated *tak* which is *not* changed within its cycle.
A finger pattern:	One finger placement on one string together with another finger placement on another string, such that they are perceived as a pair. This is called *crossing strings*.
Local variability:	The change of a *tak* within its own cycle.

Continuous variability (two perspectives):

1. The way in which a *tak* can vary throughout a performance.

2. The way in which a *tak* can transform into a new *tak*.

Summary

We have now discussed the act of punctuation, variability and different analytical perspectives, and we tested various principles for fingering and defined terms related to this chapter's discussions.

The following analysis builds on two performances of the tunes *Skjoldmøyslaget* and *Reisaren* as played by Andres Rysstad, and on my own understanding of the music. The theoretical discussions and testing of perspectives and methods will inform my understanding in valuable ways.

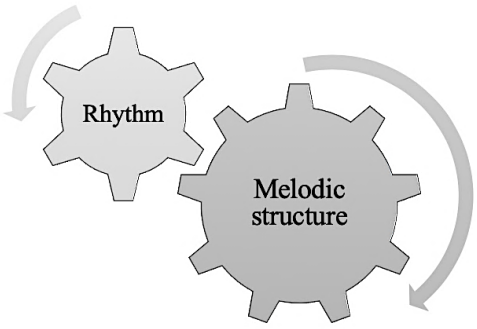


Fig. 70. The grouping for analysis.

The analysis will be grouped into the categories of *rhythm* and *melodic structure,* as shown in figure 70. The section on rhythm develops tools related to foot stomping and bowing, and the section on melodic structure develops tools related to form, melodic structure, *taks* and variability from a fingering perspective. Ultimately, then, the following analysis seeks characteristics and viable tools for the process of composing new Hardanger fiddle music.

6. Analysis

The data

On recordings and cine film footage

The analysis is primarily based on two audio recordings performed on the Hardanger fiddle by Andres Rysstad (1893–1984) from Rysstad in Setesdal, East Agder County, Norway. The two tunes are *Skjoldmøyslaget* and *Reisaren*.

Name of tune	Time and place	Recorded by	Coll. no.	ID
Skjoldmøyslaget	1950s, at Heimigard	Olav or Grunde Rysstad	181	9124
Reisaren	1950s, at Heimigard	Olav or Grunde Rysstad	181	9109

Fig. 71. The audio recordings.

The figure above shows who made the recordings, when and where each track was recorded, and its collection number (coll. no.) and object ID (ID) in the Agder Folk Music Archive. The recordings were found in a loft at the farm Heimigard; they were probably made by either Olav or Grunde Gunnarson Rysstad, and they were registered in the archive in 2003.[93] As Grunde was in Seattle in the 1950's, he could have made these recordings to bring to America, then brought them back to Setesdal when he came home.[94] In both of the recorded performances, Andres's concert pitch is approximately in A, and he says that he performs the tunes as he learned them from Knut Heddi.

Name of tune	Time and place	Recorded by	Reference
Bestelanden	1973, at Rysstad	Jan-Petter Blom and Gunnar Stubseid	(Bjørgum & Sandén - Warg, 2015)

Fig. 72. The cine film footage.

[93] Online interview with Harald Knutsen, 20 Nov. 2017.

[94] Online interview with Daniel Sandén-Warg, 20 Nov. 2017.

The study data also includes cine film footage of Andres playing the tune *Bestelanden*, filmed in his home at Rysstad by Jan-Petter Blom and Gunnar Stubseid some decades later. The purpose of including footage of Andres performing a different tune, as mentioned earlier, is simply to observe Andres's playing style and technique. This footage is to my knowledge all that exists of Andres performing.

The transcriptions

Though the audio tracks form the basis for the analysis, the actual analysis refers to the transcriptions made by the author from these recordings. Both performances are transcribed in grip notation and in their entirety (with no use of repeat signs), tracking the complete timeline of the performances. As both performances contain two rounds, the transition between round 1 and round 2 in each is marked with a doubled line. The transcriptions contain perceived melody tones, ornaments, drones, grips, and bow distribution; melody tones and ornaments are marked with big note heads and drones and harmony tones are marked with smaller note heads. Ornaments are written out in full, and the finest level of rhythmic detail is an approximation. The transcriptions do not incorporate Andres's intonation practice,[95] which principally involves a lowered 2. f., especially on s. 1 and s. 2, in the tuning of *Reisaren* (a-d-a-e), and 1. f. lowered on s. 1 in *Skjoldmøyslaget* (a-e-a-c#) and 2. f. lowered on s. 3., among other smaller (and varying) micro intervals.

On the appendices

Appendix A contains the transcriptions of both performances. Appendix B presents a complete Pro–Tools overview of the foot stomp's placement (F. 1 and F. 2), tempo and volume or intensity throughout both performances. Appendix C contains tables with complete rhythmic figures and bow units (i.e., foot stomp placements [F. 1 and F. 2], bow shifts, and bowed units in context) for both performances. Appendix D presents complete punctuation schematics of both performances. Appendix E presents complete tablature views of all the *taks* in

[95] Micro intervals have been indicated differently by collectors and transcribers over the years, and some have ignored them altogether (Bjørndal). Groven stands out for marking them more or less systematically, using a system of graphical characters (i.e., simple or double slashes up and down in front of the tones which had placements between minor and major). The marking of micro intervals was done in *Hardingfeleverket* based on Groven's principle, but with simple slashes only. See more in (Gurvin, 1958–1981, p. 13 [vol. 6]).

both performances, to be compared to the punctuation schematics in appendix D as needed. Appendix F contains a complete overview of all the figures used in the thesis. Appendix G consists of two CDs and one DVD: CD 1 named *Andres Rysstad*, contains *Skjoldmøyslaget* and *Reisaren,* performed by Andres. The DVD contains the cine film footage of Andres performing *Bestelanden*. CD 2 named *Janus*, contains the new compositions.

Rhythm

Introduction

The purpose of the rhythm analysis is to explore potential rhythmic compositional tools, and it is primarily based on Andres's use of the foot stomp and bowing. The analysis is limited to larger tendencies and deviations, as smaller deviations are too detailed to suit my purpose and may also include errors made by Andres, which are not relevant here. The analysis proceeds with the assumption of an organic rhythm*,* 'which is a harmonious, natural part of a larger (orderly) whole … part of an inner, natural necessity', as it was defined in chapter 3. How Andres's rhythm relate to a metronome is not as important as how the different rhythmic determinants relate to each other.

Foot stomp

I described Andres's double foot stomp technique in chapter 3 as one stomp with each foot following one another in the timeline but experienced as a pair (F. 1 and F. 2). Determining the exact rhythmic placement of F. 2. will clarify whether it tends to follow the meter in question in each performance or it operates almost as an independent rhythmic entity. Further, a grid situating F. 2 rhythmically in relation to F. 1 will provide a foundation for the exploration of the bow units. Following Groven, I have manually marked F. 1. in each of the performance's defined meters, then placed F. 2. In chapter 3, I discussed the accent sign in the context of Ekgren's theories and also determined it to be very relevant to ascertain intensity or volume differences between F. 1 and F. 2, as well as Andres's tendency to vary his tempo throughout the timelines.

Marking F. 1

To begin my analysis, I brought the two audio recordings to Sanden Studio in Kristiansand, where they were added to Pro-Tools with the help of sound engineer Roald Råsberg.[96] As I began to manually mark F. 1, we found that the tracks were too sound polluted to perceive the foot stomps as precisely as we needed to.

Fig. 73. The processed foot-stomp signals in *Skjoldmøyslaget*.

We therefore duplicated the sound files and further filtered the new files to isolate the foot-stomp signal's frequency, which we found to be in the area of 150–400 Hz and centred around +- 200 Hz. The frequencies above and below this range were dampened using an equalizer, producing an audio file with mostly foot stomp sounds, as shown in figure 73. This file now contributed a clearer aural and visual indication of the foot stomp's placements. This new foot stomp audio file was quite compelling to listen to—it sounded like a strong heartbeat.

I then categorised the two filtered audio files according to broad metrical inclinations (*Skjoldmøyslaget* in 1/4 and *Reisaren* in 3/8).

[96] Pro-Tools is a digital music production system, or DAW (Digital Audio Workstation), for Mac OSX and Microsoft Windows operating systems which is widely used for music editing/ recording. See https://www.avid.com/pro-tools-ultimate/features?fbclid=IwAR08lnsUGLaA_x7w7bSPmLH6TSBY5cBLCxkD6MmBpfQ00STFu9f3XtA9_. Accessed 12 May 2019.

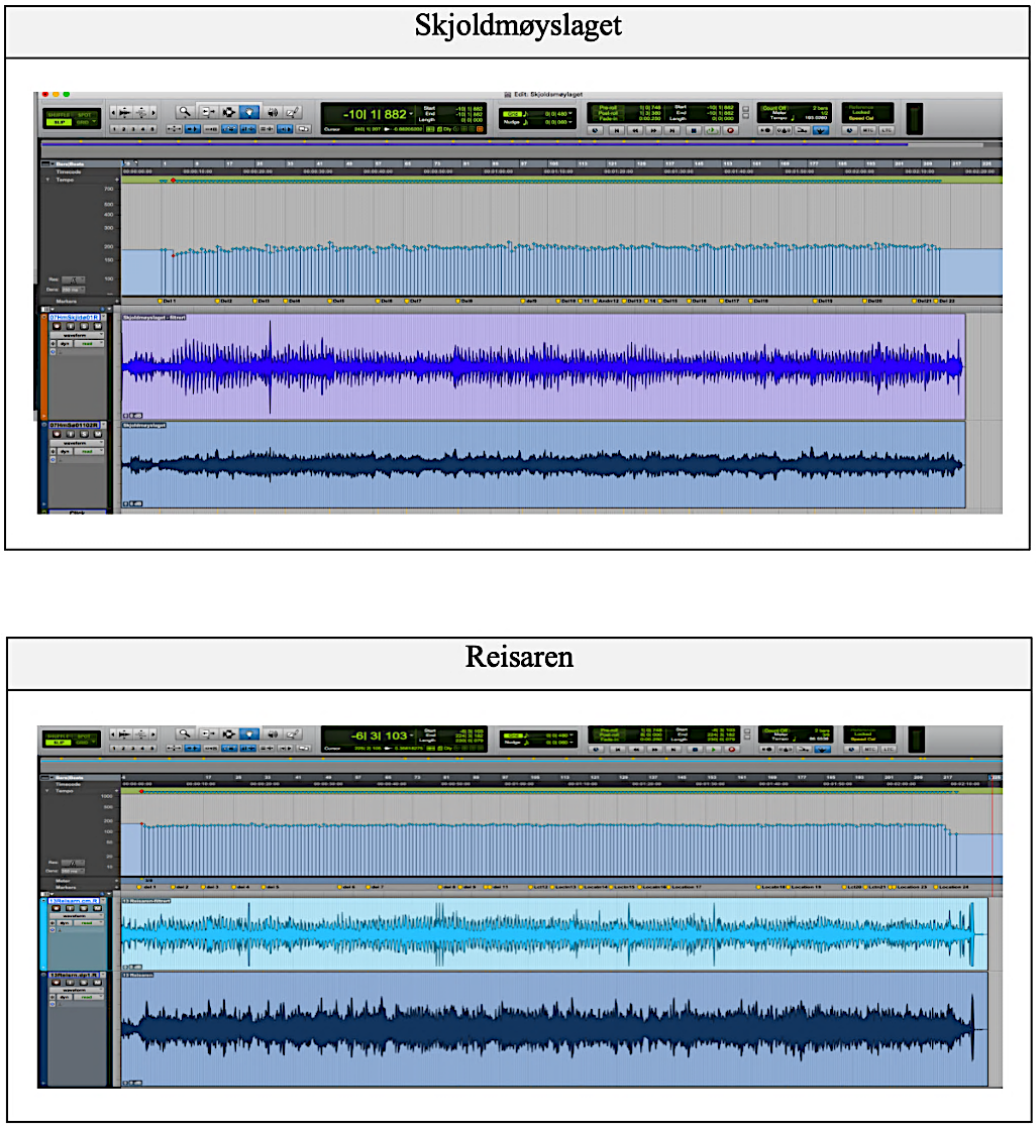


Fig. 74. Manually marking of F. 1.

Once F. 1 was marked in all the foot stomp pairs throughout both performances, I could determine the rhythmic location of F. 2. Figure 74 shows both the processed (top band) and the original (bottom band) audio files of each performance. The processed *Skjoldmøyslaget* file offers a clearer visualisation of each foot stomp than the processed *Reisaren* file, which was more sound polluted. Both files also reveal certain spikes in audio signals which were presumably noises related to the actual recording process (e.g., knocking into the mic stand). Figure 74 is to be found in appendix B.

Fig. 75. Rhythmic placement and volume of F. 2 in *Skjoldmøyslaget*.

If we now zoom in on the Pro-Tools overview of each performance, as shown in figures 75 and 76, we can begin to describe the rhythmic placement of F. 2 and the volume difference between F. 1 and F. 2. In *Skjoldmøyslaget*, F. 2 tends to mark the second sixteenth note in each bar. F. 1 is clearly more pronounced than F. 2.

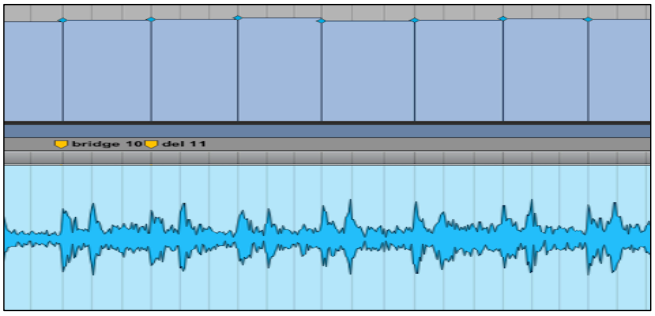


Fig. 76. Rhythmic placement and volume of F. 2 in *Reisaren*.

In *Reisaren*, F. 2 tends to mark the second eighth note in each bar, as shown in figure 76. The volume of the two foot stomps is closer to equal here, perhaps due to more sound pollution, as mentioned earlier.

Foot stomp placements in Skjoldmøyslaget																								
Bars	1				2				3				4				5				6			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		

Foot stomp placements in Reisaren																								
Bars	1				2				3				4				5				6			
F. 1	x			x			x			x			x			x				x			
F. 2		x			x			x			x			x			x				x			

Fig. 77. Rhythmic placements of F. 1 and F. 2 in both performances.

Based on these graphs, the foot stomps can now be rendered as rhythmic tables, as shown in figure 77.

Reflection

The foot stomp pairs generally repeat themselves in a loop in both performances. The findings demonstrate that the double stomp pair can serve as a stable rhythmic unit in these tunes, and that the rhythmic placement of F. 2 seems to be finely adjusted to fit the different meters. Note that the rhythmic placement of F. 2 can vary from fiddler to fiddler, and from performance to performance by the same fiddler, so general tendencies remain hard to pin down. Still, it is clear that Andres is consistent in his organic rhythm in these performances. The foot stomp is experienced to be ahead of the music in *Reisaren* (subdivided into three) and blunter in *Skjoldmøyslaget* (subdivided into four).

The dance represents an important context for Hardanger fiddle music as earlier mentioned, and has an impact upon the tempo of performances as well. In appendix B, the overview of performance tempo indicates that the main variation happens as Andres slowly accelerates from the start of the tune to eventually settle at a general tempo of 100 bpm after a few bars. He sustains this tempo remarkably consistently throughout the performance's two rounds, then slows down again in the closing few bars. Regarding volume, the findings indicates that F. 1 is stronger than F. 2, and presumably more important to Andres, in *Skjoldmøyslaget*. It is harder to discern the relative importance of the foot stomps in *Reisaren,* but it may well be that Andres performed F. 1 and F. 2 with relatively equal intensity, perhaps to better reflect the character of the 3/8 meter, where the first two eighth notes in a bar tend to be emphasized over the third eighth note.

Bowing

As mentioned in chapter 3, section *bowing*, Kvifte (1986) described a bow stroke as the movement of the bow over the strings in one direction. A down-bow moves the frog away from the strings, and an up-bow moves the frog towards the strings. The bow stroke varies in time relative to the tune's meter (e.g., in 3/8 *gangars* a bow stroke might be one, two, or more eighths) and its starting point in a given bar. Kvifte described a folk music stroke as generally shorter (though

it might still include several notes within changing direction), and the *ristetak* as a new bow stroke for each new note. A bow stroke, then, is defined by three parameters: length (in time), direction (up or down) and placement in relation to the foot stomp.

A jigsaw puzzles

I will first identify the direction and placement (or *attack*) of each bow stroke in relation to the foot stomp. The bow stroke's attacks can form a useful layer of rhythmic markings in the music. The challenge is to discern them in the recordings, which are, as mentioned above, relatively poor in quality. Thankfully, the bow figures are relatively stable units, and I have a reasonably comprehensive understanding of where they would be placed, thanks to my background as a fiddler. I will briefly describe the identification process.

The first milliseconds of a bow stroke can sometimes introduce a certain airiness ahead of the actual sounded tone, due to less pressure upon the initial shift in direction and the added speed necessary to articulate the change in pitch. Such a bow attack can also be experienced as more *knify* or sharper due to the greater speed and angle of approach. Another sign of a bow shift is when a forefall (grace note) anticipates the bow stroke's main note. When I imitate Andres's performances, I can unpack his bow work as though piecing together a jigsaw puzzle, using my bodily experience of the tune. Because my background is primarily in the west coast tradition, where many tunes start with a down-bow, I tested the performance of *Skjoldmøyslaget* the same way.

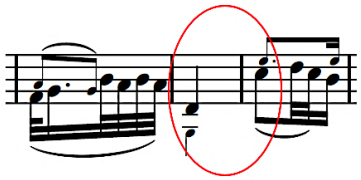


Fig. 78. Bow shift in bars 23–25 of *Skjoldmøyslaget*.

When arriving at bars 23–25, as shown in figure 78, a problem arises: there is clearly an up-bow (bar 24, inside the red circle) where I want to use a down-bow. Andres's bowing at this point, that is, seems to lift away from the string. In addition, the fingered period in bars 23 and 24 is most often played in the order of down, then up. It appears, then, that I missed something in the performance

before these bars—either a missed bow shift or the fact that the start stroke was up, not down. I tried starting with up-bow instead of a down-bow, and the pieces of the puzzle of bars 23–25 fell into place.

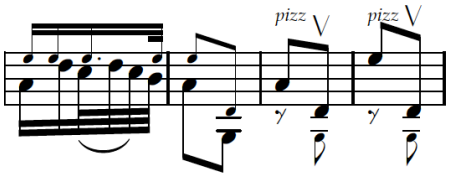


Fig. 79. Bow shifts in *Skjoldmøyslaget*.

Another example of this trial-and-error identification arises with the *ristetak* (fast bow shifts) in the first bar showed in figure 79. They want to be played down-up-down-up, which helps situate the analysis with regard to bowing at this point in the performance. Further, the bow direction after each pizzicato seems always to be an up-bow among the Hardanger fiddle masters from Setesdal who play this tune. (In my west-coast tradition, on the other hand, the bow direction after a pizzicato would often be a down-bow.)

In addition to these examples, there are identifiable bow units that recur several times during the timeline and therefore anticipate bow directions for their recurrences. Still, because bowing in general is used as a variability tool, recurrences of the same unit are not necessarily bowed the same way. In all, the identification process for bow shifts and bow directions consists of moving back and forth through the timeline as described until all the pieces of the puzzle seem to fit together. A complete overview of bow directions is to be found in the transcriptions of both performances in appendix A.

Rhythmic figures

The rhythmic markings of all bow shifts (B. shft) can now be added to the foot stomp (F. 1 and F. 2) tables. The juxtaposition produces rhythmic figures through the timeline of both performances, as shown in figure 80.

Rhythmic figures in *Skjoldmøyslaget*																
Bars	1				2				3				4			
F. 1	x				x				x				x			
F. 2		x				x				x				x		
B. shft	x						x				x				x	

Rhythmic figures in *Reisaren*																
Bars	1				2			3			4			5		
F. 1		x			x			x			x			x		
F. 2			x			x			x			x			x	
B. shft	x	x		x		x	x	x	x		x	x		x		x

Fig. 80. Rhythmic figures in *Skjoldmøyslaget* and *Reisaren*.

These rhythmic figures can serve as a fine compositional tool, and the tables contributing supply a practical foundation for exploring bow patterns and bow cycles in both performances, as we shall soon see.

Reflection

Andres's bowing is relatively light and balanced—that is, not particularly emphatic in either bow directions. (Some traditions do accentuate one of the bow directions by relative intensity, including my west-coast tradition, as mentioned earlier.) Andres's rhythm is therefore approximately equally lifted and heavily marked, and this style of playing accommodates a consistent speed for each bow stroke and a consistent bow pressure upon the strings. The combination of a relatively light bow pressure and a relatively fast pace produces a velvety tone which is more porous or open than compressed (stronger and less structure). Because the up-bow and down-bow are evenly emphasized, the music has a cool swing which reminds me of the old-time fiddle tradition from Appalachia in America, based on my own experience of playing with the American fiddle master Bruce Molsky. To reproduce such a relatively balanced bow technique, I must adjust my 'west-coast body' by lifting my elbow and wrist to put more pressure on my up-bow, so as to match up with my down-bow.

In *Skjoldmøyslaget*, the bow shifts generally occurs on the third sixteenth in each bar (i.e., not on F. 1 or F. 2). Occasionally, a bow shift marks F. 1, but nothing ever falls on F. 2 except during a *ristetak,* which covers the whole bar. Such an emphasis on F. 1 resonates with the foot-stomp volumes discussed earlier, where

F. 1 in general seemed stronger than F. 2. In *Reisaren*, F. 1 and F. 2 are more or less equally marked by the bow shifts throughout the timeline of the performance, which resonates with this tune's foot-stomp findings as well. The rhythm in this performance generally emphasizes all of the eighths within each bar.

Bow units

We will now use the tables of rhythmic figures to explore the bow units that Andres tends to use in the two performances. Bow units involve different bow qualities, so that a row of different bow strokes is a bow pattern and, when such a pattern is directly repeated, we have a cycle of a pattern, as discussed in chapter 3. Equal single bow strokes which are directly repeated comprise a cycle of single bow strokes. These different bow units can operate as possible compositional tools.

Bow units in *Skjoldmøyslaget*																
Bars	1				2				3				4			
F. 1	x				x				x				x			
F. 2		x				x				x				x		
B. shft	x						x				x				x	

Bow units in *Reisaren*																
Bars	1				2				3				4			5
F. 1		x			x			x			x			x		
F. 2			x			x			x			x			x	
B. shft	x	x		x		x	x	x	x		x	x		x		x

Fig. 81. Different bow units marked with colors in the rhythmic tables.

Returning to the rhythmic tables using colour in figure 81, we first identify which bow units that are repeated, which in turn foregrounds which units are *not* repeated. The colours, which announce the different bow units, indicates that each performance is dominated by one or very few different bow units. The complete tables of rhythmic figures and bow units in both performances appear in appendix C.

Skjoldmøyslaget

In *Skjoldmøyslaget*, there are six bow units, as shown in figure 82; the numbers for each unit indicate sixteenth notes.

Bow units in Skjoldmøyslaget										Numbers
1	x						/	/		6 (8)
2	x									4
3	x	x	/x	/x						1+1 (1+1+1+1)
4	x			x	x					3+1+2
5	x									2
6	pz									2

Fig. 82. Bow units in *Skjoldmøyslaget*.

The x indicates the bow shifts within each bow unit, and the slash marks the lengths of the specific bow unit (i.e., in unit 1, this bow stroke appears as both six and eight sixteenths, the latter as part of a cycle). The same slash is also used to describe variants of unit 3—in this case, the number of bow strokes with the length of one sixteenth which are experienced as a unit (either two or four). The single bow stroke (unit 2) marked with yellow is often used in cycles (e.g., 4+4+4, etc.) and clearly dominates this performance. The dominant bow pattern is unit 4, though it is never used as a cycle. Unit 5 appears as shown *and* in cycles, some of which intertwine with unit 6, a bouncy bow unit over two sixteenths which includes the pizzicato. Unit 6 is the only bow unit where the bow lifts from the string.

Reflection

In general, the bowing in *Skjoldmøyslaget* consists of longer bow strokes overlapping a pulse derived from cycles of unit 4, which has a cohensive and rolling effect upon the rhythm. This use of bow cycles contributes to the way in which this music is often experienced as a continuous soundstream. Bow units 5 and 6 are mostly used when switching between a cycle marking syncopic placements and a bow pattern (e.g., unit 4) marking the first beat. The single bow strokes operate similarly and also serve as a variability tool.

Reisaren

The performance of *Reisaren* consists of six different bow units, as shown in figure 83. The numbers for each unit represent eighth notes.

Bow units in Reisaren													Numbers
1	x		x		x	x							2+2+1+1
2	x	x											1+2
3	x		x		x			x					2+2+3+2
4	x		x										2+1
5	x												3
6	x		x					x			x		2+5+3+2

Fig. 83. Bow units in *Reisaren*.

The performance is dominated by unit 1 due to being repeated the most, marked in yellow, which appears as shown and in cycles. Unit 2 appears on its own and in cycles. Unit 3 never appear in cycles, as shown in the figure, but it does form a cycle when used in tandem with unit 4. (e.g., no. 3 + no. 4 + no. 3 + no. 4). Unit 4 does not appear in a cycle and is always connected to unit 3, a combination which resonates well with Kvifte's basic formula for *Reisaren* (2+2+3+2+2+1) as discussed in chapter 3, section *bowing*. Unit 3 also appears in tandem with both unit 2 and unit 5, the latter of which is always used as a cycle consisting of 3+3. Unit 6 is used on its own and in cycles and is a variant of unit 3 which includes a longer stroke as the second stroke in the pattern (5 eighth notes instead of 3).

Reflection

In *Reisaren*, bow units 1, 2, 3 and 4 are experienced as the main bow patterns, and unit 1 is most commonly used in cycles throughout the performance. The *Reisaren* cycles are generally shorter than those in *Skjoldmøyslaget,* as are the bow strokes. The patterns are also generally repeated less (either two or three times); while unit 1 is repeated up to ten times in a cycle in *Reisaren*, in *Skjoldmøyslaget* a bow unit is repeated up to thirty times. The only cycle made from a single stroke in *Reisaren* is a 3+3 cycle; the rest are repeated bow patterns consisting of several bow strokes. A pattern in *Reisaren* typically switches to a new pattern after a few bars, and all of the switches happen on F. 1. The syncopic

markings are therefore often inside a pattern in this performance and not in the beginning of a bow unit, as could be experienced in *Skjoldmøyslaget*. The bowing in both performances moves between different bow units whose longer cycles contributes a steady pulse and cohensive flow to the music. The application of these findings to compositional bowing tools will be discussed in section *the toolbox* in chapter 7.

In general, Andres's bowing is first and foremost experienced as a joyful and intricate rhythmic play among different bow strokes; a bow shift marks the first beat in a bar or other syncopic placements (between the beats). Such syncopic bow play is a trademark of the Hardanger fiddle tradition from Setesdal. The fiddler often marks syncopic placements with an up-bow at a fast speed and with a light touch on the string.

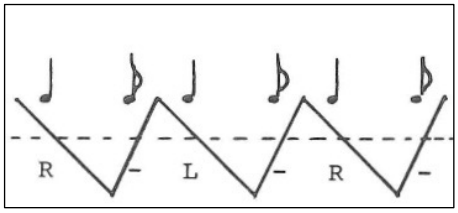


Fig. 84. The locomotion in the dance steps in 3/8 *gangars*. © Blom in (Gurvin, 1958–1981, p. 300 [vol. 7])

This syncopic play can arise out of the fiddler's communication with the dancers, who shape their movements according to the fiddler's foot stomp and bowing, even as the fiddler shapes their playing according to the bodily locomotion of the dancers. In figure 84, Blom illustrates the way in which the dancer's centre of gravity travels through two-dimensional space during their locomotion in 3/8 *gangars*. The down-up oscillation unit, understood as one beat, is here repeated (L for left foot and R for right foot). The dotted line in the figure seems to indicate the equilibrium state—that is, the state without such down-up oscillation.

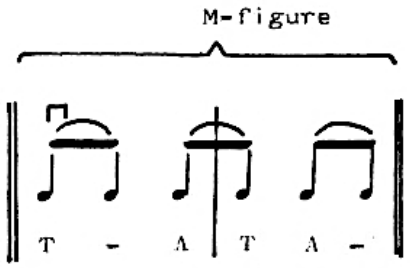


Fig. 85. The locomotion in the dance steps as an analogy to bow pattern 2+2+2.
© Blom in (Blom & Kvifte, 1986, pp. 508–509)

In figure 85, Blom illustrates the resemblance between the bowing figure 2+2+2 and the TATA sequence 2:1:1:2 in the dance steps (A, or arsis, is the up-beat; T, or thesis, is the down-beat). He argues that 'such dance isomorphisms in the music result from processes of analogic coding through which music functions as a dance metaphor'. In other words, such similarities can be a result of the imtimate connection between and mutual impact of the dance and the music in this tradition. A syncopic bow shift can in this way lift the dancer's body up in relation to the floor.

In the overall structure, the rhythmic determinants (F. 1, F. 2 and bow shifts) contribute a steady and energetic pulse throughout the timeline of both performances—a pulse which does not primarily resolve itself into a fixed number of bars but instead gives the impression of a single coherent rhythmic period, mostly due to the aforementioned syncopic play between the bow and the foot stomp. The rhythmic tools will be further defined and presented in chapter 7, *the toolbox*.

Melodic structure

Introduction

We will now focus on melodic structure in order to explore compositional tools related to the *tak,* punctuation and variability from a fingering perspective—that is, how different *taks* are fingered, how *taks* can change and how different *taks* relate to one another.

Clarification

The following clarification of the terms used in the analysis summarises the earlier clarifications proposed in chapters 4 and 5.

A *tak*:	A melodic unit related to fingering which need not include rhythm. It does include time (marked duration).
A core unit:	A *tak* which is experienced as the main *tak* in a performance because it is the most used, repeated, and/ or changed.
A *Heddi-ladder*:	A *tak* which is played only once as a bridge between two other *taks*.
A cycle:	A *tak* which is directly repeated.
A varied cycle:	A cycle where a *tak* is changed through its repetitions.
A non-varied cycle:	A cycle where a *tak* is not changed through its repetitions.
Grips:	Three types: strangle, double and drone.
Gravity finger:	The finger that holds the most muscle tension over a defined period of time.
Finger bridge:	One finger holding its muscle tension while other fingers works around it.
A finger pattern:	A finger placement on one string together with another finger placement on another string, such that they are perceived as a pair *crossing strings*.

The principle of finger placement:	The initial version of each *tak* (analythically described as the *original*) decides which finger placements will be used as a template. A variant of this *tak* is related to the original if it displays the same finger placements. The principle of finger placement deals with different orderings of the fingers, as well as different rhythmic values and pitches. When a *new* finger placement occurs, one must determine whether it is a variant of the original *tak*, a new *tak* or the start of a transformation process from one *tak* to another. Finger patterns also contribute to the identity of a *tak*.
Local variability:	Changes to a *tak* within its own cycle.
Continuous variability (two perspectives):	1. The way in which a *tak* can vary throughout a performance. 2. The way in which a *tak* can transform into a new *tak*.

Skjoldmøyslaget

Identification of *taks*

As a point of departure, I will explore, discuss and define the different *taks* in the performance of *Skjoldmøyslaget*. The letters used to label different *taks* follow the alphabet based on the order in which they appear in the timeline.

Core unit

Tak A is the core unit in *Skjoldmøyslaget,* because it appears most frequently and is the most varied.

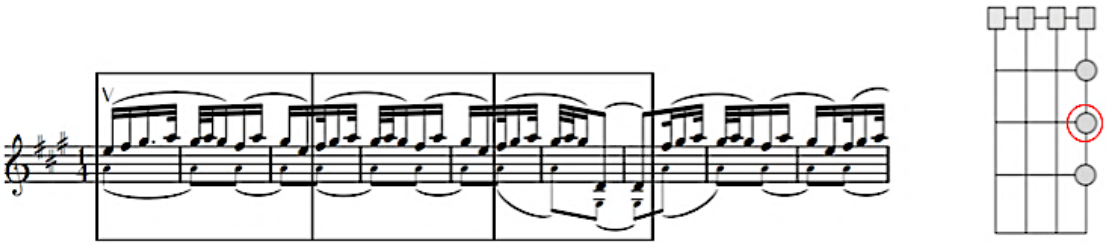


Fig. 86. Repeats of *tak* A in *Skjoldmøyslaget*.

The first appearance of *tak* A will, for analytical purposes, be defined as the *original*, and the two subsequent *taks* (marked with squares), variants of it. The tablature in figure 86 represents all three variants and indicates how specific finger placements can create a variety of *taks*. The gravity finger in these versions of *tak* A is 2. f. on s. 1 (marked with a red circle in the tablature), because this specific finger uses more muscle tension then the other fingers in *tak* A.

Finger pattern

The core fingering in *tak* B is a pattern consisting of 1. f. and 2. f on s. 2 together with 2. f. on s. 3, as marked with the triangle in the following figure. These three finger placements use approximately equal muscle tension, and B therefore does not have a clear gravity finger, though it leans toward 2. f. on s. 2.

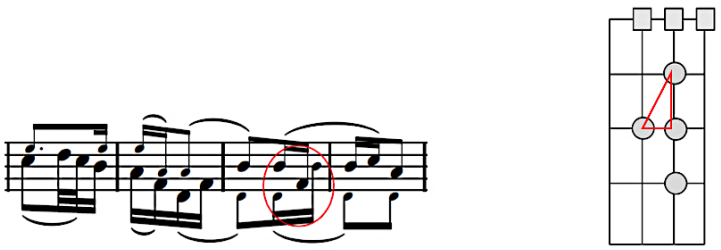


Fig. 87. Example of *tak* B in *Skjoldmøyslaget*.

The red circle in figure 87 indicates that when 2. f. is placed on s. 3, 1. f. on s. 2 holds its position (not releasing the muscle tension), creating a double grip, which is useful because 1. f. on s. 2 is also the next finger placement used in the timeline. In addition to *tak* A, *tak* B can also be considered a core unit, as it is frequently used, repeated and varied through the timeline, though not varied as much as *tak* A. *Tak* B is also the first one used in round 2.

Finger bridge

The main finger placement in *tak* C is 3. f. on s. 3, and it operates as a finger bridge and a gravity finger (marked with red circles in the tablatures in figure 88). It is worth noting that *tak* C operates in two ways in this performance: as a *tak* which is not repeated or otherwise affected by other *taks*; as a *tak* that seems to intertwine with *tak* B, as we shall soon see.

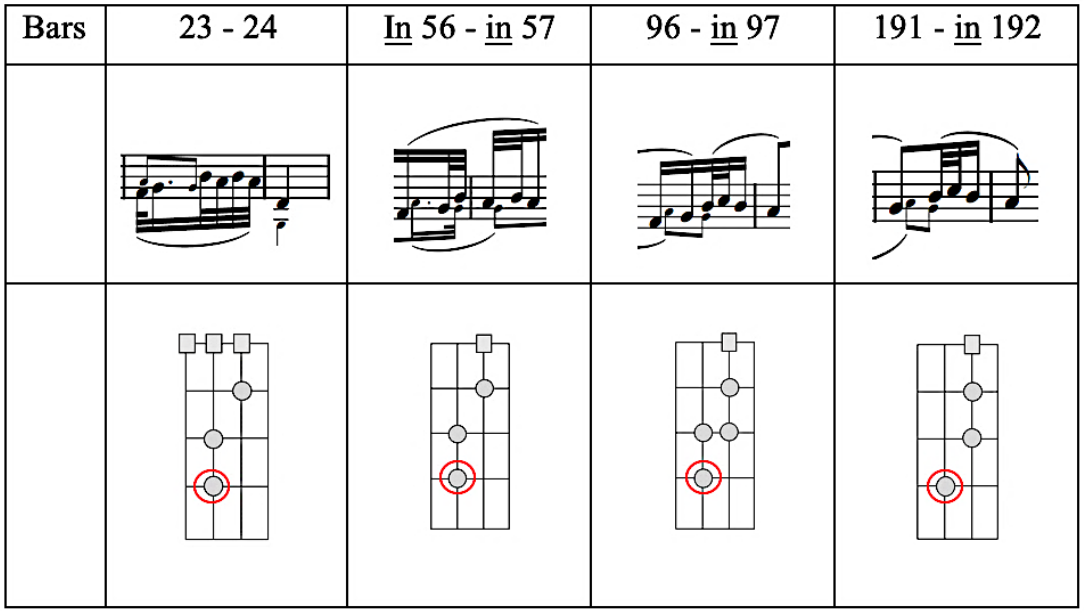


Fig. 88. Different variants of *tak* C in *Skjoldmøyslaget*.

The figure above shows the different variants of *tak* C which are not repeated or in general affected by other *taks* (the first mode of operation above), and which can therefore be understood as *Heddi-ladders*. *Tak* C in these variants is mostly fixed save for small changes in rhythm, ornaments and drones. The underlined *in* in front of a bar number in figure 88 means the example is to be found *within* the bar, not following the barlines (e.g., bar 15–in 17). When in is *not* used, the example follows the barlines.

The other versions of *tak* C, made through the *tak*'s interaction with *tak* B (the second mode of operation above), will soon be discussed.

Cycle D

Tak D is directly repeated and therefore becomes cycle D; it appears only once in each round of the performance. The main fingering mechanics for local variants of D involve transposing the fingered period on s. 1 to s. 4, with the exception that 4. f. is not used in the dark variant on s. 4—that is, Andres uses open s. 4 as a start for the dark variant. By learning Stubseid's version of *Skjoldmøyslaget*[97] while doing fieldwork, and also by observing other fiddlers performing this tune within the tradition, I found that it was quite common to use the 4. f. on the dark strings' variant as well.

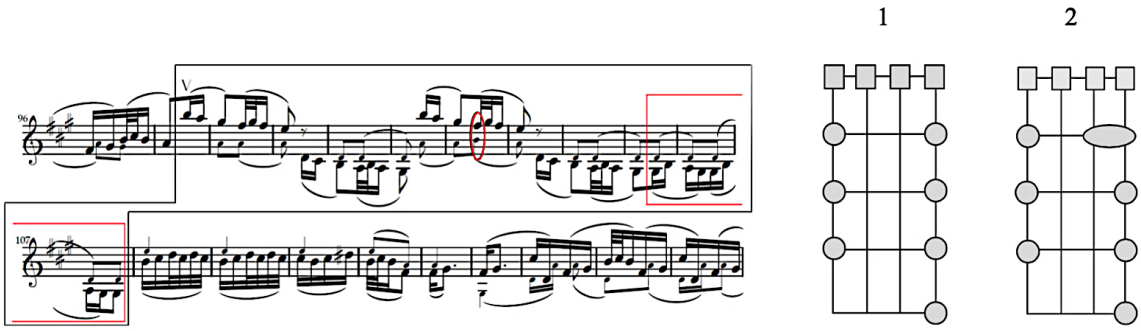


Fig. 89. Cycle D in round 1 of *Skjoldmøyslaget*.

Cycle D is approximately the same in both rounds save that the *tak* is repeated two times in round 1 and three times in round 2 (bright and dark variant). It is therefore locally varied and executed through mechanics such as strangle grips, marked with a red circle in figure 89 and diagrammed in tablature 2. The strangle grip is also used in the repeat as a variability tool. The second time through cycle also adds a melodic tail, marked with the red square/ lines, to the dark variant. We can therefore interpret cycle D in at least two different ways from a local perspective: either as shown inside the black square, with a variant for its last repetition, or as a cycle with a Heddi-ladder inside the red squares/ lines which forms an independent *tak*. Based on the consistency of finger placement between the two units, I favour the former interpretation and would describe cycle D as locally varied but ultimately non-varied from a continuous perspective.

[97] There are two traditional branches of *Skjoldmøyslaget*, one following Knut Heddi and one following Olav Heggland. Andres bases his form on the Heddi version, and Stubseid, on the Heggland version.

Form

The different *taks* in the performance of *Skjoldmøyslaget* are now given in order in figure 90.

Round 1: A-A-B-A-B-C-B-A-B-C-A-B-A-A-A-A-B-A-B-A-B-C-D-B-C

Round 2: B-A-B-A-B-C-A-B-A-B-A-A-B-A-B-A-B-C-D-B-C

Fig. 90. The order of the *taks* in *Skjoldmøyslaget*.

Each round starts with periods consisting of different orders of A, B and C, then ends with a period consisting of C, D and B, as marked by the red squares in the figure. We see that, in each round, *tak* A drops out towards the end and *tak* D appears only towards the end.

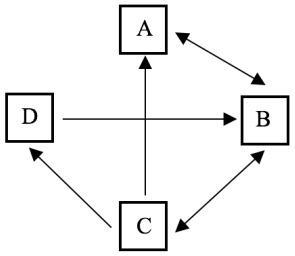


Fig. 91. The network in *Skjoldmøyslaget*.

We can now use Kvifte's network (2007, p. 63) discussed in chapter 5, as an analytical illustration, which abstracts these various periods to reveal that *tak* C delivers the music either to *tak* A, B or D and in this way determines which group is active in the performance (A, B and C or C, D and B) as shown in figure 91.

Variability

In chapter 5, section *more on variability*, we also saw that Levy (1989, p. 96) addressed variability in the context of defining clear start and end points for a melodic unit, via circuits, arguing that 'as long as the repeat structures, as they

appear in a *slått*, cannot be shown to indicate their own beginnings and endings, it would be a misplaced act of violence on the part of the describer to introduce such criteria into the music. Instead, the concept of circuits means a closed course, which does not in itself have a beginning or an end'. The notion of the circuit usefully demonstrated which parts may intertwine, though it did not address how the *taks* potentially transformed or intertwined with each other. In addition, the problem of defining the jumping points from one circuit to another was discussed. I will now try to show a perspective on how to use circuits when discussing variability, jumping points and *vek* (section)-markers.

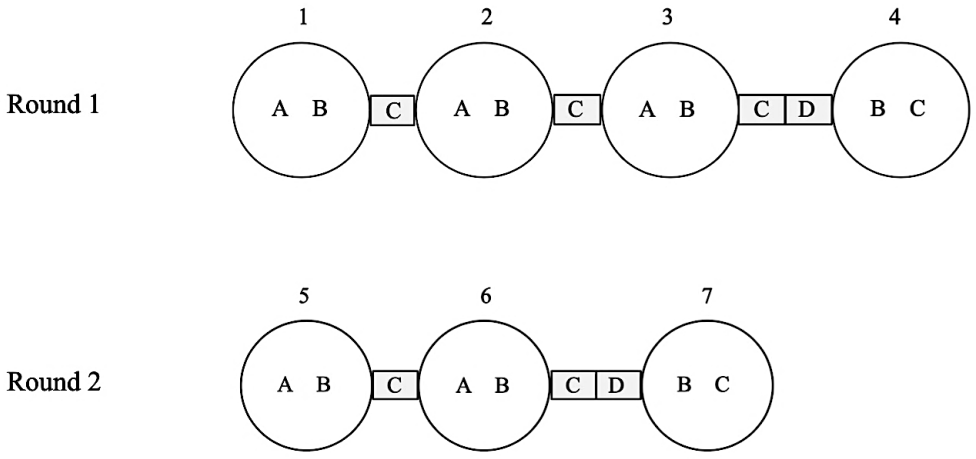


Fig. 92. Circuits and jumping points in *Skjoldmøyslaget*.

Because *taks* C and D in *Skjoldmøyslaget* appear relatively infrequently and fixed in relation to *taks* A and B both of which tend to vary and to impact one another we can understand C and D as jumping points between the circuits, punctuating the performance into different sections (i.e., periods or *veks* in the timeline between these *taks*) as shown in figure 92. The figure visualises all the sections in both rounds of the performance as circuits, marked 1–7. Each circuit contains the *taks* which engage with one another in each section. Note that in the last circuit in each round (4 and 7), *tak* C intertwines with *tak* B and therefore operates *both* as a jumping point and an integral part of the circuit itself. Local variability occurs within eventual cycles in each circuit, which can contribute to a sense of the tune's continuous variability as well, as we shall soon see.

The following analytical discussion on variability within these seven sections will follow the order of 1, 2, 3, 5, 6 (concerning principally the variability of *taks*

A and B), then 4 and 7 (concerning principally the variability of *taks* B and C). It will also address possible transformation processes between *taks* from a fingering perspective (i.e., how A can be understood to transform into B). Regarding punctuation, the different *taks* and cycles are marked with colored squares because they often overlap or fall within the barlines. The colors are as follows: A (red), B (blue), C (brown) and D (green). I apologize in advance to those readers who are colorblind. I have tried to place the squares so that barlines can be used as reference structure as well. When a *tak* continues onto the next line in the transcription, the squares are *open* (i.e., the lines end on the right side of the score and continue on the left on the next line). The complete punctuation table of the performance of *Skjoldmøyslaget* is presented in appendix D, and a complete overview of the tablatures is presented in appendix E.

Section 1

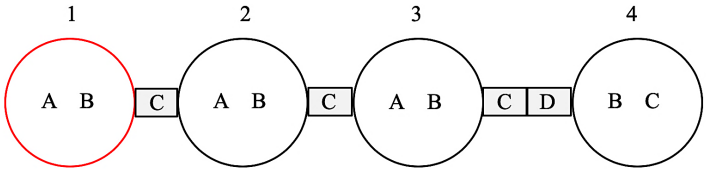


Fig. 93. Focus on section 1 in round 1 of *Skjoldmøyslaget*.

Figure 93 shows all four sections (marked as circuits) in round 1 of *Skjoldmøyslaget*, in addition to its jumping points (*tak* C and *tak* D). Section 1 is marked red because it is the present focus.

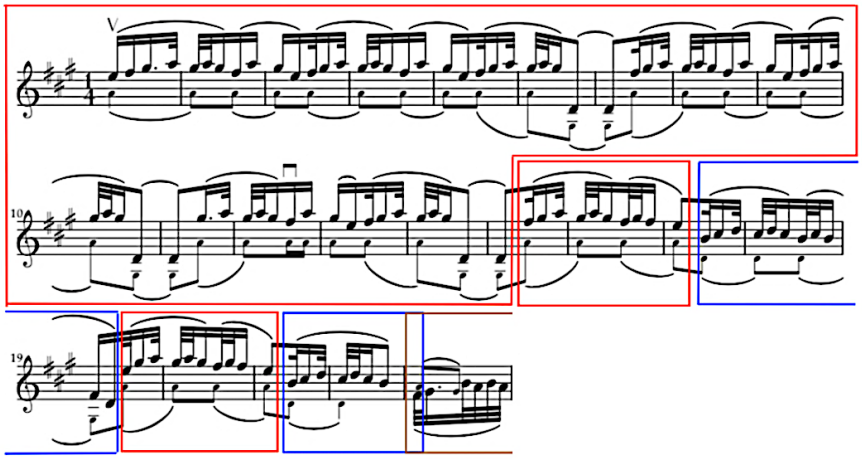


Fig. 94. Section 1 of *Skjoldmøyslaget*.

Section 1 begins in bar 1 and ends within bar 23, as shown in figure 94. The period encompasses *tak* A (red) and *tak* B (blue) and is delimited by jumping point *tak* C (brown).

Reflection

The melody from bar 1 to in 15, marked with the first red square in the figure, is a *varied cycle A,* because *tak* A is directly repeated with changes within the cycle. A new variant of the original A appears from bar in 15 to in 17. This variant of A is roughly transposed from s. 1 to s. 2, suggesting a new finger placement (2. f. on s. 3), which transforms this figure into *tak* B (marked with the blue square), even though the melody is experienced being related to the just-completed *tak* A. The last *tak* of section 1 is also B. Because 2. f. on s. 3 in this variant of B is shared with the following *tak* C, it can be understood as a *fulcrum finger,* which operates as a specific fingered jumping point between *taks*.

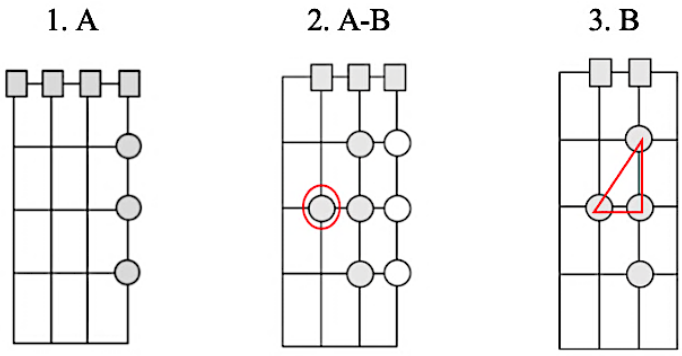


Fig. 95. The transformation process from A to B.

We can now diagram the transformation process from *tak* A to *tak* B in section 1, as shown in figure 95, which starts with the finger placements used in A (tablature 1), which are then marked with white circles in tablature 2. These finger placements are transposed to s. 2, marked with grey circles in tablature 2. The new finger placement (2. f. on s. 3) is marked with the red circle. *Tak* A thus transforms into *tak* B according to the schematic in tablature 3. *Tak* B is not defined as such until the introduction of 2. f. on s. 3. The transposed finger placements of the original A on s. 2 (*without* 2. f. on s. 3) are, on the other hand, understood as comprising a variant of A.

Section 2

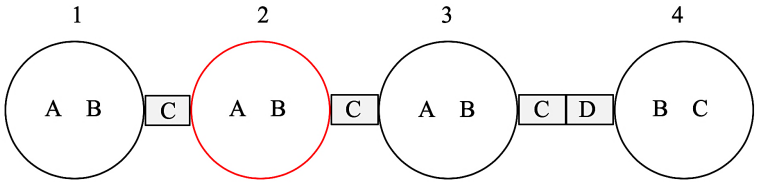


Fig. 96. Focus on section 2 in round 1 of *Skjoldmøyslaget*.

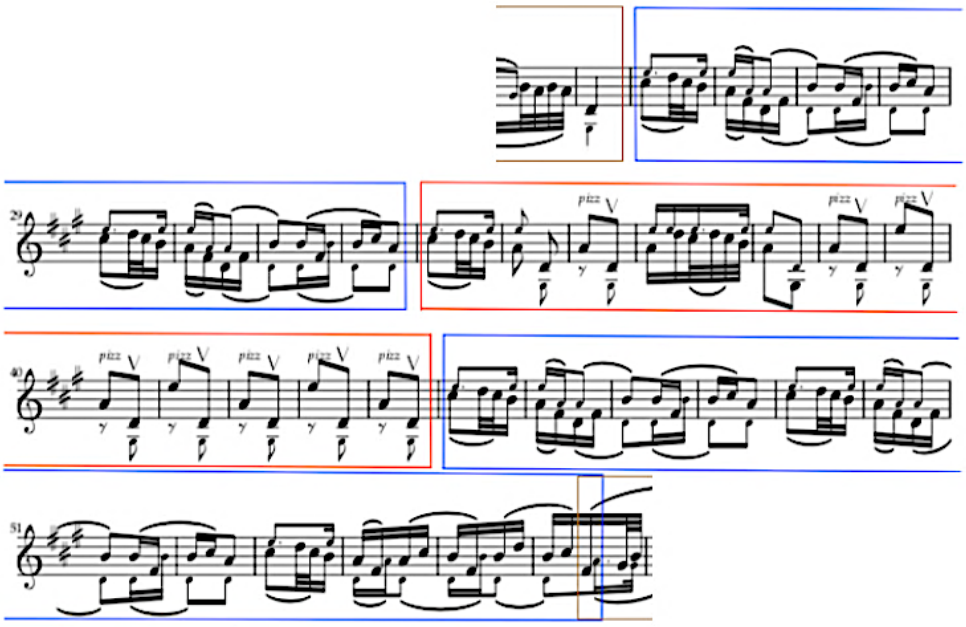


Fig. 97. Section 2 in *Skjoldmøyslaget*.

Section 2 consists of *taks* A and B and is delimited by *tak* C both at the beginning and at the end of the section in the figure 97 timeline. This section begins at bar 25 (*after* the brown C in the figure) and ends within the next *tak* C, in bar 56.

Reflection

Bars 25–32 present a *non-varied cycle B,* because *tak* B is repeated without being changed.

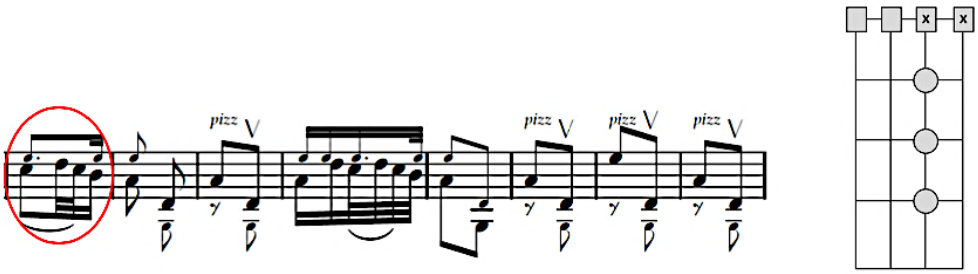


Fig. 98. A variant of *tak* A.

Further, bars 33–44 represent a variant of *tak* A due to the use of finger placements associated with *tak* A (e.g., not including 2. f. on s. 3). This variant also includes pizzicato as a variability tool, as marked with the x in the tablature in figure 98 (the example shows only the first part of *tak* A). This *tak* A is not repeated but instead understood as continuously varied, due to the way in which it changes from the preceding appearances of *tak* A. This particular variant also incorporates the first bar from the previous *tak* B, as marked by the red circle in figure 98. By using the transposed finger placements from s. 1 to s. 2 of the original *tak* A, the gravity finger (2. f.) is now also transposed from s. 1 to s. 2. The period from bar 45 to in 56 is further understood as a locally varied cycle B (because it is changed upon its final repetition). Of course, section 2 can also be understood as one cycle B where *tak* B is both repeated and varied, but I will hold to this study's fingering principle, as described in section *clarification*, and define period 2 as consisting of both *taks* A and B.

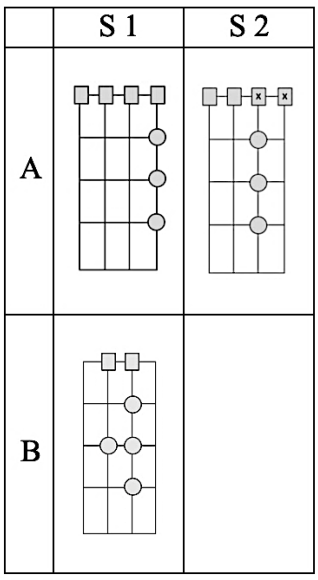


Fig. 99. Variants of *taks* A and B.

Thus far, the analytical discussion has generated tablatures representing variants of *taks* A and B in relation to sections 1 and 2 (S 1 and S 2), as shown in figure 99. We can now see that the tablature of *tak* B is unchanging through sections 1 and 2 (i.e., variants of B are following the *original* tablature), while *tak* A contributes a new tablature variant in section 2. When no tablature is shown in a section (e.g., *tak* B in section 2), the *tak* B appearances in this section are represented by the tablature shown for section 1.

Section 3

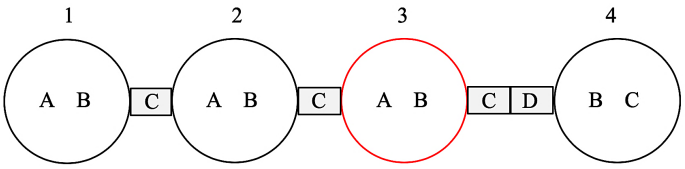


Fig. 100. Focus on section 3 in round 1 of *Skjoldmøyslaget*.

The diagram in figure 100 indicates that section 3 consists of *taks* A and B, delimited by *tak* C on both sides of the circuit.

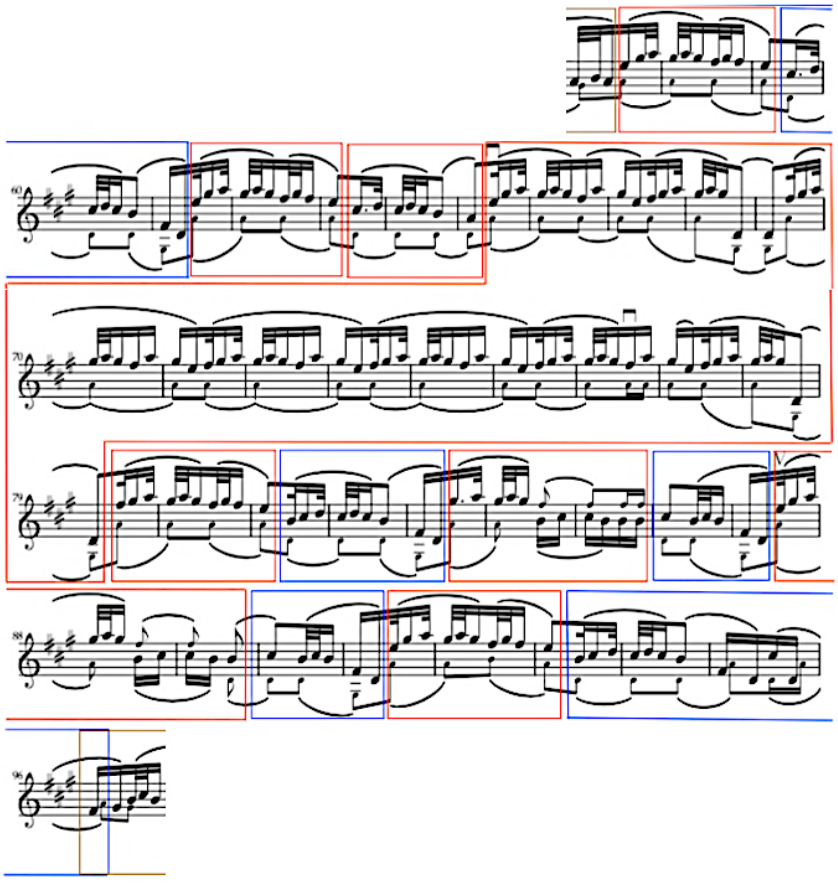


Fig. 101. Section 3 in *Skjoldmøyslaget*.

Section 3 starts at bar in 57 (the first red square in figure 101, after the brown *tak* C) and ends at bar in 96.

Reflection

Most of the variants of *tak* A used in section 3 are discussed elsewhere. A new contribution occurs from bar in 63 to bar in 65, where the original fingered period of *tak* A is transposed from s. 1 to s. 2. This happened in the previous variant of *tak* A in section 2, but now it does not include pizzicato. *Tak* B uses the same tablature as elsewhere, including the last variant in section 3, when *tak* B shares the fulcrum finger 2. f. on s. 3 with *tak* C.

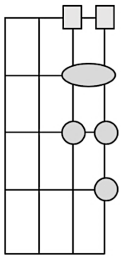


Fig. 102. New variant of A.

In bars in 83–85 and in 87–89, a new variant of *tak* A introduces the biggest change yet to the *tak*; a strangle grip bridges the fingering from s. 1 to s. 2, as shown in figure 102.

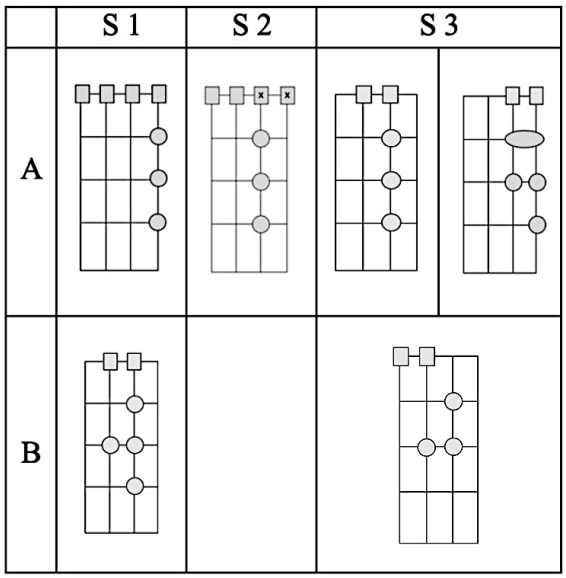


Fig. 103. Variants of *taks* A and B.

Figure 103 indicates that *tak* B contributes one new tablature in section 3, whereas *tak* A contributes two. As mentioned earlier, I will now suspend the analysis of round 1 for the moment, as *tak* A does not appear again, and *tak* B intertwines with C, which will be discussed later. I will skip ahead to the beginning of round 2 to keep my focus on the continuous variability of *taks* A and B in this tune.

Section 5

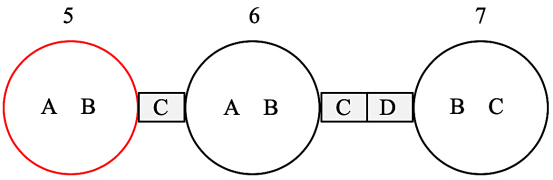


Fig. 104. Focus on section 5 in round 2 of *Skjoldmøyslaget*.

Figure 104 includes all of the sections in round 2. Section 5 contains *taks* A and B and is delimited by *tak* C on both sides.

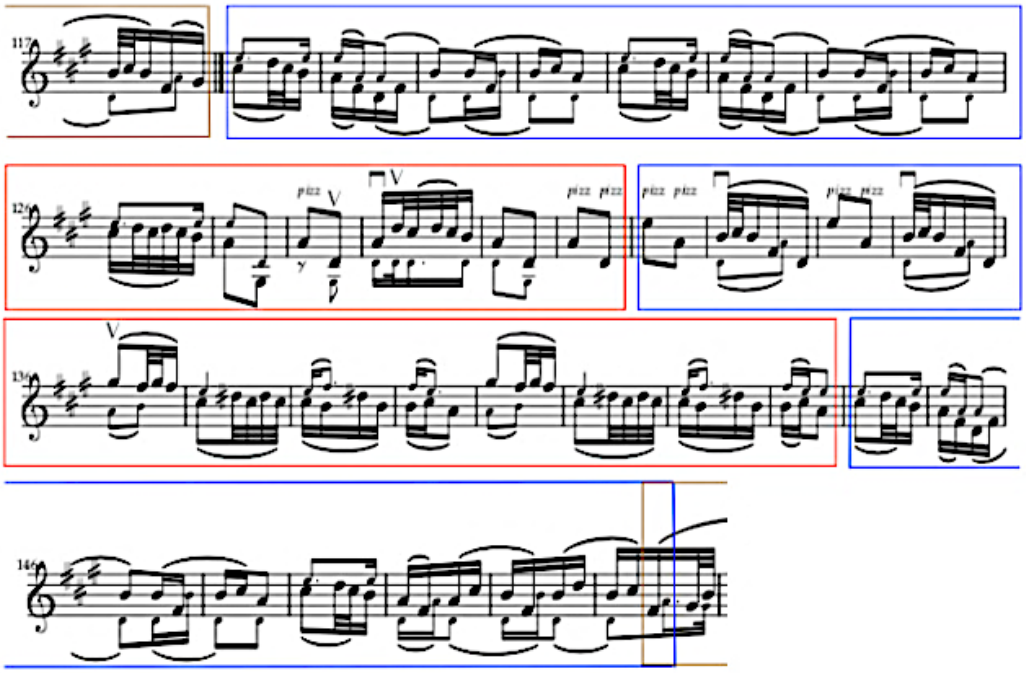


Fig. 105. Section 5 in *Skjoldmøyslaget*.

Section 5 starts at bar 118 and ends at bar in 151, as shown in figure 105.

Reflection

Section 5 starts with a non-varied cycle B. The subsequent *tak* A in bars 126–131 is a variant of the previously described A with the pizzicato. Here, the variant of *tak* B in bars 132–135 transmits the pizzicato structure from the previous *tak* A, thereby contributing to the development of *tak* B from a continuous analythical perspective. *Tak* A further changes from a continuous perspective in cycle A in bars 136–143, which are otherwise non-varied from a localised perspective. This variant of *tak* A derives from an earlier variant of A in section 3. Section 5 ends with a locally varied cycle B, which was also used in section 2 and is therefore not continuously varied save for one extra repeat when it appears in section 2.

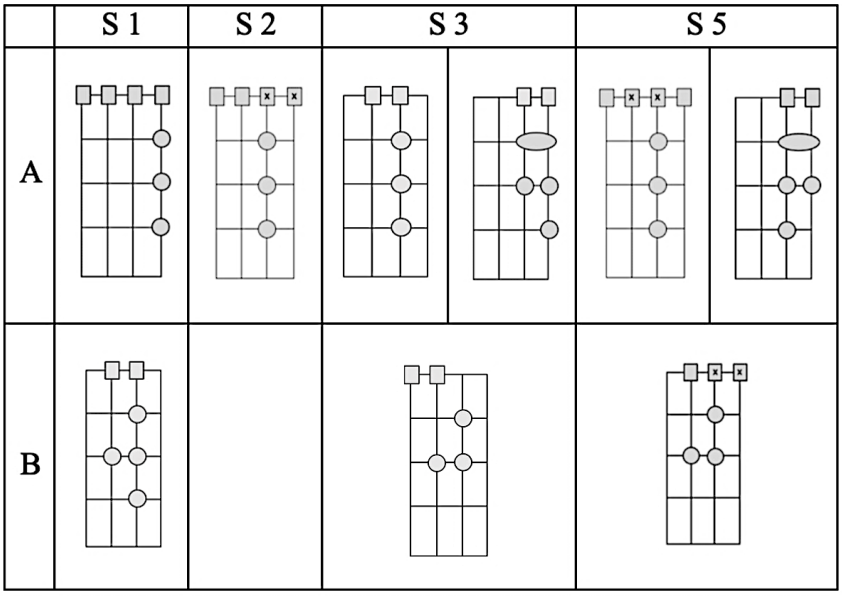


Fig. 106. Variants of *taks* A and B.

Figure 106 updates this tune's continuous variability by indicating that *tak* A is still variable in round 2. *Tak* B is also continuously variable, having contributed a new tablature, including pizzicato.

Section 6

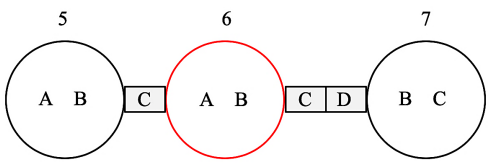


Fig. 107. Focus on section 6 in round 2 of *Skjoldmøyslaget*.

Section 6 again contains *taks* A and B, delimited by *tak* C on either side.

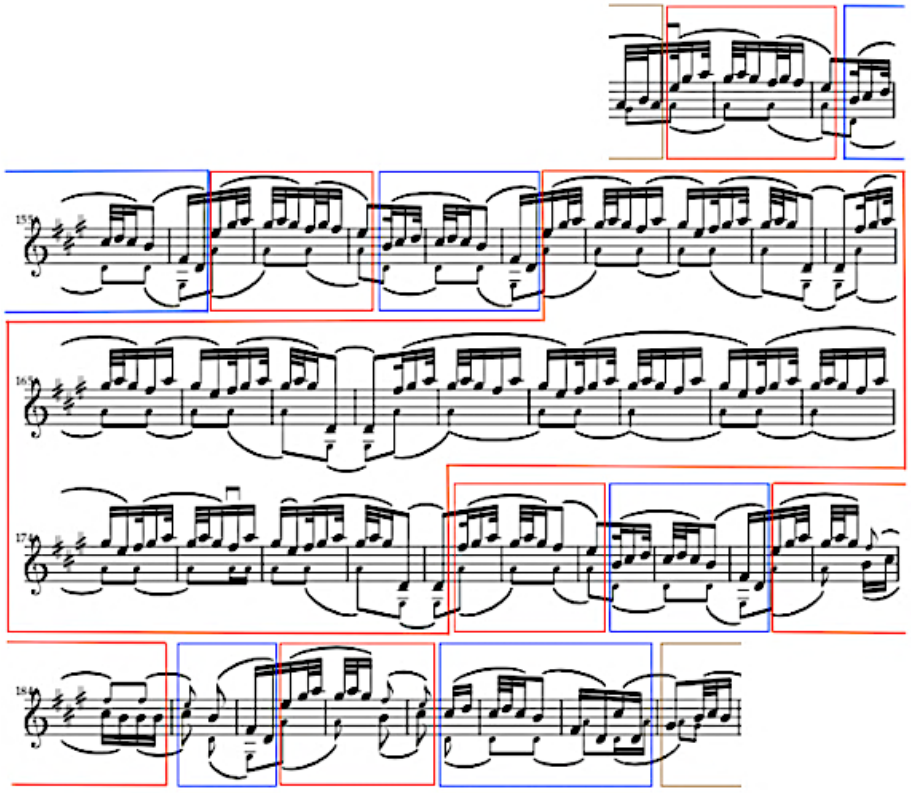


Fig. 108. Section 6 in *Skjoldmøyslaget*.

Section 6 starts at bar in 152 (the first red square after the brown *tak* C in figure 108) and ends after bar 190.

Reflection

Section 6 is dominated by *tak* A in a long and varied cycle from bar in 160 to bar in 178. From a continuous perspective, all the variants of both *taks* A and B in this section are equivalent to the variants described earlier. Section 6 also concludes the continuous variability process of *tak* A, and therefore my discussion of the interaction between *taks* A and B in the performance. I will now consider variability in relation to *taks* B and C at ends of both rounds, in addition to the aforementioned fulcrum finger between *taks* B and C.

Section 4 and 7

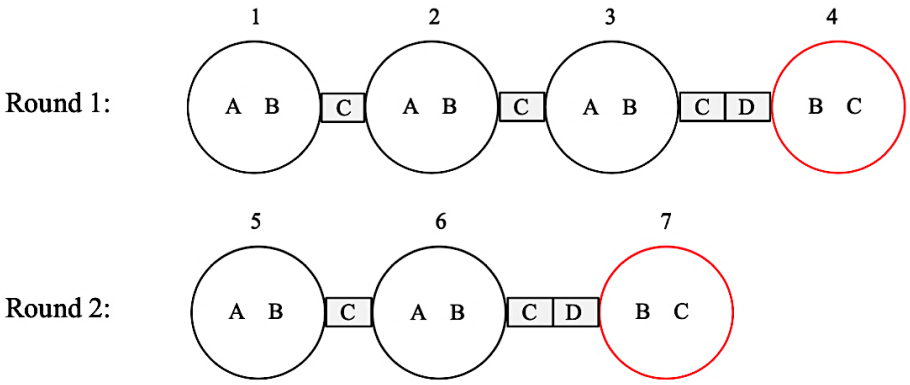


Fig. 109. Focus on sections 4 and 7 in *Skjoldmøyslaget*.

Figure 109 shows all of the sections in both rounds of *Skjoldmøyslaget*. The concluding sections 4 and 7 contain *taks* B and C, delimited by the preceding *tak* D. The jumping point between sections 4 and 5 (i.e., between the two rounds) is the variant of *tak* C from section 4.

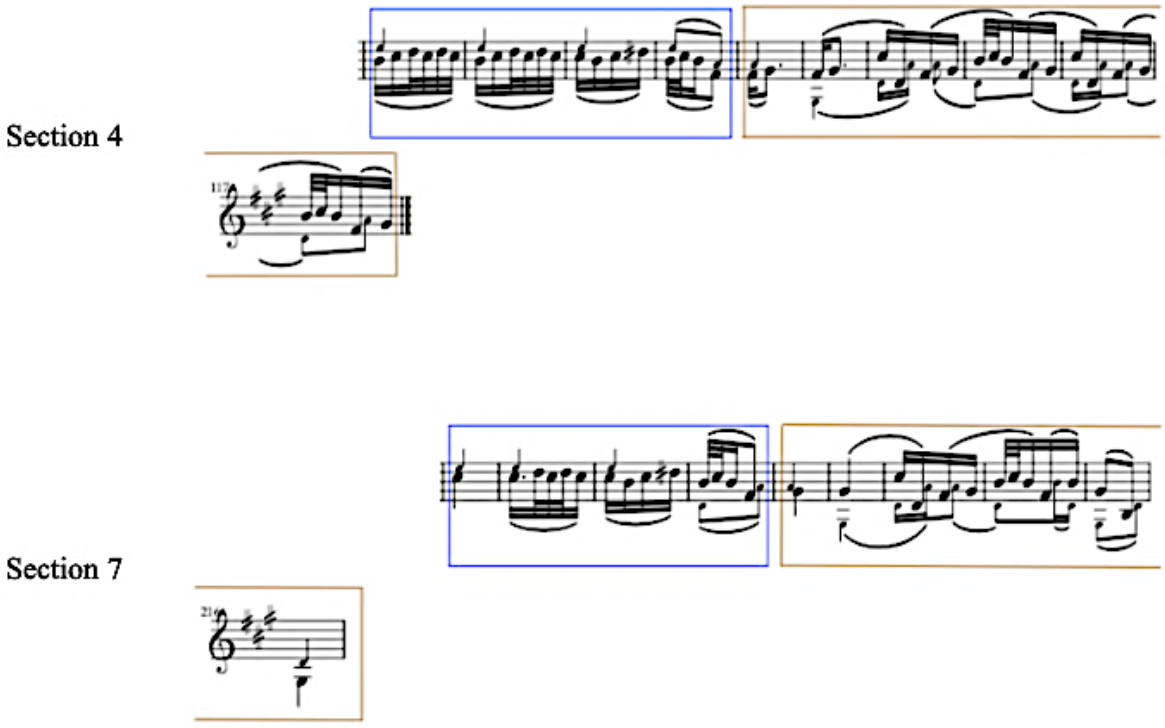


Fig. 110. Sections 4 and 7 in *Skjoldmøyslaget*.

Section 4 ranges from bar 108 to bar 117 in round 1 (*after* the previous *tak* D), and section 7 ranges from bar 207 to bar 216 in round 2, both as shown in figure 110.

Reflection

The blue-marked *taks* in both sections, based on the principle of finger placement, are *tak* B, though they vary from the previous ones in both melodic structure and rhythm. This *tak* B is therefore varied from a continuous perspective but non-varied from a local perspective, as it is not repeated in sections 4 and 7. The last *tak* in both sections is *tak* C, because its gravity finger is 3. f. on s. 3., one of the main finger placements established for this *tak*. These versions of *tak* C do not use the gravity finger as a finger bridge, however, as did earlier versions of C.

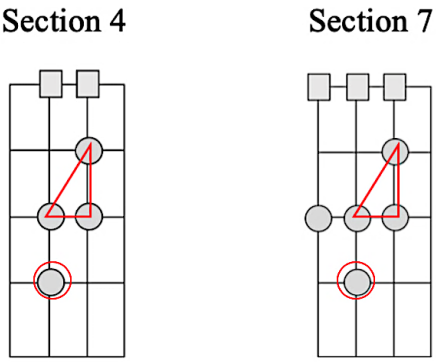


Fig. 111. The intertwining between *taks* B and C.

The two versions of *tak* C shown in figure 111 are intertwined with *tak* B, because they include the finger pattern of B and the gravity finger of *tak* C (marked in the figure with the triangle and the circle, respectively). The variant of C in section 7 introduces a new finger placement (2. f. on s. 4), which might classify it as a new *tak*. Ultimately, however, I still experience the last *taks* in both rounds as *tak* C, because the gravity finger of C operates as the main finger placement in both versions.

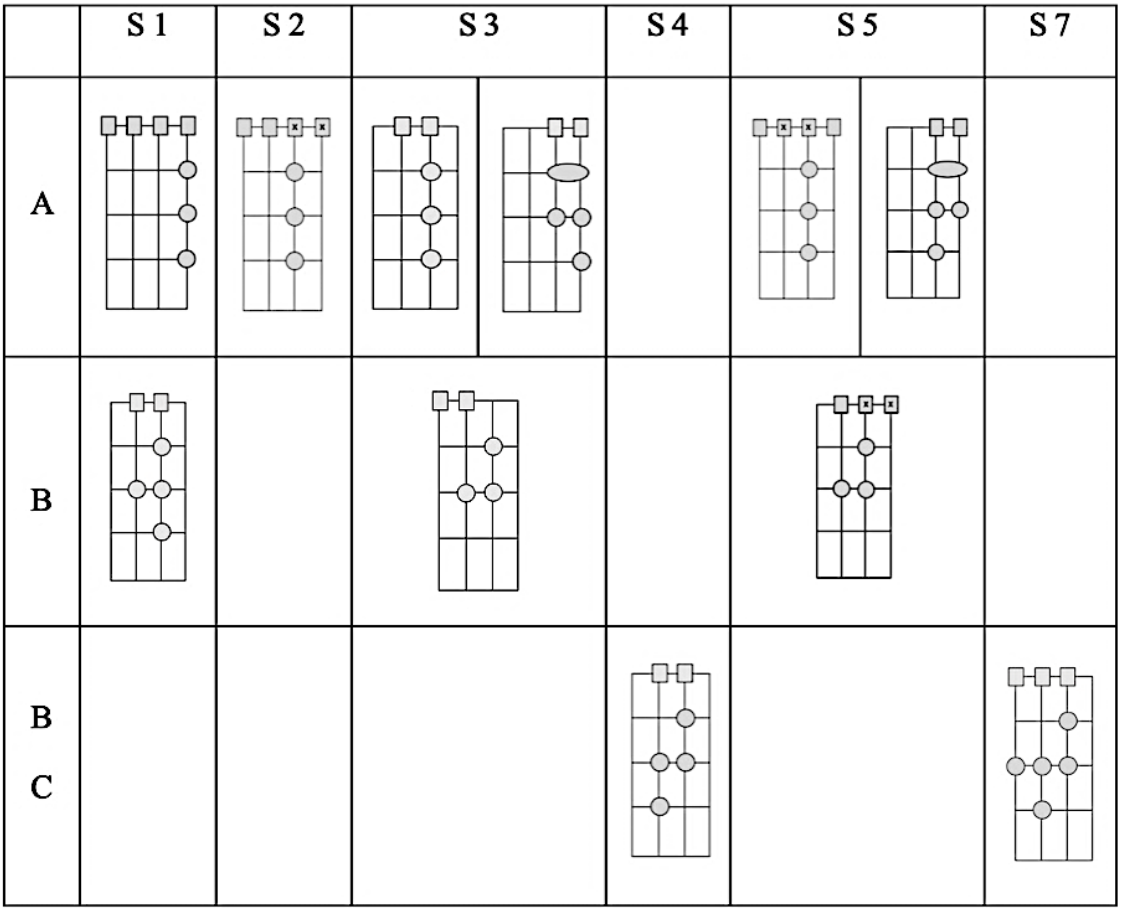


Fig. 112. The variants of A, B and C.

Figure 112 summarises the different variants of *taks* A and B throughout the performance of *Skjoldmøyslaget*, including the versions of *tak* C that intertwine with *tak* B (marked B C). Both local and continuous variability have been addressed across in the tune's sections, including continuous transformation between *taks*. We have seen that the performance contains four *taks*: A, B, C and D. Again, A and B are core units in this performance, because both (and especially *tak* A) are frequently used, repeated and changed. *Taks* C and D primarily operate as fixed jumping points, except when *tak* C intertwines with *tak* B at the end of each round.

Summary on fingering

Skjoldmøyslaget features a generally descending fingered profile which begins on s. 1 and ends on s. 4 and also includes undulating fingering movements between bright and dark strings. Most of the short *taks* in *Skjoldmøyslaget* also feature a descending fingered profile, with the exception of the original *tak* A.

All strings are fingered in this tune, but the main strings are s. 1, s. 2 and s. 3; s. 4 is used in cycle D to conclude the performance, and as a drone. This *three-strings fingering* recalls Anmarkrud's argument that tunes with less-used tunings (such as *Skjoldmøyslaget'*s a-e-a-c#) might originate with a tradition shaped for three-strings instruments, before the Hardanger fiddle even existed (Anmarkrud, 1975, p. 123). The melody includes few big jumps from the bright strings to the dark strings or vice versa, with the exception of *tak* D, which transposes the melody from s. 1 to s. 4, and *tak* A, where the melody jumps to s. 4, and variants of *tak* A which picks up open s. 4. The *taks* vary in their fingering from placements only on a single string (the original *tak* A) to include patterns which cross strings (*tak* B).

The finger locomotion in each *tak* primarily revolves around a gravity finger or finger pattern and often ends in a release *tak* (open strings). This form of almost stationary finger locomotion can build up tension in the music. Cycle D is an exception in this regard, in that the fingering follows the strings downward without any specific finger patterns or gravity finger involved. When the *taks* end on open strings in this way, the tuning of the fiddle becomes a large part of the sound. The tuning in this performance (a-e-a-c#) creates a relatively tight framework for the fingering as the intervals are relatively small between the strings, which may explain the relatively small ambitus of each *tak*.

The pinkie is only used on the bright strings (s. 1 and s. 2), perhaps due to the coincident pitches in this tuning, as shown in chapter 2, section *fingering*, which limit the use of certain finger placements. It may also be due to the angled wrist technique Andres uses, which can limit the range of the 4. f. placement, especially on s. 4. Or perhaps Andres simply chose to use less pinkie in this performance.

Andres primarily uses drone grips in *Skjoldmøyslaget*, which, according to Anmarkrud, is an old-fashioned performance technique (1975, pp. 120–123). The drone grip consists of the gravity finger 2. f. on s. 1 and an open s. 2; it is particularly common in variants of *tak* A on s. 1. Again, drone grips tend to make the fiddle's tuning a fundamental part of the music. Andres uses the strangle grip primarily as variability tool. He sometimes uses the double grip when the melody crosses strings, as discussed earlier. He only uses finger bridges in *tak* C, so there is no intertwined fingering in this performance. Blom argues, 'During the last 150–200 years, a traditional development has taken place towards more double grips in the music' (Blom, 1985, p. 206).[98] From this perspective, the findings indicates that Andres has inherited a more old-fashioned fingering style, consisting in general of drone grips rather double or strangle grips.

It is also noteworthy that the *taks* in general often cross the pulse, creating a rolling, dizzying, syncopated experience of this complex music, as is clear from all the 'ins' which were needed to describe the punctuation even in a 1/4 meter (See appendix E).

Turning point

I will now direct my analysis of the melodic structure away from the concrete music represented by the tablatures and towards the other musical possibilities these tablatures suggest—to prepare for my own creative work.

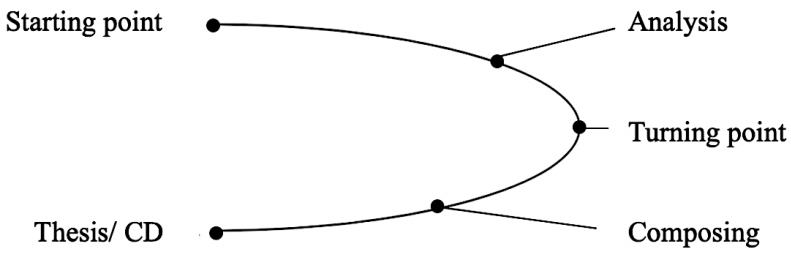


Fig. 113. Turning point.

[98] Translated by the author. Original: 'I løpet av de siste 150–200 år har funnet sted en tradisjonsutvikling i retning av mer dobbeltgrep i spillet'.

Such an exercise points the analysis towards the process of composing and is indicated as such in figure 113.

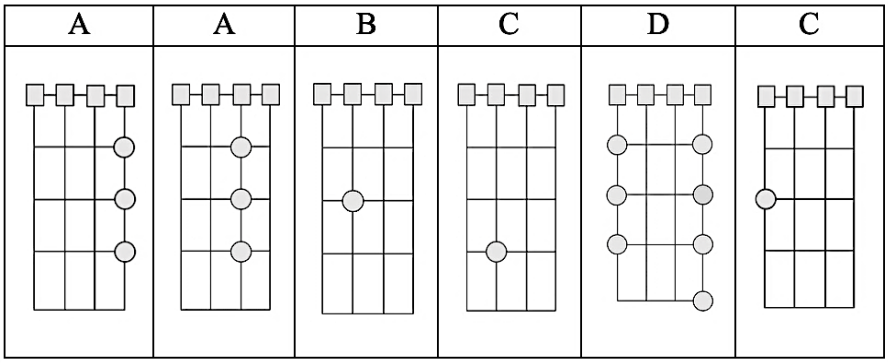


Fig. 114. Abstract fingered process of round 2 in *Skjoldmøyslaget*.

Figure 114 shows an abstract illustration of the core finger placements in *Skjoldmøyslaget*, as well as the way in which the new finger placements which arise during the timeline lead the transformation process from *tak* to *tak*. The fingered process shown in the figure indicates that, after the original *tak* A is played, the finger placements are transposed from s. 1 to s. 2 (a variant of A). Then, a new finger placement is introduced on s. 3 (*tak* B) to introduce the gravity finger of *tak* C (3. f. on s. 3). *Tak* D is more or less tacked on to the main form; it appears only once in each round and is not intertwined in the main transformation process of *taks*. The performance ends by introducing a new finger placement on s. 4 (a variant of *tak* C). Figure 114 is, of course, abstracted in the sense that there are several variations within each *tak*; there are different drones used; and the *taks* appear in varying order in the timeline. From this perspective, the whole performance of *Skjoldmøyslaget* seems to derive from the original *tak* A, except for *tak* D. Along these lines, different finger placements also operate as fulcra where the music involves new directions, *taks* and forms.

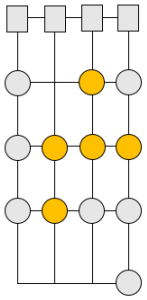


Fig. 115. The skeleton of *Skjoldmøyslaget*.

The whole performance of *Skjoldmøyslaget* can now be collected into one tablature, or 'skeleton', as shown in figure 115, which includes all the finger placements used (and *not* used) in the performance. Orange marks core finger placements—that is, the finger patterns and gravity fingers in the different *taks*—and grey marks other fingered and open strings. Strangle grips and pizzicato are not included in the figure because they generally work as variability tools. The skeleton, in short, reveals what makes different performances of *Skjoldmøyslaget* recognizable as the same tune. The skeleton also supplies a fine tool for composing, as we shall soon see.

Reisaren

We will now turn to the performance of *Reisaren*.

Identification of *taks*

Core unit

Tak A is the core unit in this performance, as it appears frequently. It is not varied much, though its borders are somewhat inconsistent and it presents in three distinct versions in the performance.

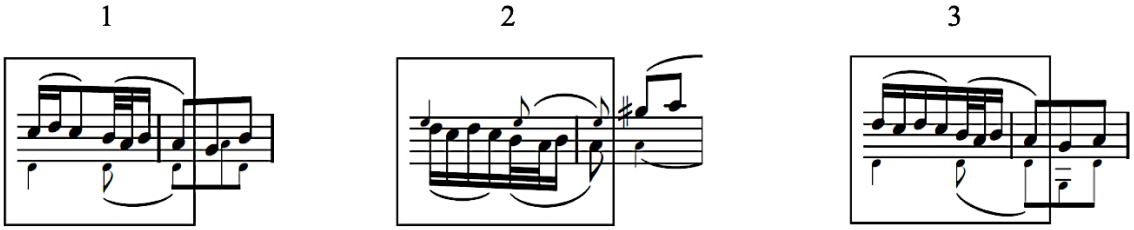


Fig. 116. Three variants of *tak* A.

The question is whether the entire fingered periods of these three versions should be understood as equal variants of *tak* A, or whether it should be defined as only the approximately fixed part within the marked squares in figure 116, which varies only in ornaments and drones. The latter definition resonates well with the physical experience of playing these different parts, as the muscle tension in the fingers is released by the last open s. 2 within all of the squares, lending them a certain consistency and continuity. Likewise, the fingering *after* the marked squares in all three versions implies as a new *tak* in each case, as we shall soon

see. I will therefore define *tak* A as the figure inside the squares; its gravity finger tends towards 2. f. on s. 2.

Finger patterns

Three different finger patterns arise in *Reisaren*, all of which are *crossing strings*—that is, finger placements on several strings that are experienced as a pair.

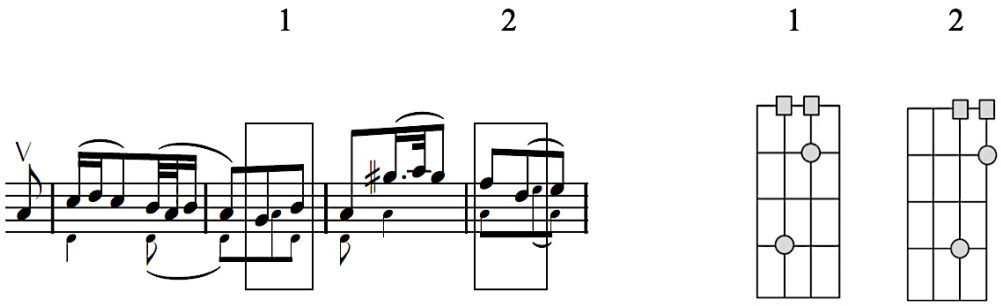


Fig. 117. Two of the finger patterns in *Reisaren*.

Two of these finger patterns are marked with squares and represented by the tablatures in figure 117 with related numbers (1 and 2), consisting of 1. f. and 3. f. with the fingers used on different strings and in a different order. The question is whether these finger patterns should be included in the same *tak* or divided into two separate *taks*.

Here we see that the perspective of fingering contributes something new to traditional melody and motif analysis, revealing fundamental similarities between two small motifs that a traditional analysis would read as different. How might such an insight be used?

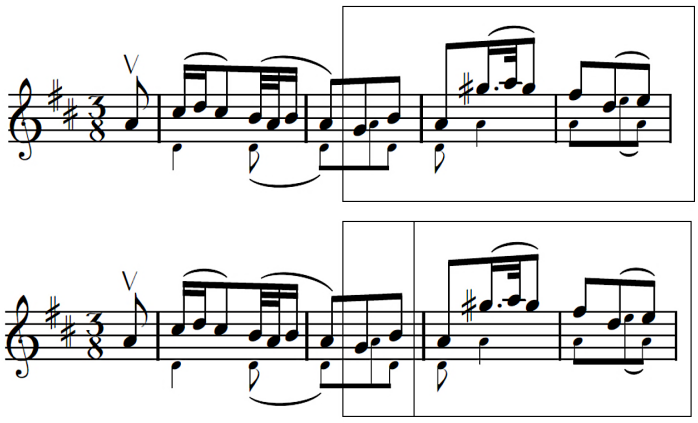


Fig. 118. Two different ways to integrate the finger patterns in *taks*.

In figure 118, the whole fingered period shown two times is part of a cycle (i.e., the shown period is repeated in the timeline), so it could be considered one *tak*, but parsing it into smaller units might add meaningful information about its fingering.

To begin, we might observe whether finger patterns 1 and 2 operate relatively independently throughout the timeline or tend to pair up within the same fingered period.

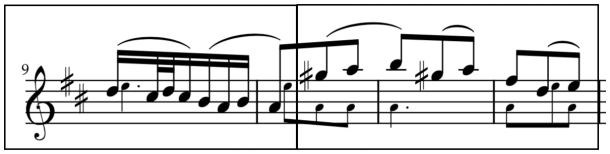


Fig. 119. Fingered period without pattern 1.

Indeed, pattern 2 does seem to appear as part of the same fingered period, or variants of such. Pattern 1 is sometimes connected to *tak* A and sometimes not, as shown in the figure above.

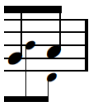


Fig. 120. Release *tak* in *Reisaren*.

Occasionally, finger pattern 1 appears as a release *tak,* as shown in figure 120. Based on these observations, pattern 1 will be defined individually as *tak* B.

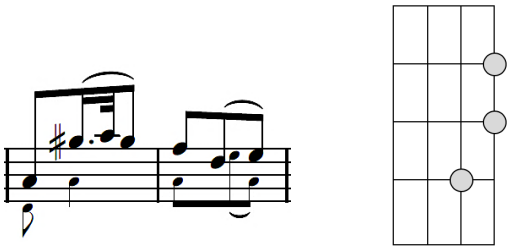


Fig. 121. Finger pattern in *tak* C.

Finger pattern 2 is therefore part of *tak* C, to which I will also add 2. f. on s. 1, as it serves as the gravity finger for the *tak*. The figure above shows the finger pattern of C together with its gravity finger in the tablature and one example of the *tak*.

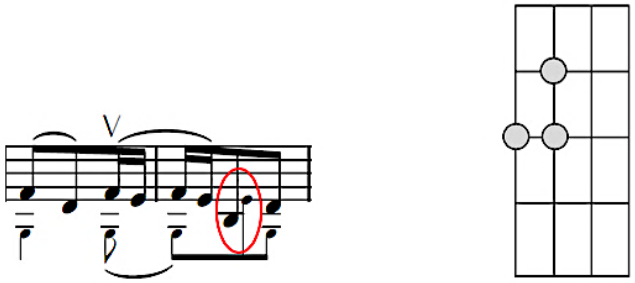


Fig. 122. Finger pattern in *tak* E.

The third finger pattern in *Reisaren* consists of 1. f. on s. 3 together with 2. f. on s. 3 and 2. f. on s. 4, as shown in the tablature in figure 122. As this pattern is generally part of the same finger period or variant of it, it is part of *tak* E. The example in the figure above includes a double grip, as shown by the red circle, for the same pragmatic reasons already mentioned with regard to the performance of *Skjoldmøyslaget*—that is, to keep the finger ergonomically correct rather than awkwardly lift it away from the string. The gravity finger of *tak* E is 2. f. on s. 3.

Cycle D

Cycle D appears only once in each round of the performance as a non-varied cycle from a local perspective, as shown in figure 123.

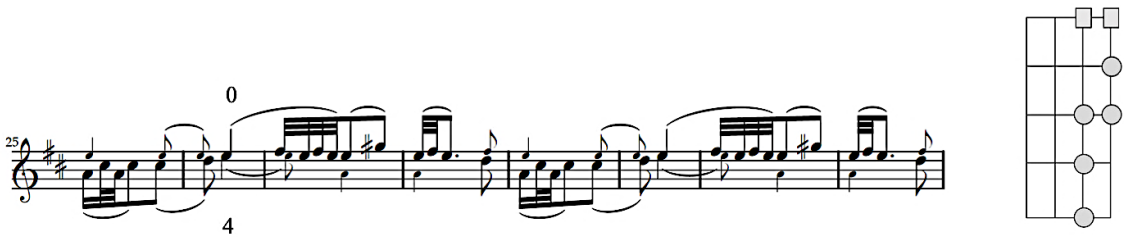


Fig. 123. Cycle D in *Reisaren*.

Cycle D is the same in both rounds, so it is also non-varied from a continuous perspective.

Finger bridge

Tak F appears two times in each round of the performance with 3. f. on s. 4 operating as a finger bridge and a gravity finger, as marked by the red circle in the tablature in figure 124.

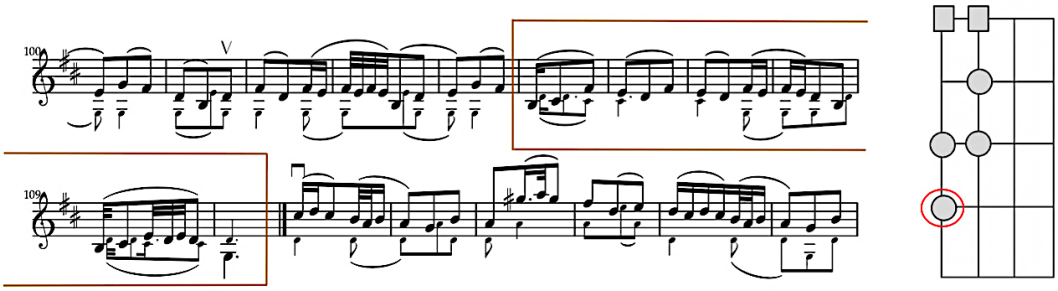


Fig. 124. *Tak* F in *Reisaren*.

Tak F is not locally repeated and is therefore a *Heddi-ladder*. Its four variants in the performance are approximately identical, with the exception of ornaments, the use of the strangle grip in the third variant, and the alteration of one note at the end of the fourth version (the final *tak* of the whole performance).

Form

Having discussed and defined the *taks* in *Reisaren,* we can next turn to the tune's overall form. This performance consists of two roughly identical rounds with the same order of *taks* and cycles. The differences between the rounds include a longer cycle C in round 2, and a shorter cycle E in round 2. I will confine the following discussion to round 1 as representative of both rounds but address differences in round 2 where relevant to the analysis's general research questions.

A-B-C-A-B-C-A-C-A-C-A-B-C-A-B-C-D-A-B-C-A-B-C-A-B-C-A-B-A-A-B-

A-A-B-E-A-B-E-F-A-B-A-B-E-F

Fig. 125. The order of the *taks* in round 1 of *Reisaren*.

In figure 125, the black squares around *taks* D and F draws attention to the role of these *taks* as punctuation for the performance. The red square marks the period in the round where *taks* C and D are left behind, and E and F are introduced.

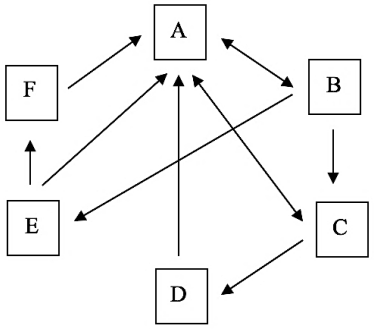


Fig. 126. Network of *Reisaren*.

The network shown in figure 126 represents a bird's-eye view of the form of *Reisaren*. The two main interactions among *taks* are between A, B, C and D and between A, B, E and F, whereby B determines which group is active.

Variability

Figure 127 shows one round in the performance of *Reisaren* with the sections numbered. Section 2 has two periods.

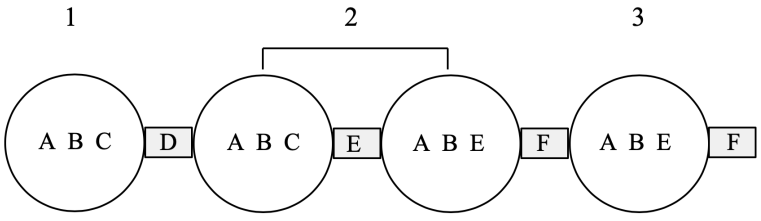


Fig. 127. The different sections in one round of *Reisaren*.

Interestingly, *tak* E operates both as a jumping point between the two periods in section 2 (its first appearance) and as part of the periods in sections 2 and 3, intertwining with *taks* A and B. Taks D, E and F therefore all serve to punctuate the performance in different ways.

I will now punctuate round 1 in terms of both local and continuous variability using different colours: A (red), B (black), C (blue), D (green), E (turquoise) and F (brown). The complete punctuation table for *Reisaren* is in appendix D, and complete overview of tablatures is in appendix E.

Section 1

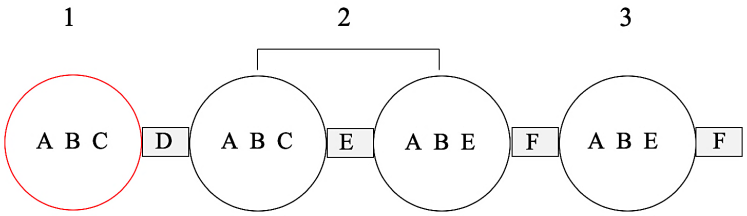


Fig. 128. Focus on section 1 in round 1 of *Reisaren*.

Section 1 includes *taks* A, B and C and is delimited by *tak* D.

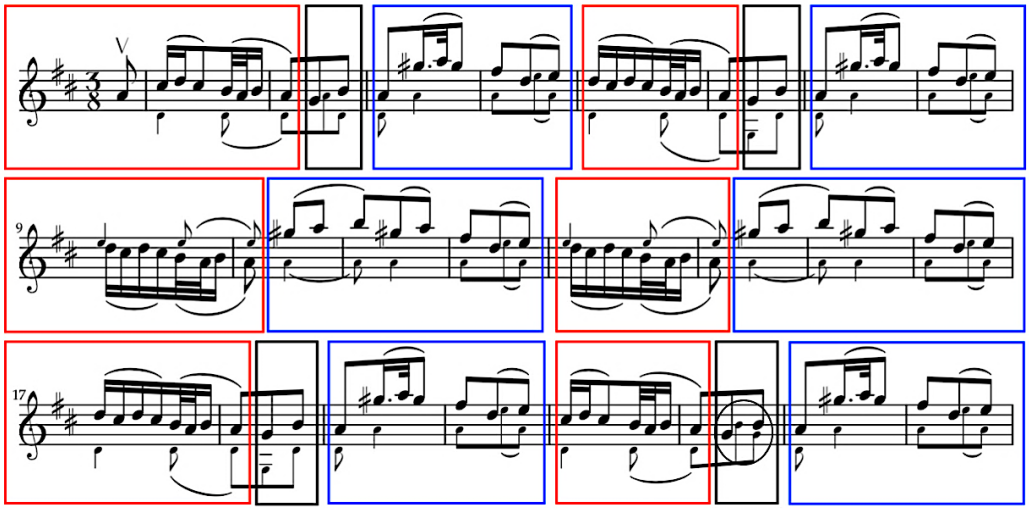


Fig. 129. Section 1 in *Reisaren*.

Section 1 fills bars 1–24, as shown in figure 129.

Reflection

Tak A (red) is consistent throughout section 1, save for small variations in drones and ornaments, so it is non-varied from a continuous perspective. It is also not repeated, so it is non-varied from a local perspective. *Tak* B (black) is not repeated and is consistent in section 1; therefore, it is neither locally nor

continuous varied, save for the double grip in bar in 22. *Tak* C (blue) is not repeated and therefore not locally varied, but it is varied from a continuous perspective, thanks to its variants (i.e., from bar in 10–12).

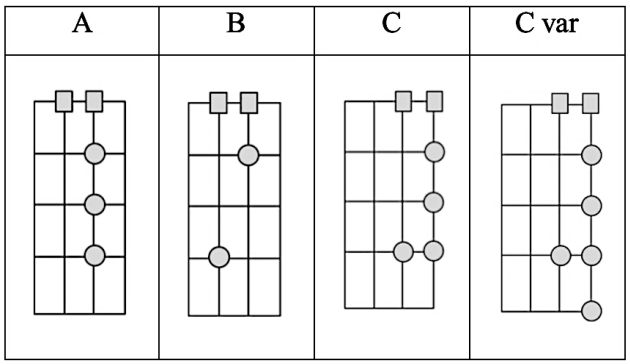


Fig. 130. Transformation from *tak* A via B to C.

As the *taks* in section 1 are relatively fixed, the transformation process between them gains new importance, as shown in the tablatures in figure 130. The finger placements used in *tak* A, together with the finger pattern of *tak* B, are transposed from s. 2 to s. 1 in *tak* C but also changed. From this perspective, *tak* C is a variant of A and B. *Tak* C transforms into a variant of itself as well by adding 4. f. on s. 1.

Section 2

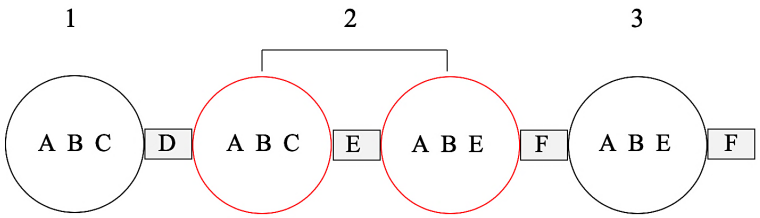


Fig. 131. Focus on section 2 in round 1 of *Reisaren*.

Section 2 includes the periods inside the two red circuits and the jumping point *tak* E between these circuits. The first circuit includes *taks* A, B and C and is delimited by the preceding *tak* D and the following E. The second circuit includes A, B and E and is delimited by the preceding E and the following F.

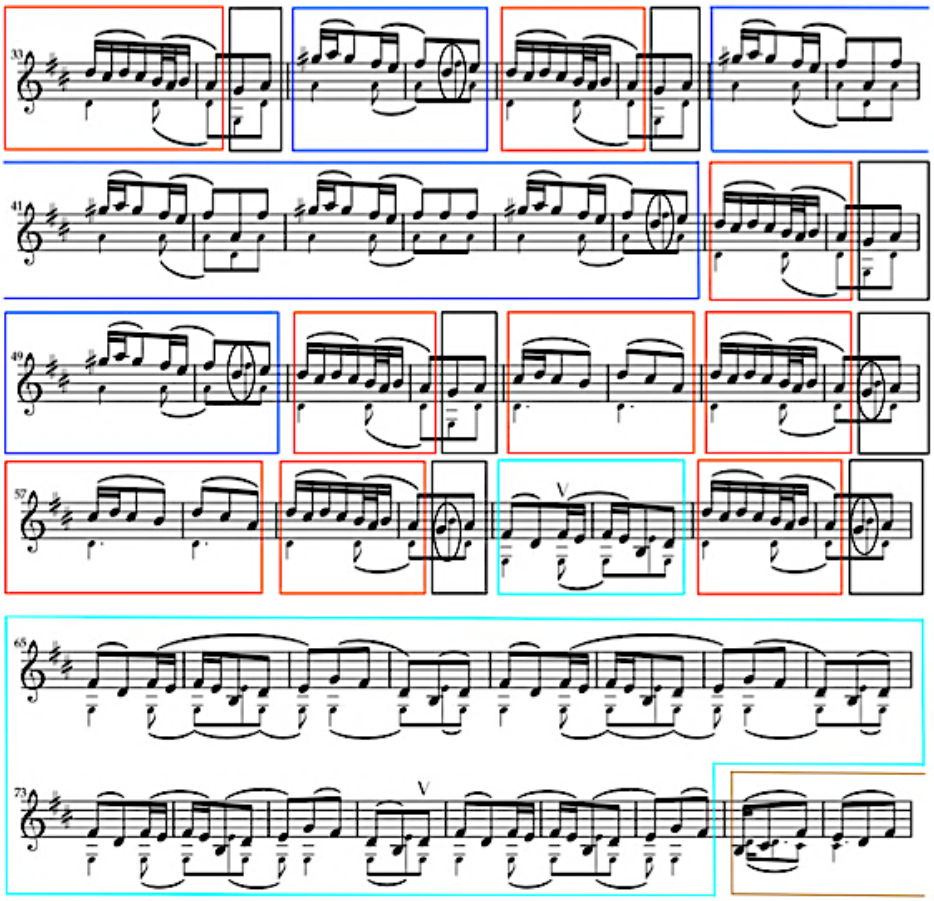


Fig. 132. Section 2 in round 1 of *Reisaren*.

Section 2 includes bars 33–79. Its second part starts at bar 61, where *tak* E first appears.

Reflection

In section 2, A (in red) remains fixed, with the exception of one variant, in bars 57–58, where its rhythm and profile changes slightly though the finger placements of the original A remain the same. *Tak* B (black) varies in this period by serving as a release *tak* and by introducing double grips, as marked with circles in figure 132. *Tak* C is continuously varied in cycle C in bars 39–46. The first time *tak* E appears in bars 61–62, it is presented once without repeats between the preceding B and the following A. It then appears as a varied cycle E from a local perspective in bars 65–79. *Tak* E can also be understood as continuously varied, given the new variants in this cycle in relation to the previous E. As these variations in all the *taks* all generally follow the original tablatures, it remains more meaningful to continue focusing on the

transformation process between the different *taks* rather than on how each *tak* develops throughout the timeline.

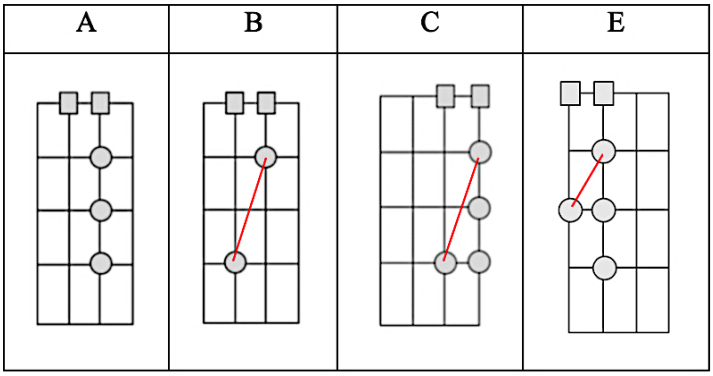


Fig. 133. Transformation from A to E.

As shown in figure 133, after A and B are transposed from the middle strings to the bright strings, the same fingering is now further transposed to the dark strings, except that 2. f. is used instead of a possible 3. f. (illustrated by the red lines in the figure). Had s. 4 been tuned down to G, the finger placements of *tak* E would match those used in C, but transposed from the bright strings to the dark strings.

Section 3

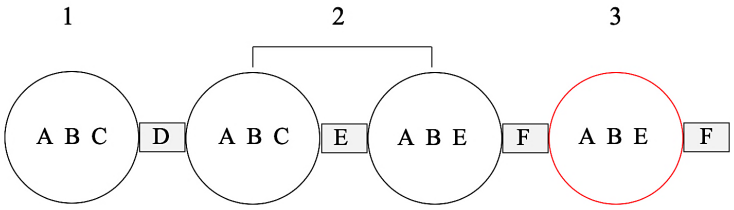


Fig. 134. Focus on section 3 in round 1 of *Reisaren*.

Section 3 includes *taks* A, B and E and is delimited by F on both sides.

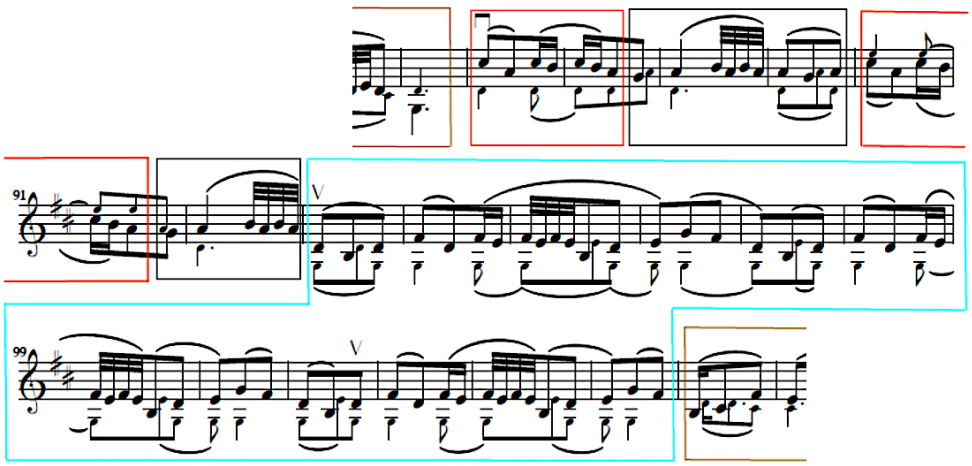


Fig. 135. Section 3 in round 1 of *Reisaren*.

Section 3 begins with the first A (red) and ends with bar 104, as shown in figure 135.

Reflection

From a continuous perspective, *tak* A is varied in section 3, thanks to a new variant of the *tak* according to the fingering principle. *Tak* B is also varied in this section, thanks to new rhythmic variants following the same principle. In bars 88–89, Andres uses open strings in this version of B, but he could also have used a finger bridge made by the pinkie. In bars 93–104, *tak* E is repeated and can be described as a *non-varied cycle E,* though one featuring an alternative entrance for the *tak* in bar 93. This order of the fingering is repeated later in the cycle as well.

I have now discussed local variability, the transformation of one *tak* into another, and continuous variability in the respective sections of *Reisaren*. As we saw, *taks* A and B are approximately fixed throughout the performance and therefore operate differently than those in the performance of *Skjoldmøyslaget*, where the *taks* which did not operate as jumping-off points were all varied to some extent. *Tak* C in *Reisaren* varied the most, though the variability in general was more about switching between fixed *taks* than about continuously varying *taks,* as was the case in *Skjoldmøyslaget*. The round itself in *Reisaren* is also varied in terms of *when* the different *taks* are used. So, instead of *tak* variation as such, new *taks* provide the change throughout the timeline of this tune which can operate as a fine compositional tool, as we shall soon see.

Summary on fingering

The fingered profile in *Reisaren,* like that of *Skjoldmøyslaget,* is generally descending, departing on the bright strings and ending on the dark strings. The energy in this performance therefore trends from high to low, though not as dramatically as it does in *Skjoldmøyslaget*, because the melody in *Reisaren* is centered around s. 2 in the beginning, and *Skjoldmøyslaget* is centered on s. 1. All of the strings are more or less equally fingered, though s. 2 is the core string, because the main *tak* A is fingered on this string and it frequently appears throughout the performance. All *taks* generally feature a descending profile, save *tak* C, which has a more curved profile. The melody avoids large jumps (e.g., from bright to dark strings) by primarily moving to neighboring strings.

The fingering in each *tak* in this performance circles around a gravity finger or a finger pattern, slings downward, and often ends with a release *tak* (on open strings); the tuning also in this performance is therefore a large part of the music. Because the performance of *Reisaren* is tuned a-d-a-e, it features a more open framework, because the intervals between the strings are larger than those in *Skjoldmøyslaget*. One might then expect more complex *taks* with a bigger ambitus, but that is not the case here. The finger locomotion in each *tak* in this performance often crosses strings, due to the frequently use of finger patterns, with the primarily exception of *tak* A, which follows one string. In general, the fingering consists of transposed finger patterns between different string pairs. The core gravity finger in the performance is 2. f. on all strings but leaning towards 2. f. on s. 2, as *tak* A is a core unit even though it is not being varied to any great extent.

The pinkie is only used on s. 1 and s. 2, and the performance primarily consists of drone grips. As in the performance of *Skjoldmøyslaget*, both strangle and double grip serve as variability tools in repeats of a *tak* or arise when the fingering crosses strings.

Turning point

I will now abstract the music presented in the analysis's tablatures represent to engage other musical possibilities contained therein.

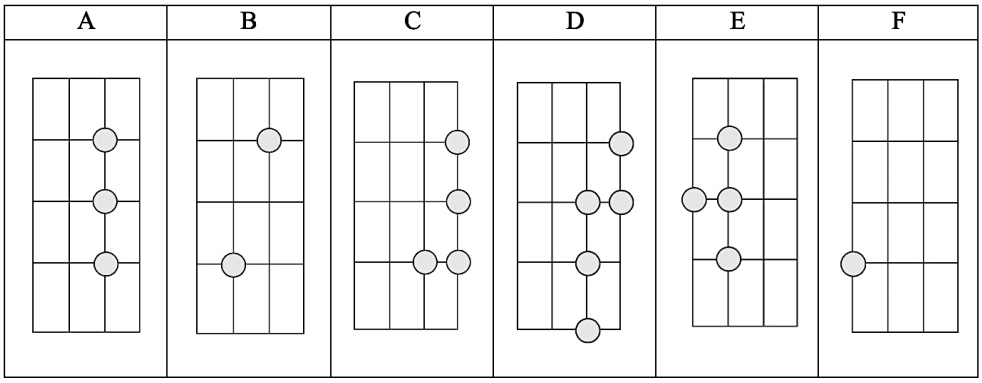


Fig. 136. Abstract fingered process in *Reisaren*.

The fingering structure in the main form of the performance of *Reisaren* is summed up in figure 136. The whole performance derives from the original *taks* A and B. The fingering of A and B is transposed from the middle strings (s. 2 and s. 3) to the brighter strings (s. 2 and s. 1), thereby creating *tak* C. *Tak* D inherits a mix of both A and B, as well as an independet *tak* towards the end of each round. Further, the fingering in the original A is transposed from s. 1 to s. 3, adding the new finger placement 2. f. on s. 4, as shown in *tak* E. The round ends by introducing the new finger placement 3. f. on s. 4 (*tak* F). The fingered process showed in figure 136 abstracts *taks* which otherwise feature several variations, a variety of drones and various occasions of repetition and different orderings in the timeline.

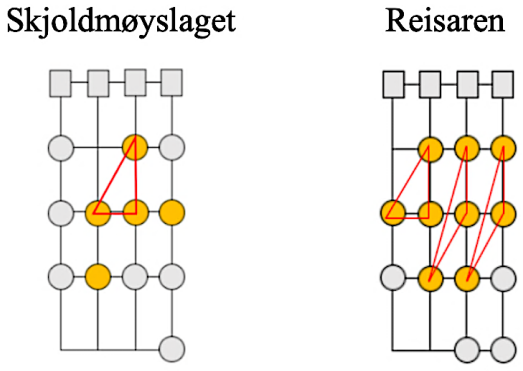


Fig. 137. The skeletons of *Skjoldmøyslaget* and *Reisaren*.

The skeleton of *Reisaren* in figure 137 shows all the finger placements used (and *not* used) in the performance. The gravity fingers and finger patterns are marked with orange. The finger placements marked with grey are used less frequently in the performance. The red triangles show the finger patterns used in the performance. The skeleton of *Reisaren,* like the skeleton for *Skjoldmøyslaget,* abstracts those musical aspects which explain why different performances of *Reisaren* can be received as the same tune. If comparing the skeletons of *Skjoldmøyslaget* and *Reisaren*, we see that even though their tunings are very different, their core finger placements are similar and demonstrates how the practice of using different tunings on the fiddle contribute to a valuable variety of mood and timbre. Different tunings will also soon be used when new tunes are to be made.

Summary

We have now looked at one way the two performance *Skjoldmøyslaget* and *Reisaren* as performed by Andres can be understood, and we have pointed out different Hardanger signature characteristics in the music. The following chapter will define the compositional tools for this study and show how they can be used when making new tunes.

7. Composing

Introduction

This chapter summarizes the ways in which I connected the analysis to the artistic (compositional) part of this study. I will present the chosen compositional tools and explore how each of them can be used as part of an approach when making new tunes. The eight tools defined here will then be applied to produce one tune each, and the different processes to be discussed in the associated subsections.

The toolbox

Through the preceding analysis, we explored different aspects of this Hardanger fiddle music which might serve as potential compositional tools—that is, various methods and/or perspectives which could inform new tunes, in tandem with the Hardanger fiddle itself, a bow and the body of the performer.

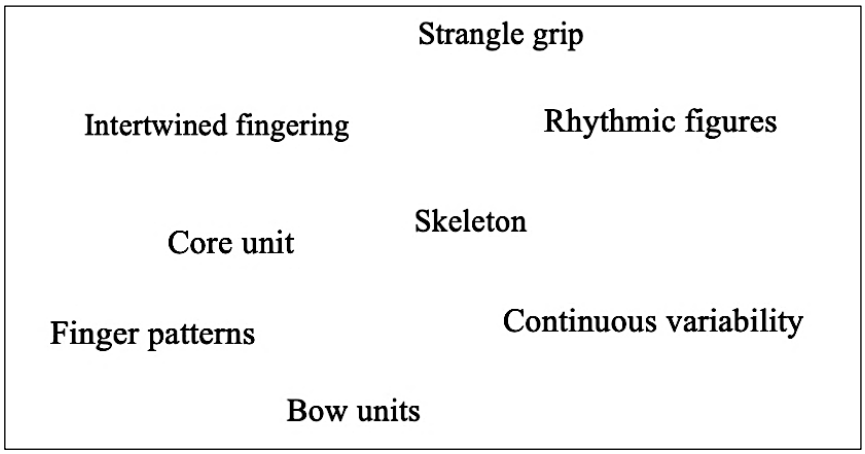


Fig. 138. The toolbox.

Figure 138 shows a sketch of the resulting toolbox, consisting of eight tools; strangle grip, intertwined fingering, rhythmic figures, core unit, skeleton, finger patterns, continuous variability and bow units. These tools are perceived by me as meaningful for the upcoming compositorical task, and are of course eight out of several possible tools avaliable. One example in this regard, is to choose strangle grip for the benefit of double grip and drone grip. As the latter two grips are perceived to operate regularly in the music, the strangle grip has the function

to a clearer change in the music, by raising the harmony tone one step up. On the other side, one tool *not* appearing in the analysis, was *intertwined fingering*. I will still include the tool in the toolbox, because being experienced as valuable characteristics in Hardanger fiddle music. In this way, some tools could be understood as based on the tradition from Setesdal (bow unit, rhythmic figures, skeleton and finger pattern) and other tools understood as more general Hardanger characteristics (intertwined fingering, strangle grip, core unit, continuous variability).

Each of the tools chosen for the study can contribute in several ways, depending upon which function of the tool I found most useful at the time. What each tool asks for or inspires in terms of composing new tunes is based on my perception and interpretation. The tools can also change in terms of their functionality between the traditional tunes and the newly composed tunes, in the way that some patterns change in nature: wind changes the ripples of sand in a desert, an animal changes its patterns or color to hide itself, and the brain builds new neural pathways after being damaged. Gibson's (1986) ecological theory addresses the interrelationship between actors and their environments via the term *affordance*, which describes the function which an aspect of the environment might offer the actor (animal or human):

> The *affordance*s of the environment are what it offers the animal, what it *provides* or *furnishes*, either for good or ill … I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementary of the animal and the environment. (Gibson, 1986, p. 127)

From this perspective, a tool represents an opportunity or possibility for action, depending upon the need and ability of the actor to perceive it. An affordance is, according to Gibson, essentially relational. People, as opposed to animal, further tend to alter or modify their environment so as to change its affordances to better suit them. In light of Gibson's ecological perceptual theory, Clarke—in his book *Ways of Listening* (2005)—sought to understand the relationship between listening to music and grasping music's meaning. He tackled musical meaning from the perspective of perception, treating meaning in terms of the listener's experiences and responses. The reason for this brief nod to ecological theory is to

shed light upon my choice of tools as the result of their perceived affordances within the original musical landscape of Andres and the new musical landscapes which these tools, as aesthetic choices, help to create. Or as Watzlawick states in his book *How Real Is Real?* (1976, p. 140), 'There is no absolute reality but only subjective and often contradictory conceptions of reality'.

It is also important to note that the gap between the analyses and the finished tunes varies, because my creative activity activates the tools in different ways—as inspiration, as compositional building blocks, as starting points for other tools, and so on. I will identify the tool that will dominate the given composition, and if other tools are used within the same composition, they will have a secondary function. I do not attempt to give an extensive description and explanation of my compositional processes, but instead articulate what I regard as the main steps in the tool's testing process in each tune. The concert pitch used in the tunes is B, unless otherwise noted. CD 2 in appendix G represents the main musical summary of my compositional processes.

We will now see how these tools can be used when composing new tunes.

1. Strangled stranger

Tool: The strangle grip

The first tool I tested was the strangle grip; it was defined in chapter 4 as the placement of 1. f. on two different strings at the same time. The analysis showed that Andres used the strangle grip as a variability tool, by often introducing it the second or third time he repeated a given *tak*. In this way, the strangle grip adds energy to the music within a *tak's* cycle, and it can also be used in melodic progressions. I used it this way in general in *Strangled stranger*. A strangle grip on the dark strings requires less energy than one on the bright strings.

Because my ears are more accustomed to the effect of strangle grips first and foremost in regular tuning, I chose a more unfamiliar tuning for my new tune. Heddi's manuscript, shown in chapter 2, section *tuning*, indicates that *Forkjert stidding* (g-c-a-e) was relatively underused; in any case, it is a tuning that I am not used to. Interestingly, this tuning divides the fiddle down the middle—that is, by tuning the dark strings one step down from a regular tuning, this tuning

creates *two rooms*, one dark and one bright. The meeting point between these two rooms—the two middle strings—can then present new and interesting strangle and double grips, in this way challenging both my ear and my scope of experience.

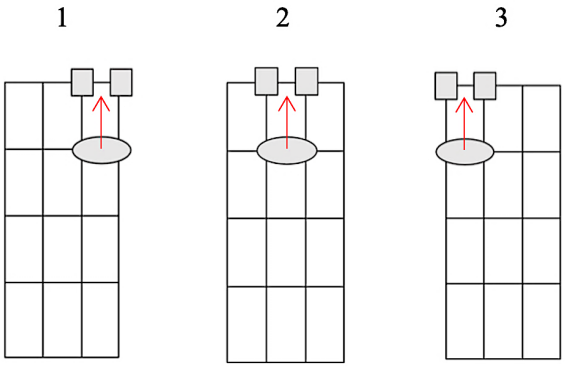


Fig. 139. The strangled slid release *tak*.

In addition to using the strangle grip as a variability tool in a more traditional manner, I tried to create a *tak* off this grip, by sliding on all the string pairs, as shown in figure 139. Such *a strangled slid release tak* demonstrates the tonal range of the strangle grip on all of the strings and also brings out the work's tuning.

C-D-E—slid *tak*—A-B-C-D-E—slid *tak'*—A-B-A-B'—slid *tak''*

Fig. 140: The form of *Strangled stranger*.

The form is as shown in figure 140; the strangled slid release *tak* appears relatively early so as to set the stage for the tune. The period of A-B-C-D-E was composed first. I then designed the beginning starting with C-D-E to build anticipation and also save *tak* A part for later in the form. The arrangement used in the strangled slid release *tak* draws upon the tones found in this grip across all the strings (that is, the starting and ending tones in each slide). The second time the slid *tak* is used in the form shown in figure 140, the arrangement of other instruments first stands on its own without the slid *tak*, then brings it back in the repeat, so as to present the melodic lines which can be created as a response to the slid *tak*. The third time the slid *tak* is used in the form, it is inside a variant of

B (B'), climbing upward (on the brighter strings) toward the end to build up the energy in the music. In this version, the slid *tak* is used the opposite way from the earlier versions, moving from open strings upward to the position of 1. f. rather than sliding downward, ending with open strings. The tune starts with Andres explaining his family relationship to Hardanger master Knut Heddi.

2. The clock is ticking

Tool: Rhythmic figures

In section rhythm in the analysis, the findings indicated that the rhythmic markings of the foot stomp (F. 1 and F. 2) and the bow shifts in fact created rhythmic figures. All three eighths were often rhythmically marked in each bar in *Reisaren,* and all sixteenths in a bar were marked in different ways in *Skjoldmøyslaget*. The foot stomp findings included information regarding the placement of F. 2 approximately in alignment with the given meter's rhythmic subdivisions. F. 2 was placed on the second sixteenth in each 1/4 bar in *Skjoldmøyslaget*, and on the second eighth in each 3/8 bar in *Reisaren*. On top of this framework, the bow shifts varied by either double mark F. 1 and/ or F. 2, or the third eighth within a bar. Findings regarding volume indicated that F. 1 was emphasised more than F. 2, especially in *Skjoldmøyslaget*. Copying the rhythmic figures from the analysis felt too restrictive in terms of composing a new tune. Also, I hesitated to allow the foot stomps and bow shifts be the rhythmic determinants of my new context for this tool. I felt it would be more meaningful to add the voice *together* with the fiddle, and to use the attack of words to rhythmically contribute to the figures. In addition to a sung phrase's various points of attack, individual words can also contain internal rhythmic points (in words with several syllables). Thus, the attack points in the vocal part can supply the main link to the bow figures.

F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
Lyrics							a		t		c		d	e		f			t		

F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
Lyrics		a	t	w			f					r	f		a	s					

Fig. 141. Rhythmic placements of the text's attacks.

Figure 141 shows the attacks of the new tune's words—that is, the first letter of each attack word (for example, and is marked with a). The compositional process consisted of moving the words back and forth on the foot stomp's rhythmic framework in the meter of 3/8 until the song felt balanced. I composed the melody with the intention of using quite few notes, trying to put the focus on the lyrics. Because I wanted a relatively dark feel for the vocal part, I used the tuning *nedstemt bas* (g-d-a-e) with a concert pitch in A.

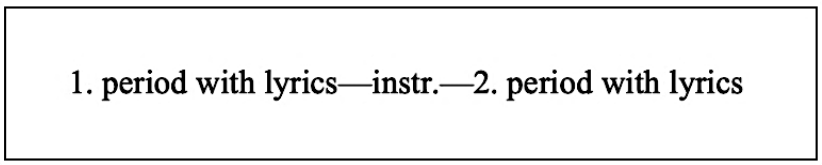


Fig. 142. The form of *The clock is ticking.*

Figure 142 shows the form of *The clock is ticking*, which consists of two periods of lyrics with an instrumental interlude in the middle. I had to consider what words to include here. What story should be told? In the DVD *Tidi renne—å alli snåvar (Eilertsen, 1990)*, the Hardanger fiddle master Torleiv Bjørgum performed two stanzas with lyrics about how time is passing. I found these lines to resonate with the way in which rhythmic figures drive the music forward in a *setesdalsgangar*. Time remains a relevant aspect of today's society, of course, as the tempo of daily life steadily increases, causing great stress. From the perspective of tradition, the passing of time also emphasises the value of keeping what we have and staying in the moment.

© trad. from (Eilertsen, 1990)[99]	
Klokka tikkar og ljose brenne, og skyne drive og vatnet renne. Tidi endelaust lid og skrid, og synar jordbuar makta si.	The clock is ticking and the candle burning, the clouds drift and the water flows. Time endlessly ever passes, and shows the Earthling its power.
Tii renne å alli snåvar, ho fere fortar hell hesten tråvar. Der fer en vetre, så fer a vår. Så renn a sumår, så gjeng a år.	Time runs and never stumbles, rushes faster than the horse trots. A winter goes and a spring comes. Then a summer runs, a year has passed.

I first translated the lyrics from the Setesdal dialect into English, in order to produce a more rhythmic linguistic basis for my song—that is, one with fewer vowels and more consonants in the text, to supply clearer rhythmic attacks. I then revised the English lyrics further to allow more space among the various messages in the lyrics (that is, open up the relative compressed art form of the stanza). In this process, I added some new words to enhance the narrative, and I repeated certain important words. The processed lyrics ended up as follows:

Don't you hear it?
The clock is ticking
And the candle is burning

Don't you know?
The clock is ticking
And the candle is burning

All the clouds drift even faster today
And the water flows
Refuses a salvation

[99] Translated by author. The second stanza was written by Tarald Jonsson Uppstad (1861–1925).

Don’t you hear it?
The clock is ticking
And the candle is burning

Don’t you know?
The clock is ticking
And the candle is burning

Time endlessly ever passes
And shows the Earthling its power
You better slow down, slow down, slow down
‘Cause time endlessly ever passes
You better slow down

Instrumental

Don’t you hear it?
The time is running
And it never stumbles
Faster, faster, than the horse trots

Don’t you know?
The time is running
And it never stumbles
Faster, faster, than the horse trots

Time endlessly ever passes
And shows the Earthling its power
You better slow down, slow down, slow down
‘Cause time endlessly ever passes
You better slow down

3. Unit 1

Tool: Core unit

I then tested the core unit as a tool. In the analysis, the findings showed that one specific *tak* could be understood to operate as the main *tak,* or the core unit in a performance, according to the following conceptual clarification: 'A *tak* which is experienced as the main *tak* in a performance because it is most used, repeated, and/or changed'. In *Skjoldmøyslaget*, *tak* A operated as the core unit, because it was the most used and changed. In *Reisaren, tak* A also operated as the core unit; though it was not directly repeated or continuously changed, it was used frequently throughout the performance in a fixed form. Variability arose in the periods *between* the core units over the timeline of *Reisaren*. A core unit could be understood as a tune's hook, which the Cambridge Dictionary defines as 'a repeated part of a song or piece of music that is particularly pleasing and easy to remember'.[100]

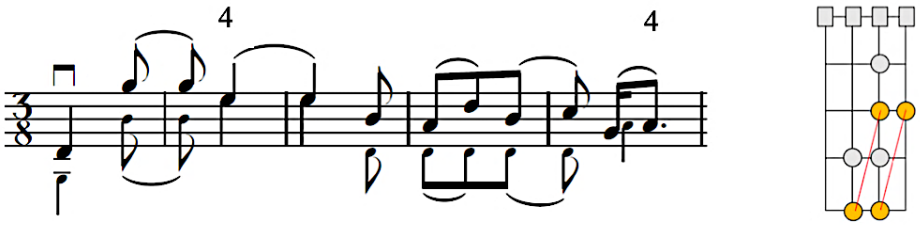


Fig. 143. The core unit (A) in *Unit 1*.

Figure 143 shows the core unit in *Unit 1*, which is built on a finger pattern consisting of 2. f. on s. 1 and the pinkie on s. 2. This pattern is further transposed from the bright strings to the middle strings. I intended to compose this tune in a relatively traditional style—that is, using several small *taks* which develop out of one another and are intended to be experienced as related, so that the core unit stands out among the variety of *taks*.

Round 1:	A-B-A-B'-A-C-D-E-F-E-A-B-A-B'-G-A-C-D-H-I-J
Round 2:	A-B-A-B'-A-C-D-E-F-E-A-C-D-H-I-J + tail: G-A'

Fig. 144: The form of *Unit 1*

[100] See https://dictionary.cambridge.org/dictionary/english/hook. Accessed 21 July 2019.

The form of *Unit 1* is shown in figure 144, where the core unit (A) is used regularly throughout the timeline in both rounds. *Tak* A is therefore the most frequently repeated *tak*, though it is not changed often, except in the tune's tail, where A is varied to mark the end (A'). Round 2 is shorter than round 1 in order to continuously vary the melodic structure throughout the performance; there is also a melody *between* the rounds to allow the band to shine without the fiddle. The size of the different *taks* varies (B can include more bars than C), and is not specifically defined here, as this information is less relevant to the core unit testing. The focus is kept on the repeated core unit throughout the timeline. The tempo is consistent throughout the timeline until the last few bars, when it slows. This type of approach was found in both of Andres's performances in the analysis, but especially in *Skjoldmøyslaget*. The tuning used is *nedstillt bas* (g-d-a-e), because it allows for larger intervals between the strings and more pitches available for the melody.

4. Intertwined

Tool: Intertwined fingering

In chapter 4, the new term *intertwined fingering* labelled the situation whereby a finger bridge overlaps another finger bridge over the course of a tune. A finger bridge was defined as one finger holding its muscle tension while other fingers work around it. The length of these finger bridges can vary. Intertwined fingering does *not* encompass a release action (that is, two open strings), and in this way it foregrounds the way in which finger bridges can be combined in two-strings playing. The analysis showed that Andres used some finger bridges but not intertwined fingering as such, but I nevertheless explored and emphasised the tool in my compositional processes because it is a signature fingering characteristic of the Hardanger fiddle music. Intertwined fingering in two-string playing consists of strangle, double or drone grips; in the testing process, I limited myself to but a few drone grips and primarily the use of two active fingers overlapping each other throughout the timeline.

I chose *standard tuning* (a-d-a-e) for this tune to take advantage of the relatively large intervals between the strings, which in turn permit a greater variety of finger bridges than do smaller intervals between the strings. I could have use

nedstillt bas (g-d-a-e) as well, because it contributes more possibilities for finger placements, but *standard tuning* enables the use of *a-grips*—that is, the pinkie (4. f.) on s. 2 coincides open s. 1, and the pinkie on s. 3 coincides open s. 2, contributing with three other finger placements available (1. f., 2. f. and 3. f.) in finger bridges. If using *g-grips* (in *nedstillt bas*), 3. f. on s. 1 coincides open s. 2, 3. f. on s. 2 coincides open s. 3 and 3. f. on s. 3 coincides open s. 4, which contributes less use of the pinkie in finger bridges. I chose the meter of 5/4 because it pushes the music forward, and I played in a relatively slow tempo so that each finger bridge would shine.

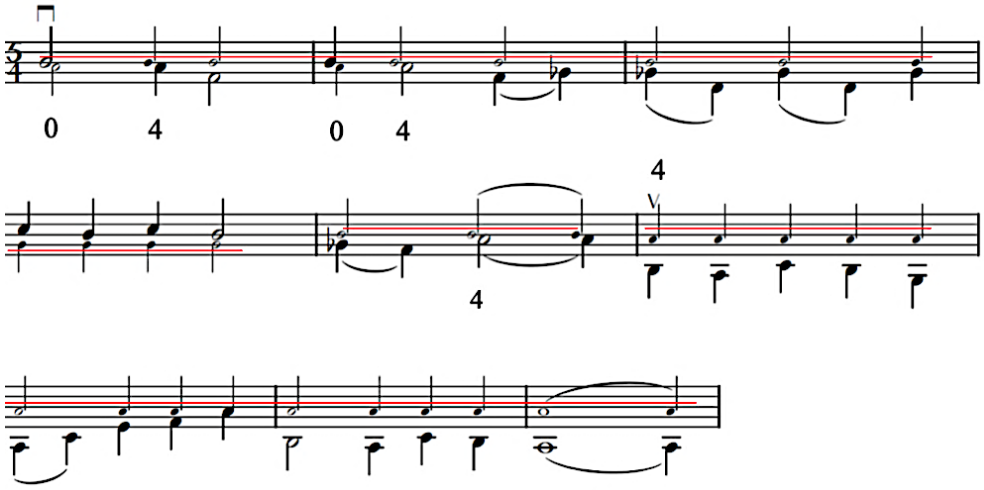


Fig. 145. Intertwined fingering.

Figure 145 shows the different finger bridges (marked with red lines) in the first part of the tune, consisting of 1. f. on s. 2 in bars 1–3, 3. f. on s. 3 in bar 4, 1. f. on s. 2 in bar 5, and the pinkie on s. 3 in bars 6–9.

My first reaction upon testing this tool involved the amount of muscle tension in the fingers that such a technique demands. As one finger more or less always holds the tension and seldom gets a chance to rest, which enhances the effect of a release action. Though, a good finger training. Another aspect of the tool is the intonation reference a release action contributes with, or at least a finger bridge with an open string as a string pair buddy, because the finger placement of a gravity finger must adjust to the open string. When one uses intertwined fingering which mainly involves fewer open strings and generally two playing fingers on two different strings for longer periods, the reference tone (that is, the

open string[s]) becomes virtual rather than actual and in this way exercises the musical memory.

Because the intention of the testing process of intertwined fingering is to always let one gravity finger bridge/overlap the next gravity finger, large jumps in the melody (i.e., from bright to dark strings) are not possible. Thus, the different *taks* bite each other in the tail, so to speak, and the melody will always move on to one of the neighbouring strings.

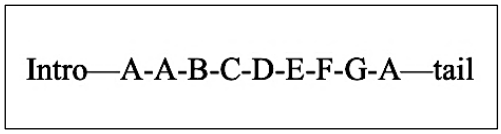


Fig. 146. The form of *Intertwined*

The intro and the tail in the tune include pizzicato on open strings to show the tuning, where the pizzicato is in 5 against the guitar riff in 4 to create confusion in the perception of meter in the intro. When the tail is played in 4 by the drums in the end, the imagination interestingly seems to still experience the 5. The band arrangement is intended to support the chords created by the intertwined fingering on the fiddle.

5. Amazon

Tool: Skeleton

I used the skeleton of *Skjoldmøyslaget* as the next tool; in the analysis, it was defined as a tablature representing all the fingering in the performance. This new tune, called *Amazon,* thus explored the fingering characteristics of *Skjoldmøyslaget* by also reusing the core order of the different *taks* throughout the performance in an abstract matter, as well as the same tuning. In this way, I challenged myself to compose a tune which would balance its own identity against its affinity with the traditional *Skjoldmøyslaget*. As the tuning *Sjellmoystidding* (a-e-a-c#) is also used in the old-time tradition in America, I tried to compose this tune in a more old-timey style, which is, as mentioned earlier, related to a bowing emphasis upon both the up-bow and the down-bow. *Amazon* therefore brought the characteristics of *Skjoldmøyslaget* into a new context.

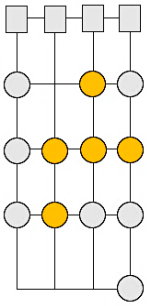


Fig. 147. Skeleton of *Skjoldmøyslaget*.

Figure 147 shows the finger placements used in *Skjoldmøyslaget*; the orange circles represent gravity fingers and core finger patterns, and the grey circles represent other finger placements used in the performance. I

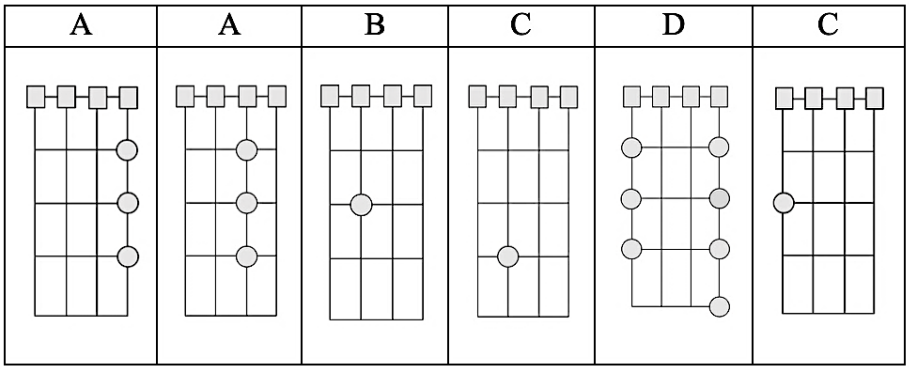


Fig. 148. The abstract fingering process in both *Skjoldmøyslaget* and *Amazon.*

In addition, the abstract version of the fingering process in *Skjoldmøyslaget* was also used in *Amazon,* as shown in figure 148, without copying the exact order of *taks*. This abstract fingering process consists of *tak* A being introduced on s. 1, then transposed to s. 2. A new finger placement, 2. f. on s. 3, is introduced next, to be understood as part of *tak* B and to introduce *tak* C's gravity finger, 3. f. on s. 3. *Tak* C also appears with a variant at the end when it intertwines with B; the variant introduces 2. f. on s. 4. *Tak* D appears once in each round in *Skjoldmøyslaget* and will be used the same way in *Amazon*, though it will start by using the finger placements on the dark string (which is the opposite of how it is performed in *Skjoldmøyslaget)*. In *Amazon*, *tak* D is repeated several times (forming a cycle), which allows some space for bass lines and a rest in the otherwise constantly climbing melody. Other characteristics borrowed from *Skjoldmøyslaget* include picking up the bass string in *tak* A and using pizzicato as a variability tool.

Due to this use of characteristics from *Skjoldmøyslaget*, *Amazon* could be understood as a *Skjoldmøyslått*, which is what all tunes in *Sjellmoystidding* (a-e-a-c#) seems to be labelled in Setesdal as earlier mentioned. *Skjoldmøy* means 'Amazon', a female warrior, and *Skjoldmøyslaget* is connected to the story of two such female warriors playing the lure horn from *Skjoldmøynuten* in Setesdal at church time. The congregation heard this beautiful sound and went outside to listen, so the priest came by and turned the two Amazons to stone. This story captures the controversy associated with the introduction of Christianity in Norway, pitting, as it does, the ancient culture against the new (represented by the priest) (NRK Skomeland, 1990). The Amazons were known as skilled archers, and in order to be able to buckle their bows, legend had it that they burned off their right breast.[101] I wonder, as well, if this helped them place a fiddle on their chest?

6. Prince purple

Tool: Bow units

We will now look at how bow units can be used as a testing tool. Different bow units can operate as signature characteristics in a fiddle tune, as was shown in the analysis; *Skjoldmøyslaget* was dominated by longer cycles (4+4+4, etc.) which contributed a driving feel to the tune. A play with syncope characterised the bow strokes that spread over the barlines. *Reisaren* featured inherently shorter bow strokes and shifted frequently between different bow patterns, emphasising bow shifts on F. 1 in particular. The syncope here was *inside* a pattern.

In the tune *Prince purple*, I tested the effect of a bow cycle (2+2+2, etc.) and contrasted them to short bow patterns which first and foremost acted to switch between syncopic markings, and to mark beat 1 in a bar. The driving force inherent in a cycle inspired me to try out a relatively speedy tempo. To support this, I tuned the concert pitch up to C, so that the fiddle contributes more power and is more potent than it is in B. *Prince purple* uses the *standard tuning* (a-d-a-e) and a 3/4 meter, the latter of which resonates well with the *polska* traditions in the Nordic countries, and especially in Sweden. In Norway, *pols* and *springar* can be understood as close relatives in this regard.

[101] See https://snl.no/amasoner. Accessed 27 May 2019.

Bow units in *Prince purple*																		
Bars	1				2						3							
F. 1	x				x		x				x		x				x	
B. shft	x	x		x		x		x		x	x		x	x		x		x

Fig. 149. Bow units in *Prince purple*.

Figure 149 illustrates the beginning of the tune, shown in eighths, where cycles of 2+2+2, et cetera, are marked in yellow. Because *polskas* in general are stomped with one foot, only F. 1 is shown in the table (it is not a double foot stomp). F. 1 marks the first and fifth eighth in each bar, which is commonest way to stomp a *polska*, with an understanding that different fiddlers will stomp it in different ways.

A-A-A-B-C-B-D—A-A-B-C-B-D—instr./ solo—A-A-B-C-B-B-D

Fig. 150. The form of *Prince purple.*

Figure 150 shows the form of *Prince purple*. The various *taks* (A, B, C) are not described in terms of size or length, as the present tune's testing focuses on the bow cycle alone. The cycle is used more or less throughout the tune. In the instrumental solo in the middle of the tune, as shown in the figure, the effect of the bow cycle is applied to a melody consisting of fewer notes in the interests of creating a musical backdrop—that is, moving away from the main melody and placing the cycle more in the background, to allow room for other instruments in the arrangement.

The name *Prince purple* was inspired by a bow I recently acquired, made by the Norwegian bowmaker Niels J. Røine; parts of the stick were beautifully spun with a purple silver string by the frog. My old bow was well used, bought in my childhood days, so the new bow proved that a good bow is as important as a good fiddle.

7. A silver spoon

Tools: Finger patterns

The analysis showed that finger patterns also operate as signature characteristics of a tune; *Reisaren,* for example, was almost entirely built on three finger patterns, as shown in figure 151.

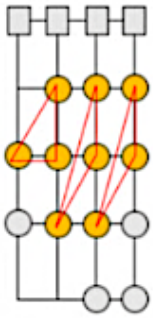


Fig. 151. Finger patterns in *Reisaren*.

Finger patterns are, of course, closely linked to the tuning, and different tunings therefore imply characteristic finger patterns. Because finger patterns were the testing tool for this tune, I could have tested *Reisaren's* patterns on other tunings to demonstrate this link, but I found it more interesting to see what other musical ideas arose from these finger patterns in my new tune, which I kept in the same tuning: the *standard tuning* (a-d-a-e).

I considered composing the new tune towards in the style of a *setesdalsgangar* but decided instead to explore the strong stanza tradition in Setesdal in the interests of developing a new environment within which to use this tool and engage its affordances. The stanza's melodies are a central part of the Hardanger fiddle tradition from Setesdal, and they are played in a *talking rhythm* (or free rhythm). This approach leads one to include lyrics, adding traditional stanzas to the composed stanza melody.

v1—instr.—v2—v3—interlude—v4—tail

Fig. 152. The form of *A silver spoon*

The form in the new tune, called *A silver spoon,* is shown in figure 152. It starts with the first verse, for then to play the new stanza melody on the fiddle. Two more verses are presented, for then to play an instrumental interlude before the fourth verse. The song ends with a tail, as shown in the figure. In the process of composing this song, I saw a need for a rhythmic riff to tighten up the rhythm in the lyrics which were otherwise performed in a relatively free rhythmic manner. The stanza melody, the riff under the verses, and the instrumental interlude were created out of the finger patterns from *Reisaren*.

The question then became the lyrics: What story should be told in this song? Because *Reisaren* might have been a Hardanger fiddle tune learned from the gypsy Peter Strømsing, who frequently travelled through Setesdal, I was inspired to call this song *A silver spoon,* alluding to the fact that Hardanger fiddle master Torleiv Bjørgum paid the gypsies with his own homemade silver spoons when he had the chance to learn tunes from them. When I tried to imagine the life of an itinerant traveller, the words *turmoil* and *longing* came in mind. A traditional stanza is a four-line verse which can stand on its own. In this song, I put together several such independed stanza's and build a story around these two words[102]. I found each verse in different sources, which are marked in the following table.[103]

© Trad. from (Berg, Rolfsen, & Rysstad, 2007, p. 62)	
Så ven en fugle eg heldt i håndi eg sat å lyddi på fuglesongji. Han song om kjærleik om von å tru så kom der en stormvind å tok han ut.	A fine bird I held in my hand I sat and listened to the bird sing. He sang about love, hope and faith then a whirlwind came and took him out.
© Trad. as sung by Kirsten B. Berg	
Å alli høyr' han å alli sjå han å alli mei' fær eg take på han. I draumo ser eg han mang a nott, han hev kåm' å trøysta meg, hev eg tott.	Never hear him and never see him, and never can I ever touch him. In dreams I see him many nights, he has come and comforted me, I have thought.

[102] Such a traditional stanza is named *stev* in Setesdal.

[103] Translated by the author.

© Trad. from (Berg et al., 2007, p. 126)	
Eg tenkte alli eg sill det akte men ai ai ai, då eg såg han atte. Å då eg såg han va like grei va det som det myrkna om soli skjein.	I never thought I would care but ai ai ai, when I saw him again. And when I saw he was just as decent it darkened even though the sun was shining.
© Trad. from *Stevbasen*[104]	
Gøym på kjærleik den vene blomen som pryder barnet å alderdomen. Um inkje kjærleiken den fekk rå ko glede va der i livi då?	Take care of love, the fine flower which adorns the child and old age. Unless love was allowed to live what joy was there in life then?

The song *A silver spoon* is an example of how one tool can create a very different work of art from the original (*Reisaren*), in this case because the voice is moved to the front and the Hardanger fiddle is moved away from a solo position to operate more as a support instrument (in addition to the other aforementioned choices which were made).

8. Mr. Snaky

Tool: Continuous variability

The last tune in this process, *Mr. Snaky*, tested *continuous variability* as a compositional tool. Continuous variability was framed in two ways in chapter 5: (1) in relation to the ways in which a *tak* can vary throughout a performance, and (2) in relation to the ways in which one *tak* can transform into another *tak*. In this tune, I emphasised both aspects. The title *Mr. Snaky* nods towards the fingering motion which occurs during a *tak's* transformation process as they fingers over the strings to create the curved lines of a melodic progression. The findings in the analysis showed that when a new finger placement was introduced in a *tak*, a process of transformation from one *tak* to another could be underway. I wanted this track to be dark and dronelike, even mysterious, so I chose the tuning which is the trademark of Setesdal on Hardanger fiddle, *gorrlaus* (f-d-a-e), where the

[104] *Stevbasen* is Agder Folk Music Archive's online database for stanzas. See more in http://www.folkemusikkarkivet.net/agder/nystevsok.php. Accessed 20 Aug. 2019.

bas string is tuned down to f. I could have tested the tool by trying to compose a *setesdalsgangar*, but I chose to take both the tuning and the characteristic of continuous variability out of their traditional contexts and test the tool in other ways. I therefore chose the meter of 7/8 which I experience inherent a driving feeling and sense of drama to the music. I sought to begin in the dark strings, create an ascending profile, and then curve downwards towards the end.

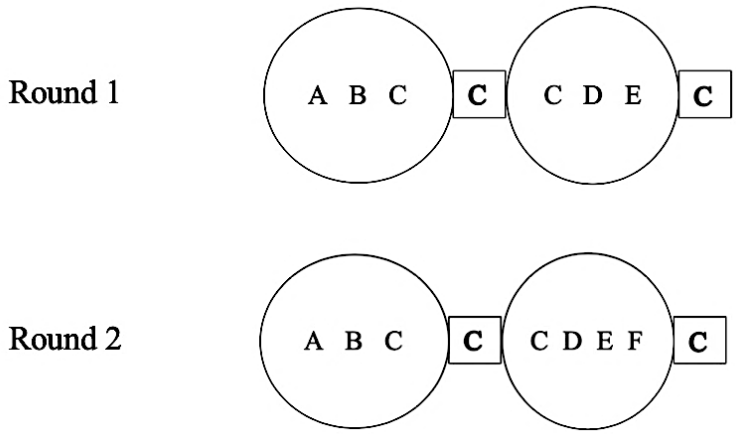


Fig. 153. *Mr. Snaky* in circuits and jumping points.

Figure 153 shows the form of *Mr. Snaky*, where *tak* C operates both as a jumping point but also intertwines with other *taks* within the circuits. Because the tool tested in this tune engages both form and musical structure, I will next show the *tak's* fingering transformation process in more detail.

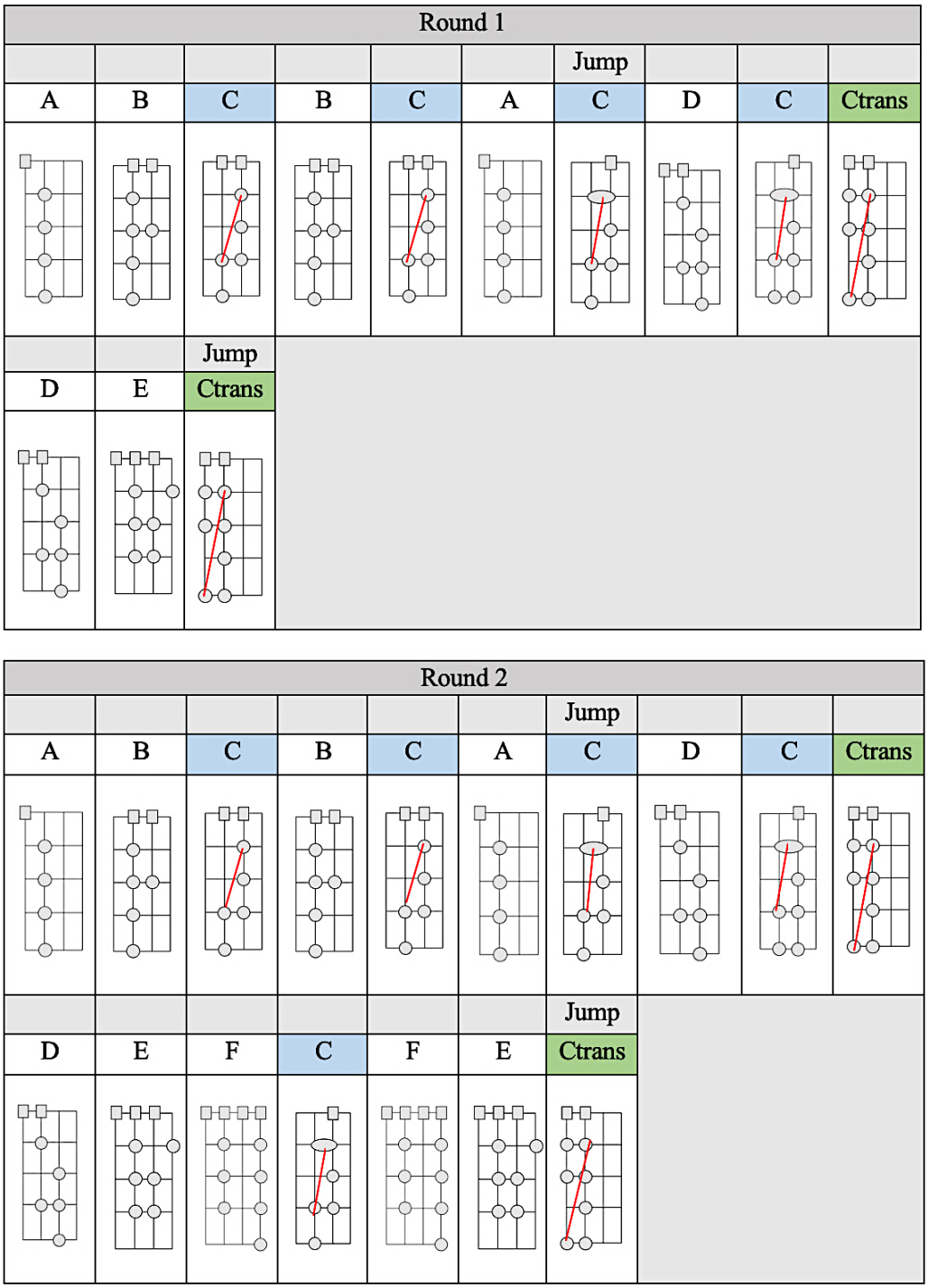


Fig. 154. Complete tablature overview of *Mr. Snaky*.

Figure 154 shows a complete overview of all the *taks* in *Mr. Snaky*. The *taks* continue to vary in round 2. The transposed variant of *tak* C is marked Ctrans in the figure.

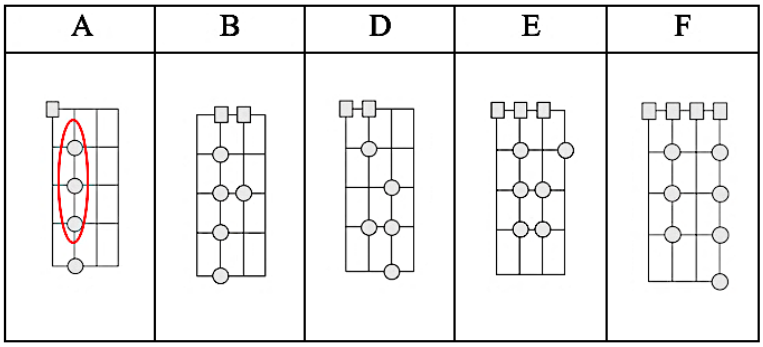


Fig. 155. The transformation process from *tak* A to *tak* F.

Regarding the aforementioned perspectives upon the characteristic of continuous variability, figure 155 shows how *tak* A transforms into new *taks* via new finger placements working around the core finger placements in A (marked with the red circle in the figure).

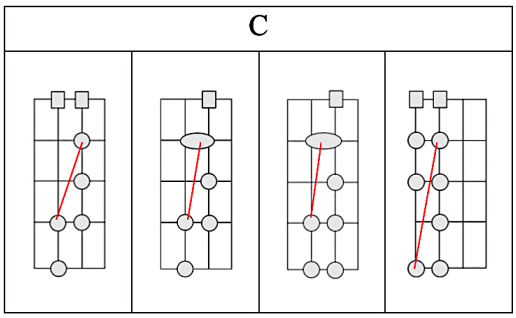


Fig. 156. The transformation process of *tak* C.

Figure 156 shows the transformation process of *tak* C throughout the timeline of *Mr. Snaky*.

The CD

We have now encountered one out of the several possible ways in which each of the chosen tools could be used when composing new tunes and songs. I have focused on the chosen tool's function in each tune in relation to the tune's form and melodic structure, rather than on other musical details of the different compositions and arrangements presented herewith.

Because the new compositions will be professionally released to the music market on my new solo CD *Janus* in 2020 by Grappa Musikkforlag, I made

certain choices in the process of composing, arranging and producing the CD. The last tune on an album is always the whole album itself—that is, the relationship between the tunes and each tune's relation to the whole, which in my case exposed polarities such as fast/slow, big/ small and beauty/ beast, as well as variation in tunings and concert pitches and so on. Whether the music would have been different if this CD were *not* being released is a question to be addressed shortly.

8. Summarising discussions and conclusion

Introduction

I will now supply some backward- and forward-looking perspectives on my research. I began by accounting for my own preconditions as a researcher, describing my Hardanger fiddle practice and experience with the repertoire. The research question was as follows:

> How can characteristics of Hardanger fiddle music from Setesdal be described as compositional tools?

The scientific part of this study aimed to explore the signature characteristics of Hardanger fiddle music, and to test the ways in which these characteristics were used by the Hardanger fiddle master Andres Rysstad from Setesdal. The artistic part presented a toolbox produced by my analysis consisting of the signature characteristics which were seen to be meaningful as compositional tools. Each new tune tested one tool in the process of composing it and recorded in the studio. Composing music and making a CD (CD 2 in appendix G) represents the bulk of the artistic part of this study, in addition to chapter 7, *composing,* though I worked throughout with the understanding that the scientific and artistic parts were intertwined. The actual recording process in the studio was not included in the thesis due to space constraints.

The characteristics I studied were grouped into the categories *rhythm* and *melodic structure*. Rhythm considered the foot stomp and bowing, and melodic structure positioned *fingering* as a new meaningful perspective on the tradition. Fingering also represented a gap in the field. In addition, the project presented empirical material on folk musicians' use of the folk term *tak*. Fingering and *tak* were framed as compositional tools for punctuation and melodic structure, as well as variability.

The purpose of this work was to show how characteristics in an artform can operate as tools when one is composing new tunes. The work presented insider knowledge on playing technique and processes in Hardanger fiddle music and added aesthetic assessments of the various possibilities introduced in this

material. In the end, the project demonstrates that narrower musical genres can shed light upon creative processes within larger fields, such as popular musicology.

Arguments, tendencies and findings

In relation to both the literature review and my empirical research, I will now present my arguments and findings related to each chapter.

Chapter 1, tradition, presented findings from my engagements with members of FfHf, and discussed different perspectives upon tradition (e.g., Rolf [2012] and Blacking [1973]). Groven (1971) stated that there are two types of fiddlers—the *cultivated* and the *innovative*—responding to tradition in three different ways: *Bluecopy* is used by the cultivated fiddler to present a tune exactly as learned, and *variability* and *composing* are used by the innovative fiddler to adapt or change a tune to various degrees. This study considered all three methods.

Chapter 2, the Hardanger fiddle, began with a review of the characteristics of the Hardanger fiddle as an instrument and looked at its technical playing conditions and tunings. It then presented a fingering model, including designations of fingers and their placements. It also included transcriptions of the two performances intended for analysis, using a grip notation system. Challenges arose regarding the definitions of meter and key signature. I decided to notate *Skjoldmøyslaget* in 1/4 and *Reisaren* in 3/8 (rather than the traditional 2/4 and 6/8, respectively) because neither the dance nor the music display accented differences between the groupings in a two-bar scheme. I chose keys which aligned as closely as possible with the reference tones in the timelines of each performance, then marked the tones which deviated from the keys.

Chapter 3, rhythm, positioned the foot stomp and bowing as determinants based on Andres's use of rhythmic signals in his performances. The placement of F. 2 in relation to F. 1, in addition, could reinforce exciting subdivisions in the meter or introduce an independent rhythmic identity. The relationship between F. 1 and F. 2 also supplied a framework for exploring the bowing. As another rhythmic determinant, bowing encompassed both the bow shifts (or bow attack), which operate as rhythmic markings, and the bow stroke (that is, the length of the stroke

between each bow shift). In addition, the *setesdalsbowing* featured bow patterns and cycles which proved valuable as compositional tools.

Chapter 4, *tak*, explored this melodic unit related to technical playing issues from a fingering perspective. While a motif was understood as a meaningful musical entity which included both melody and rhythm, a *tak* did not have to include rhythm but could contain both a motif and motif parts. Based on my fieldwork, I found that while a grip did *not* include time, a *tak* did include time. Three grips—*strangle*, *double* and *drone*—were then defined for the study. A release *tak* was defined as a double grip/ strangle grip which is released into open strings, and I further labelled such a release of muscle tension a *release action*. A *finger bridge* was the operation whereby one finger held its muscle tension while other fingers worked around it. The finger holding its muscle tension was labelled *a gravity finger,* given its foundational role relative to the other fingers involved in a *tak*. In addition, I introduced the term *intertwined fingering* to capture finger bridges without a release action (that is, two open strings), understood as *one* finger always overlapping another finger. All of these characteristics would be tested in the analysis to see how Andres used them and whether they could function as meaningful compositional tools.

Chapter 5, parsing and variability, sought tools related to form, melodic structure, punctuation and variability from the Hardanger fiddle perspectives of fingering and *taks*. The testing process of different principles for punctuation, led to the *principle of finger placements* to be used in my analysis, which generally dictated that the initial version of each *tak* (the *original*) determined which finger placements that should be used as a template. A variant of a *tak* would be understood as related to the original if it preserved the original's finger placements. This principle allowed for the variability which is inherent to the tradition, in terms of ordering of finger placements and rhythms and note values.

Chapter 6, analysis, addressed the *rhythm* and *melodic structure* categories in order to explore and define the compositional tools. It also introduced tablatures to describe the fingering in the music under consideration and to anticipate new music to which the tablatures might contribute.

Chapter 7, composing, began with presenting the toolbox showing the eight meaningful tools the analysis produced (two for rhythm and six for melodic structure). Further, a discussion of the tool's significance as inspiration, as a main compositional device, as a starting point for other compositional devices, and so on.

Below, then, I summarise the findings from my analysis (chapter 6), paired with each relevant compositional tool presented in chapter 7.

1. *Bow units*

Analythical findings:

I distinguished among the bow units (single strokes, bow patterns and cycles) in the music and found that each performance was dominated by one or a few of these bow units. *Skjoldmøyslaget* was dominated by a cycle of 4+4+4, while *Reisaren* consisted of frequent switches (every few bars) between different bow patterns rather than longer cycles. These switches primarily happened on F. 1.

Tool definition:

I chose long cycles as a compositional tool and kept the bow shifts in general off of the first beat in each bar (F. 1) to capture the joyful syncopic play of Andres's playing. The bow unit tool was defined as 2+2+2 and so on in a 3/4 meter. Because the foot stomp marks the first and fifth eighth note in each bar, the bow shifts in a cycle like this generally mark eighths *between* these foot stomp markings—that is, the second, fourth and sixth eighths in each bar.

2. Rhythmic figures

Analythical findings:

The rhythmic placement of F. 2 in a stomp pair tended to follow the meter in question. In 3/8, for example, F. 2 marked the second eighth in each bar; in 1/4, it marked the second sixteenths in each bar. Within this general framework, the bow shifts could double the foot stomp's markings or appear elsewhere. By observing the double foot stomp's marking (F. 1 and F. 2) *and* the bow shifts in tandem, one could discern characteristic rhythmic figures in the music.

Tool definition:

Simply transferring these rhythmic figures from the analysis to my composition felt restrictive, so I added the voice to the fiddle and used the attack of lyrics to contribute another element to these rhythmic figures. Because the foot stomp was marked in the drums, the attack points in the vocal part supplied the main link to the bow figures.

3. Finger patterns

Analythical findings:

The analysis demonstrated that finger patterns could operate as signature characteristics of a tune, in tandem with each performance's tuning; *Reisaren,* for example, consisted almost entirely of three finger patterns.

Tool definition:

Here, again, I sought to develop a new environment within which to engage the chosen tool's affordances. I added the voice and lyrics, then used the finger patterns from *Reisaren* in the lyric's melody, instrumental interludes and melodic riffs to produce a song rather than a traditional Hardanger fiddle tune.

4. Core unit

Analythical findings:

In *Skjoldmøyslaget*, *tak* A operated as the core unit, because it was the most used and most changed. In *Reisaren, tak* A also operated as the core unit, even though it was not directly repeated or continuously changed; instead, it simply arose frequently throughout the performance in a relatively fixed form. Variability therefore arose in the periods *between* the core units over the timeline of *Reisaren*.

Tool definition:

The melodic structure in the new tune consisted of a core unit which was relatively fixed when it recurred throughout the timeline, punctuated by various other *taks* which did not repeat.

5. Intertwined fingering

Analythical findings:

The findings demonstrated that Andres did not use intertwined fingering.

Tool definition:

I determined that intertwined fingering remained a viable compositional tool because it is a principal Hardanger characteristic and a good exercise to strengthen the muscles of the fingers.

6. Strangle grip

Analythical findings:

The analysis showed that Andres used the strangle grip as a variability tool by introducing it during the second or third repeat of a given *tak*.

Tool definition:

In my new tune, I also used the tool during repeated occurrences of melodic progressions; in addition, I created a *strangled slid release tak* to showcase the tonal range of the strangle grip on all of the strings and foreground the work's tuning.

7. Continuous variability

Analythical findings:

The analysis showed that the introduction of a new finger placement in a *tak* could signal a process of transformation from one *tak* to another or produce a variant of the original *tak*.

Tool definition:

Continuous variability represents a powerful compositional tool, contributing a new element to a tune's overall melodic structure.

8. Skeleton

Analythical findings:

All the fingerings in each performance were collected in *one* tablature which reduced the finger placements to a skeleton specifying gravity fingers, core finger patterns, and other placements.

Tool definition:

I used the skeleton from *Skjoldmøyslaget* to compose a new tune which would balance its own identity against its affinity with its traditional source.

Chapter 7, composing, further elaborated upon my process of activating the aforementioned tools in their respective new tunes. It was intended to articulate what I considered to be the main compositional elements in the chosen tool's testing process in each tune, with reference to the enclosed CD 2.

Main findings

By developing a fingering perspective to focus on how the fingers move in this music, the present study sought to fill a gap in the field. In addition, its interest in the *tak* shed new light on the melodic unit in relation to punctuating this music via technical aspects of fingering. Tablatures captured finger placements and, importantly, variability in fingering across a performance by demonstrating how a *tak* could change within its cycle (local variability), how a *tak* is transformed into a new *tak,* or how a single *tak* can be varied (continuous variability). These tablatures informed both the analysis and the compositional processes.

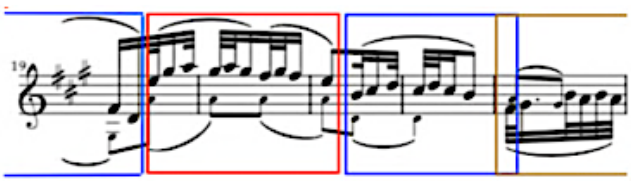


Fig. 157. The fulcrum finger.

Regarding the difficulty of defining the beginning and ending of a *tak* which varies, I proposed an analythical principle whereby two *taks* could be seen to share a finger placement, or *fulcrum finger*. Figure 157 indicates that the blue and brown *tak* share 2. f. on s. 3, which serves as a transition point between the two *taks*.

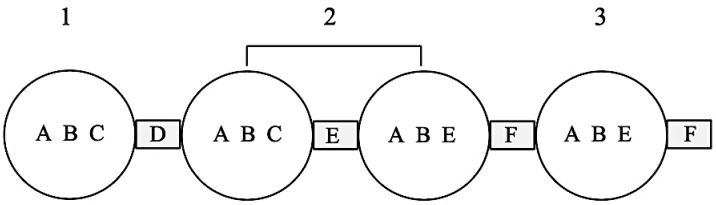


Fig. 158. One round in Reisaren

As the new perspective of continuous variability was presented, I introduced the concept of circuits to illustrating how an entire performance involved variability. First, I isolated the relatively fixed parts in the tune as transition points (or jumping points) between those sections (or circuits) which included variability, with the understanding that the variability in section 1, could continue in section 2, and so on. In this way, both the perspective of fingering and the jumping points (fixed *taks*) could be understood to operate as *vek*-markers as discussed in chapter 5, section *more on variability*.

So, what was different about composing music for this research project? First of all, working within such a restrictive context (because each new tune had to respond to a concrete tool) was a new experience. Formerly, such choices were more intuitive than planned, and the compositional process was more private and unarticulated. Working with signature characteristics has heightened my awareness of what a Hardanger fiddle composition actually consists of and how to explain it both to myself and my students. Due to such an awareness on characteristics, the findings shows that the new compositions in general differs from earlier works, as the rhythm and melodic structure now is based on Hardanger signature characteristics, such as continuous variability in the fingering, rhythmic figures and more syncopic play rather than marking the first beat in each bar. Also, to include *tak* as a melodic unit in the study, opened up for focusing more on motif parts rather than complete motifs. The research tended to show that *taks* were constructed by playing-technical fingering issues and could operate as building blocks both in a traditional tune and in new compositions—resonating both to the past and the future like a Janusgate.

Critical reflections

Has this research worked? Could I have done the work differently? Overall, I experience that this project worked out well. I have carried out the research within the field of popular musicology and succeeded in articulating tacit insider knowledge within this orally transmitted artistic practice. I explored signature characteristics, testing them on a Hardanger fiddle master through a music analysis, and converted certain characteristics into viable compositional tools. I then used these tools to compose new tunes and recorded the music. I undertook relatively thorough discussions of experiments with various methods and perspectives, then complemented them with knowledge and experience from my own practice. My interviews showed me that many conclusions can be drawn from the same traditional material, which forced me to work to determine what seemed most relevant for most people. My analysis fulfilled its purpose of exploring the characteristics as tools for composing, in that I was careful to abstract elements like the tablatures of each *tak* beyond the actual tune from which they were derived, and I deliberately framed my transition from analysis to composition in the subsection *the turning point*. I also discussed my aesthetic choices regarding the tools I developed, as well as their unique affordances according to ecological theory. In general, I showed how a musician works through creative processes; I exposed insider knowledge on the Hardanger fiddle music's characteristics and processes; and I proved that knowledge from a relatively small folk music field can shed light upon a larger field such as popular musicology.

I will though still like to highlight some possible moments that could have been done differently:

As this study was a combined artistic and scientific work, it is worth considering whether such a long narrative needed to underpin the scientific part, in contrast to the much shorter text in the artistic part. Why not write more about the process of composing instead of leaving it all to the enclosed CD? Given that I had come across relatively little theory concerning Hardanger fiddle practice, I wanted to contribute by proposing some new perspectives on its signature characteristics, any of which could have been a research topic all its own. Of course, I thus could have emphasised the artistic part as well through a deeper and thicker description

of the compositional process and the different ways in which the tools could be tested and used. In the end, because the new tunes were intended for recording and commercial release, I confined myself to preparing and presenting the finished product alone, instead of recording the compositional processes.

The fieldwork could also have considered further the ways in which musicians work when composing—for example, by including interviews with composers who employ folk music elements or characteristics from other musical genres. I chose to focus on Hardanger characteristics in composition to adress the aforementioned research gap. Happily, the interviews generated more material than I was able to accomodate here, including perspectives on music and culture to which I might return.

The corpus for the analysis could have been larger, though I was careful not to promise general statements about the repertory as a whole, because I wanted to explore characteristic tools for composing in particular. The analysis itself became relatively long as a result of my attempt at a comprehensive contribution on fingering, as there was as earlier mentioned little existing theory on Hardanger fiddle music from this particular perspective. My addition of the voice to some of the new tunes is arguably outside the scope of the Hardanger fiddle tradition, but an artistic choice on my part in the interests of innovating with some of the compositional tools outside of their original context.

My choice of objective has been based on an assessment of what I found relevant to include within the scope of a doctoral dissertation. In other words, several research tasks remain.

Future research assignments

It would be interesting to study finger patterns in other fiddle traditions, perhaps through a comparative study. For example, the Hardanger fiddle tradition in Telemark is rich in grips and ornamentation, and it would supply another substantive foundation for a study of fingering and *tak*. Because finger patterns can be analyzed in single-string playing styles as well, one could conduct an international comparative study of fiddle styles. The fingering paradigm

contributes insight into strong local traditions or styles and also bridges different fiddle styles, perhaps generating even more input for a compositional toolbox.

It could be interesting to expand my approach to both aspects of continuous variability (how a *tak* transforms across a performance and how a *tak* can become a new *tak*). If I were to analyze the same tune by the same fiddler across an entire career, what might I find with regard to *tak* variability? It would also be useful to compose several tunes using the same tool and then compare them or compose longer pieces of music to explore continuous variability over a larger timeframe.

In general, the *concept of retune* could inform future studies from different perspectives. While the present work responded to tradition with compositions, it could have looked at how other musicians work when composing music using their instrument's characteristics as tools. Because much of the music performed by fiddlers is today well documented, the process behind it, whether tacit or overt, represents valuable knowledge for musicians in other genres as well.

Self-reflection

One benefit of such research work is the reminder that there is always more than one perspective on human behaviour. As an artist who works fairly independently, I often head directly towards what I think is the right way, rather than fully considering the alternatives or listening to the objections of others. Research demands an effort to understand the diversity in a field and receive disagreements and critique without resentment. Such a 'lifted eye' can lead to experimentation outside one's signature method, and even outside one's artistic comfort zone. This particular process of retuning is healthy for a performer, as the wood does not stiffen but instead remains pliable, even alive, as I argued regarding the Hardanger fiddle in chapter 2, section *tuning*. It is all about trying to expand one's horizon while walking on the Möbius loop, as discussed in the introduction.

Regarding playing style, I recognise that my bowing has become more *balanced*, in that I try to emphasise the up-bow as much as the down-bow and also emphasise to place the bowstrokes across the barlines. In alignment with my new focus on the double stomp technique, I adjusted my rhythmic markings more

away from the first beat in each bar. The research focus on technical finger issues enabled me to emphasising smaller melodic units and, together with the act of variability, create longer lines of melodic progression consisting of smaller changes in the fingering, as opposed to the more fixed and larger melodic units of my earlier works. My research also revived the two-strings playing after several decades of often having to avoid the cool dissonance of a drone.

In the end I should note that even though this work was intended to articulate creative processes in music, I also valued the artistic part, where the music most of the time spoke for itself. The point where the words end and the music takes over in this study is there for a reason: some aspects of the music and its processes should remain tacit, so that the music's mystery and power can continue to engage the imagination of both the composer and the listener.

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Web

The main web pages used in this study are as follows:

Popular Music and Society (Journal)
http://www.tandfonline.com/loi/rpms20

Oxford Music Online
www.oxfordmusiconline.com

FfHf (Facebook's forum for Hardanger fiddle)
https://www.facebook.com/groups/1380162542222360/

International Council for Traditional Music
www.ictmusic.org/ICTM

Store norske leksikon
www.snl.no

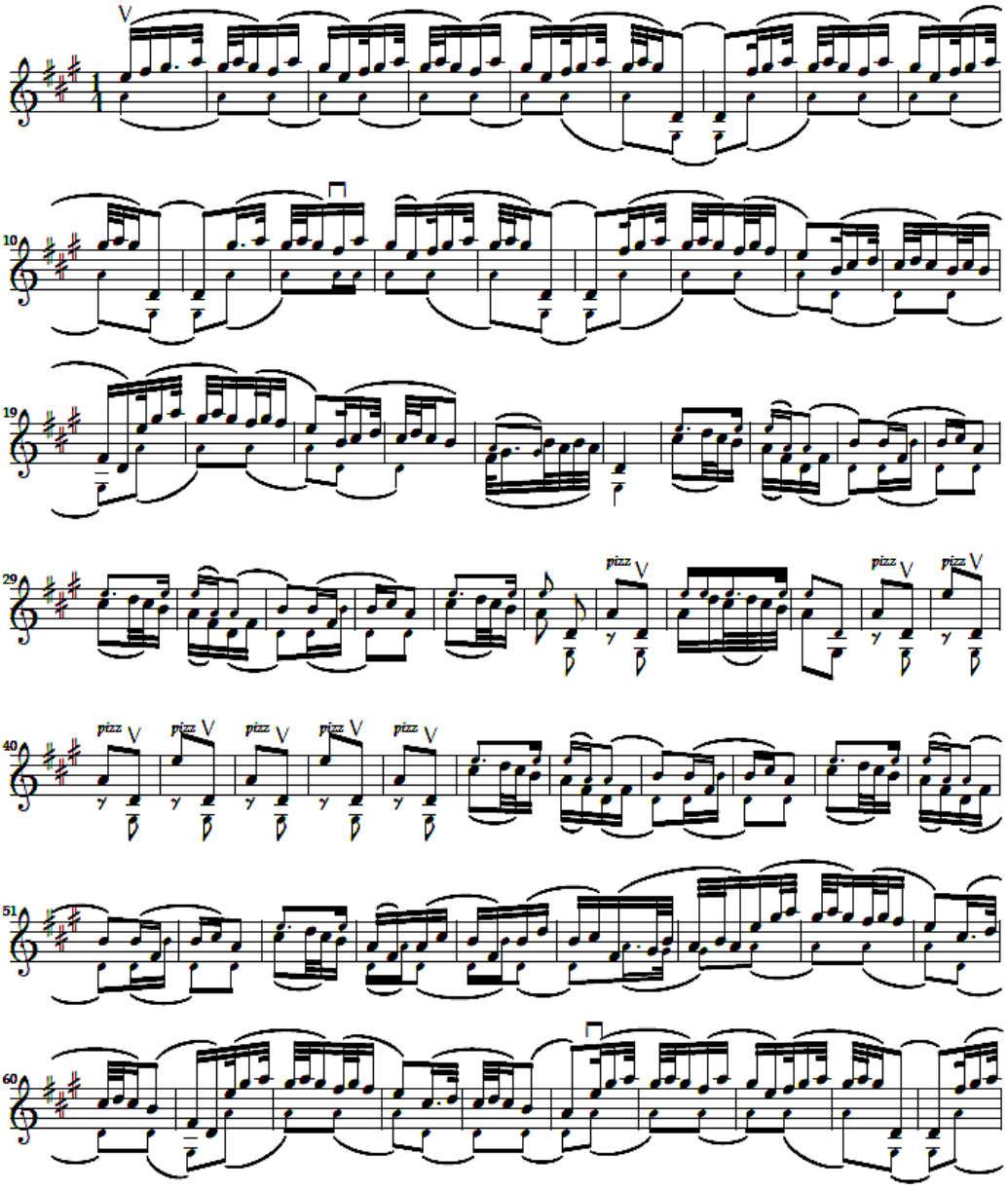
Oxford English dictionary
http://www.oed.com

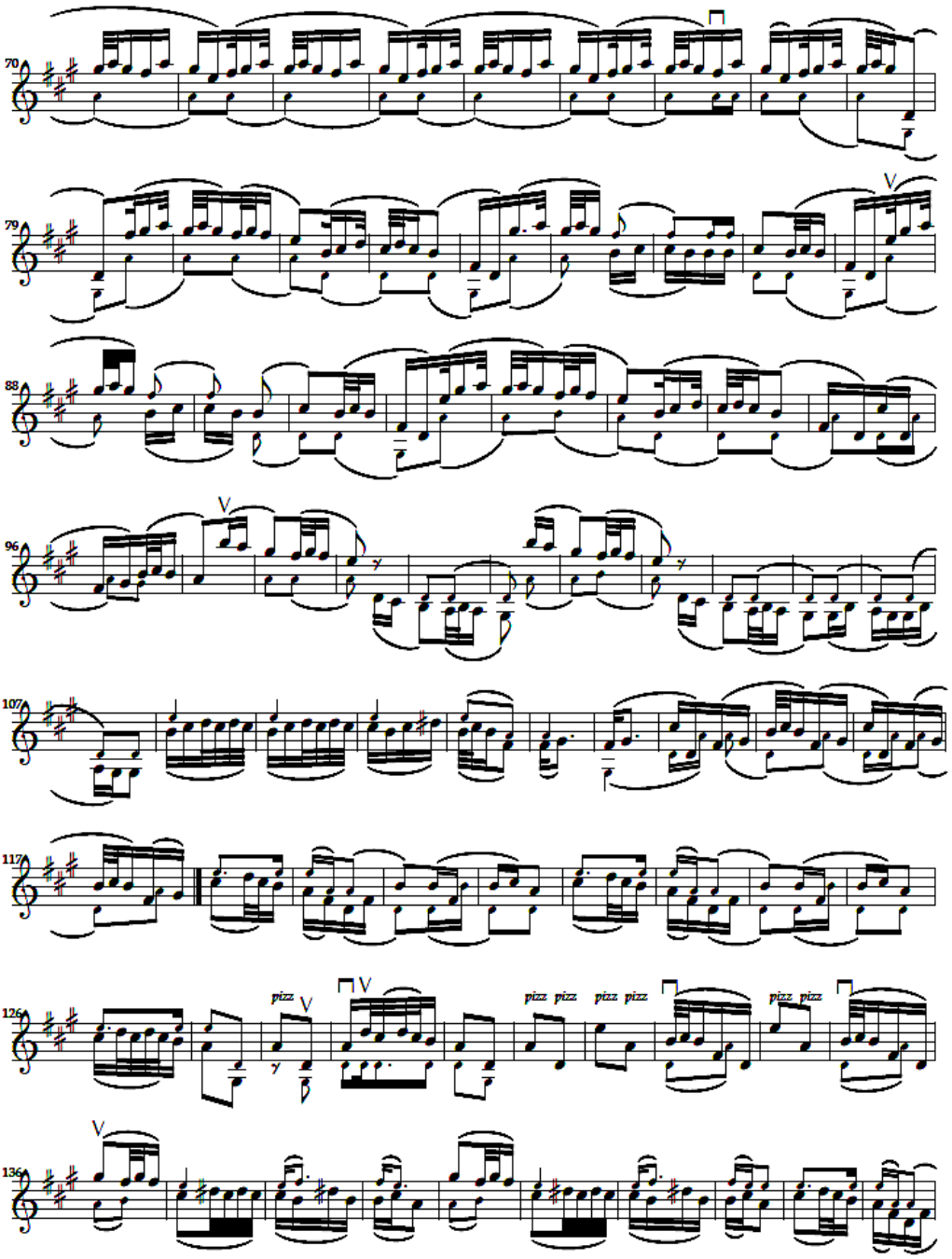
Appendices A–G

Appendix A. Transcriptions

Skjoldmøyslaget

Grip notation

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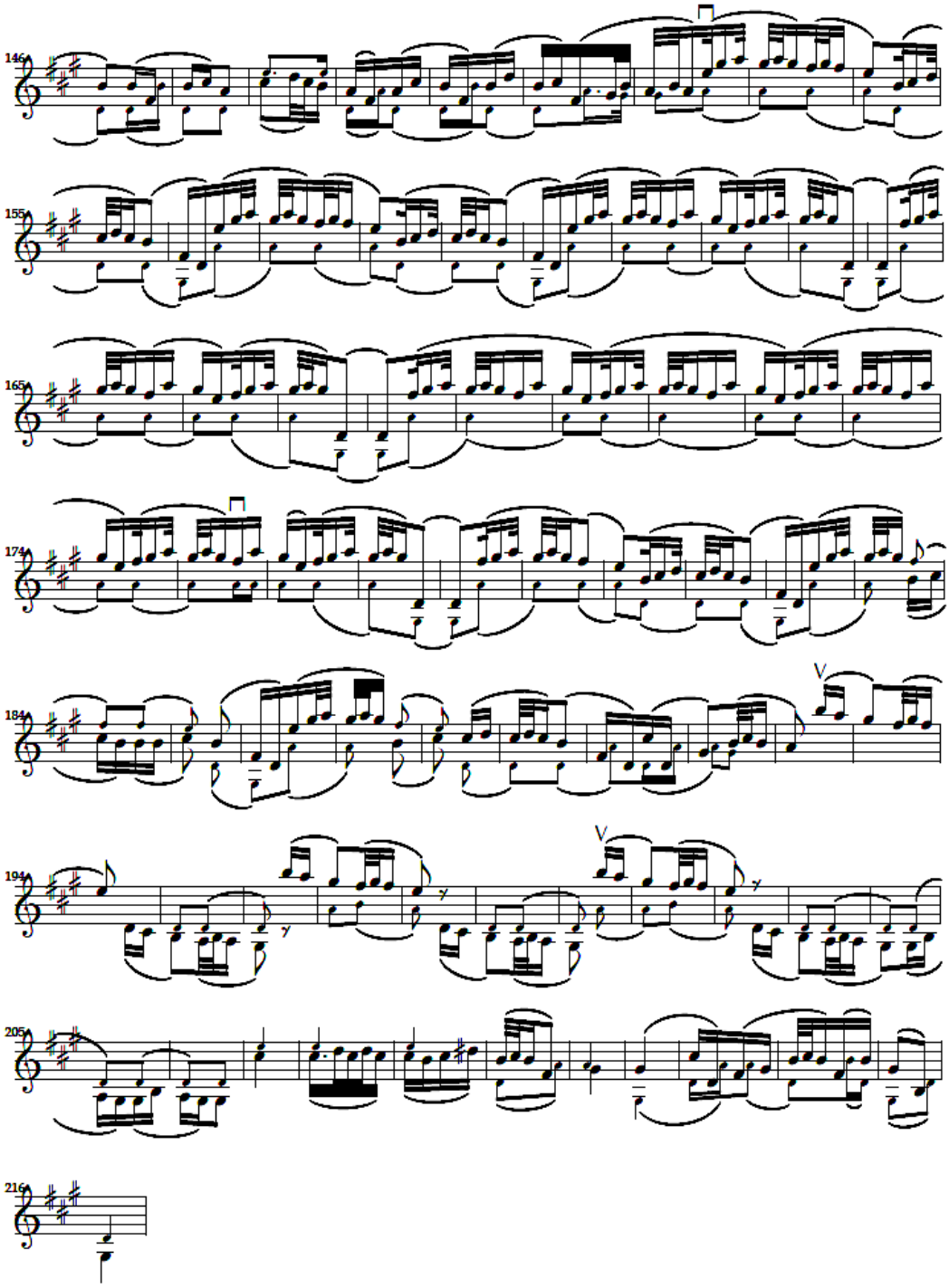
136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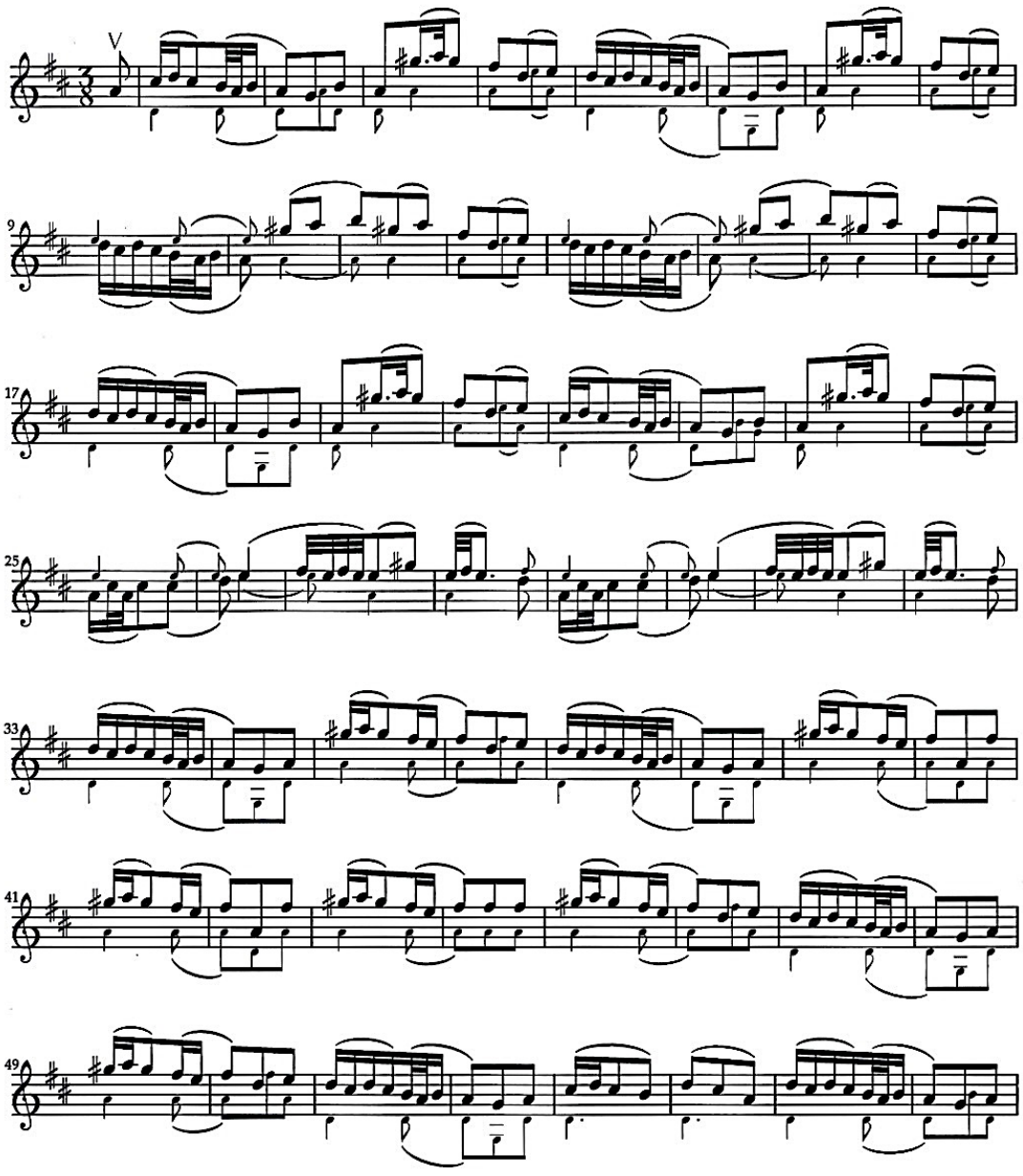
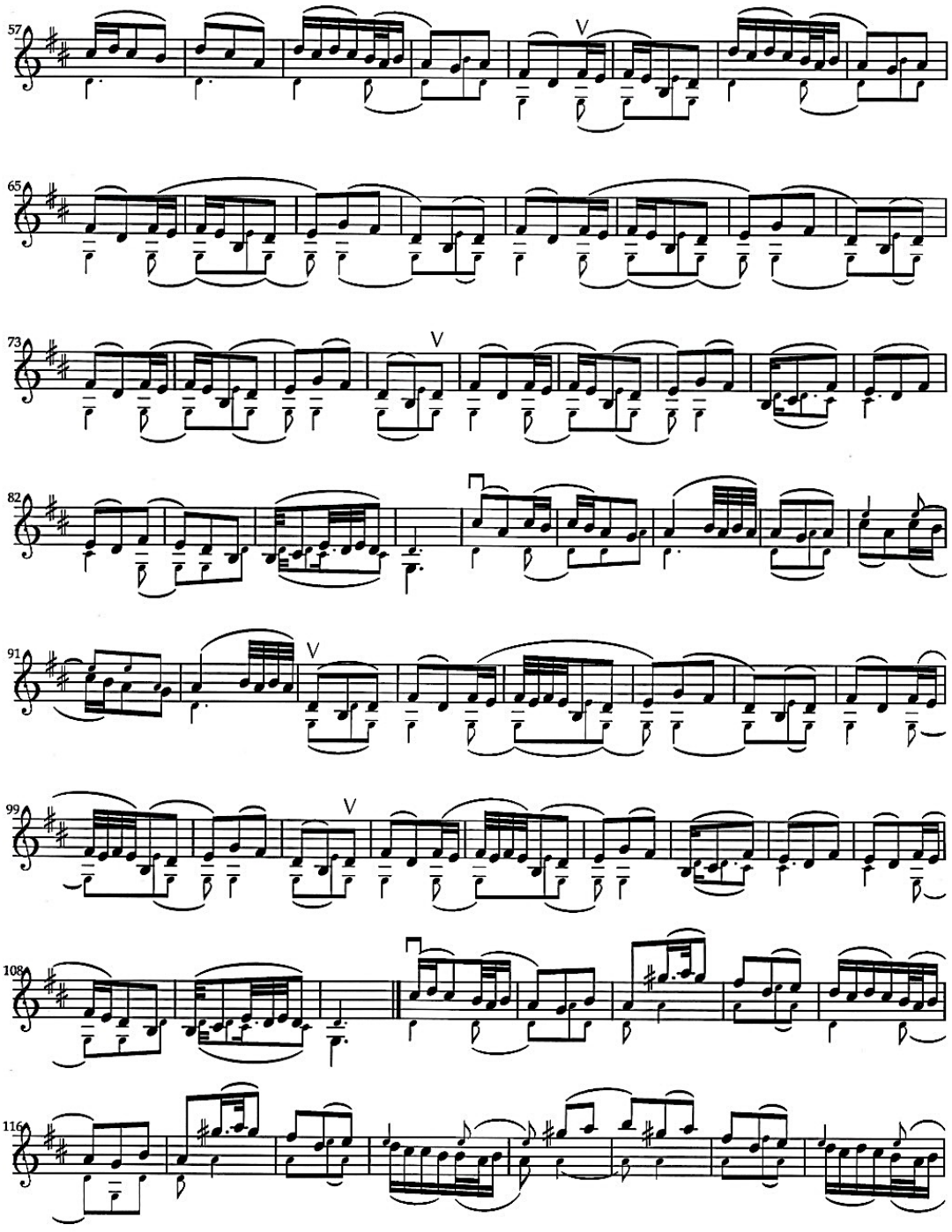
165
174
184
V
194
V
205
216

Reisaren

Grip notation

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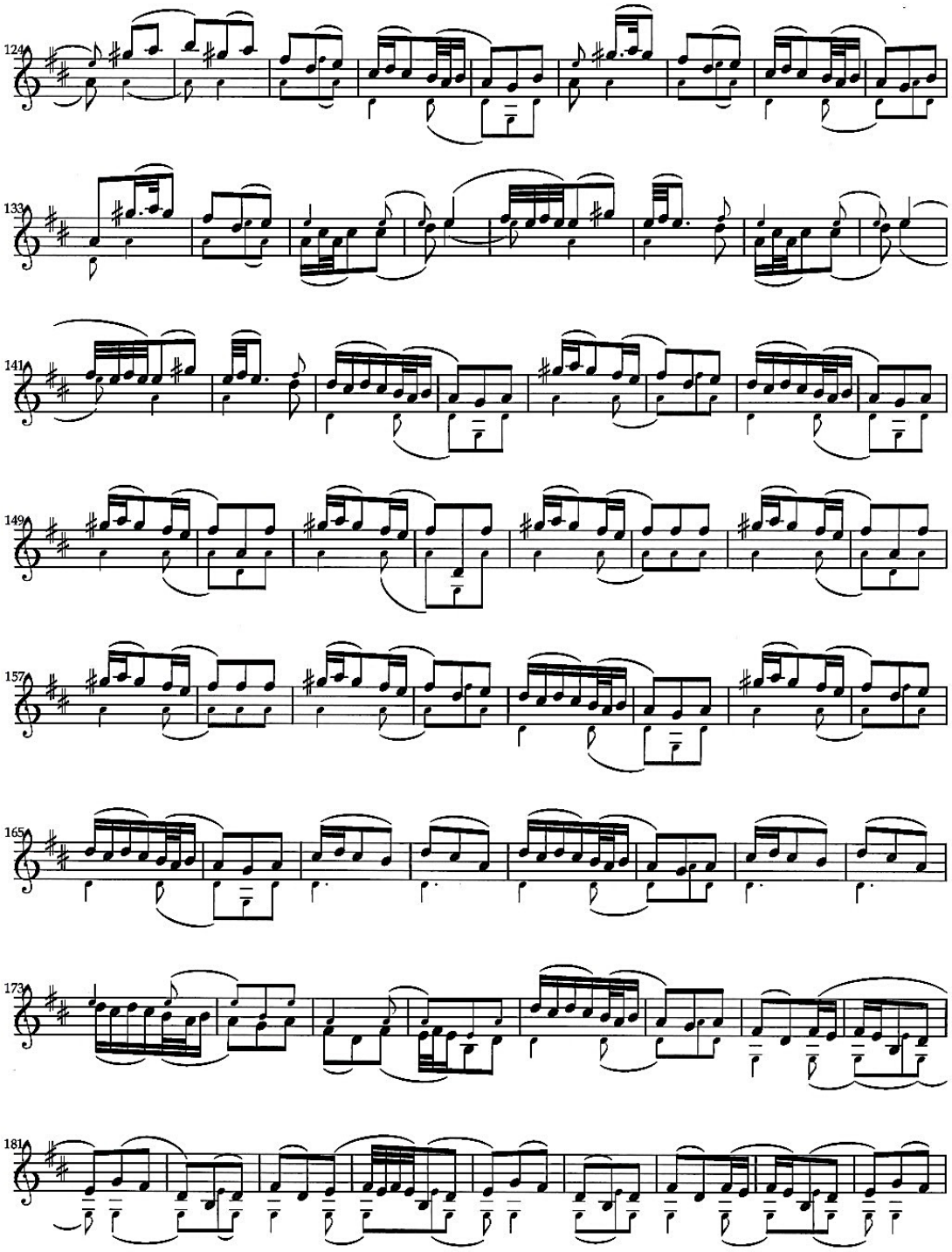
V
65
73
V
82
91
V
99
V
108
116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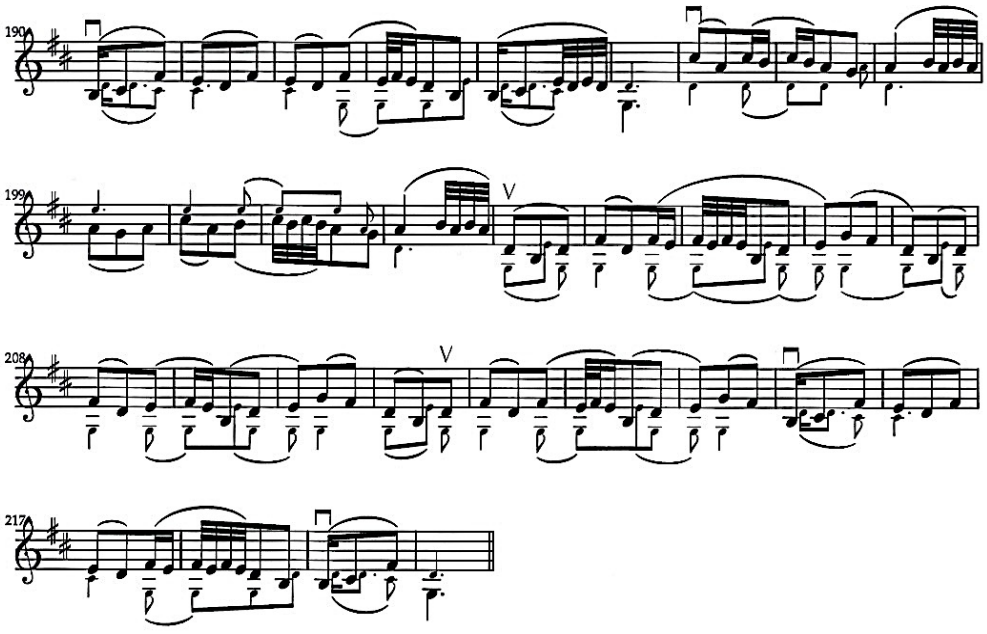
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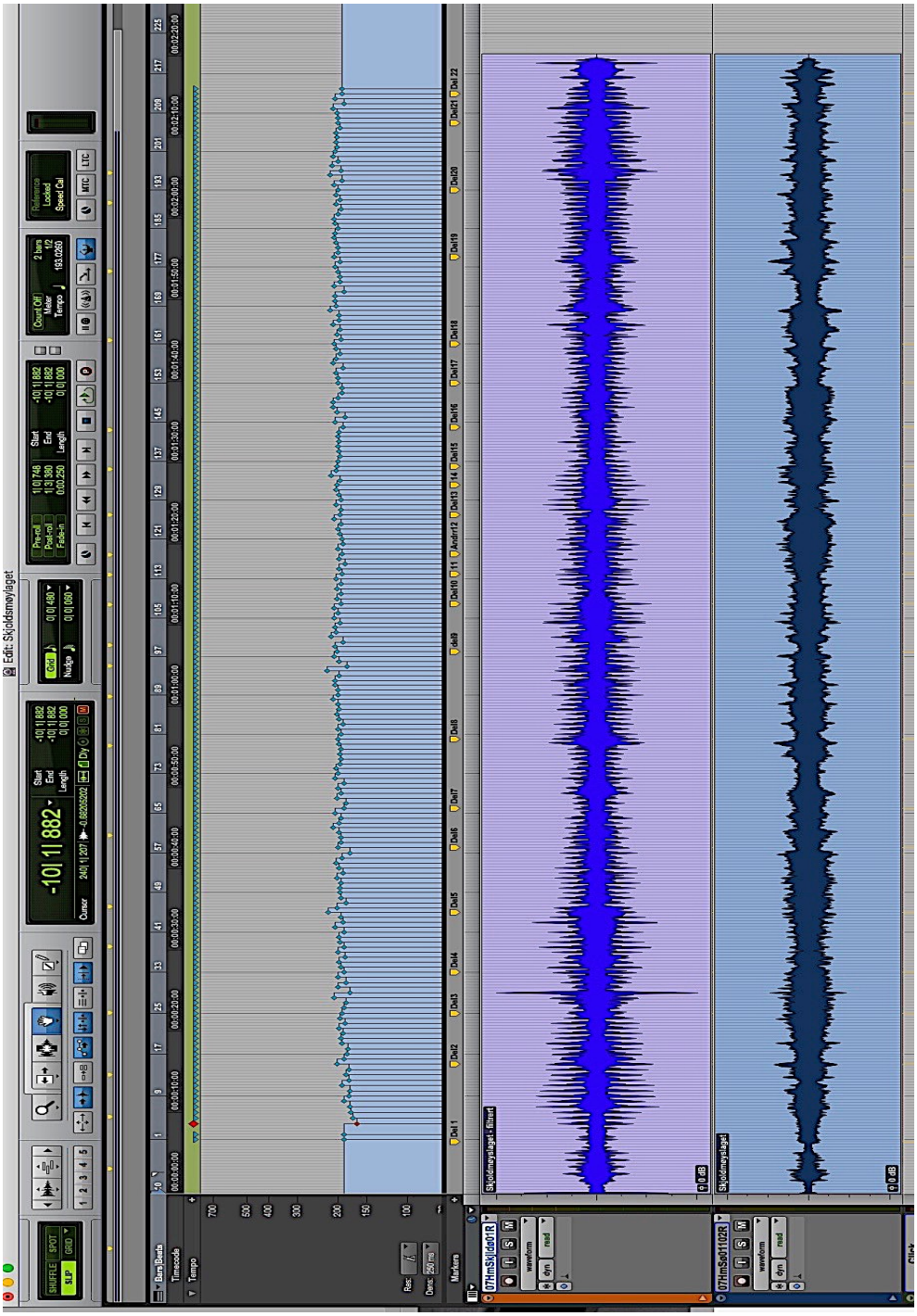
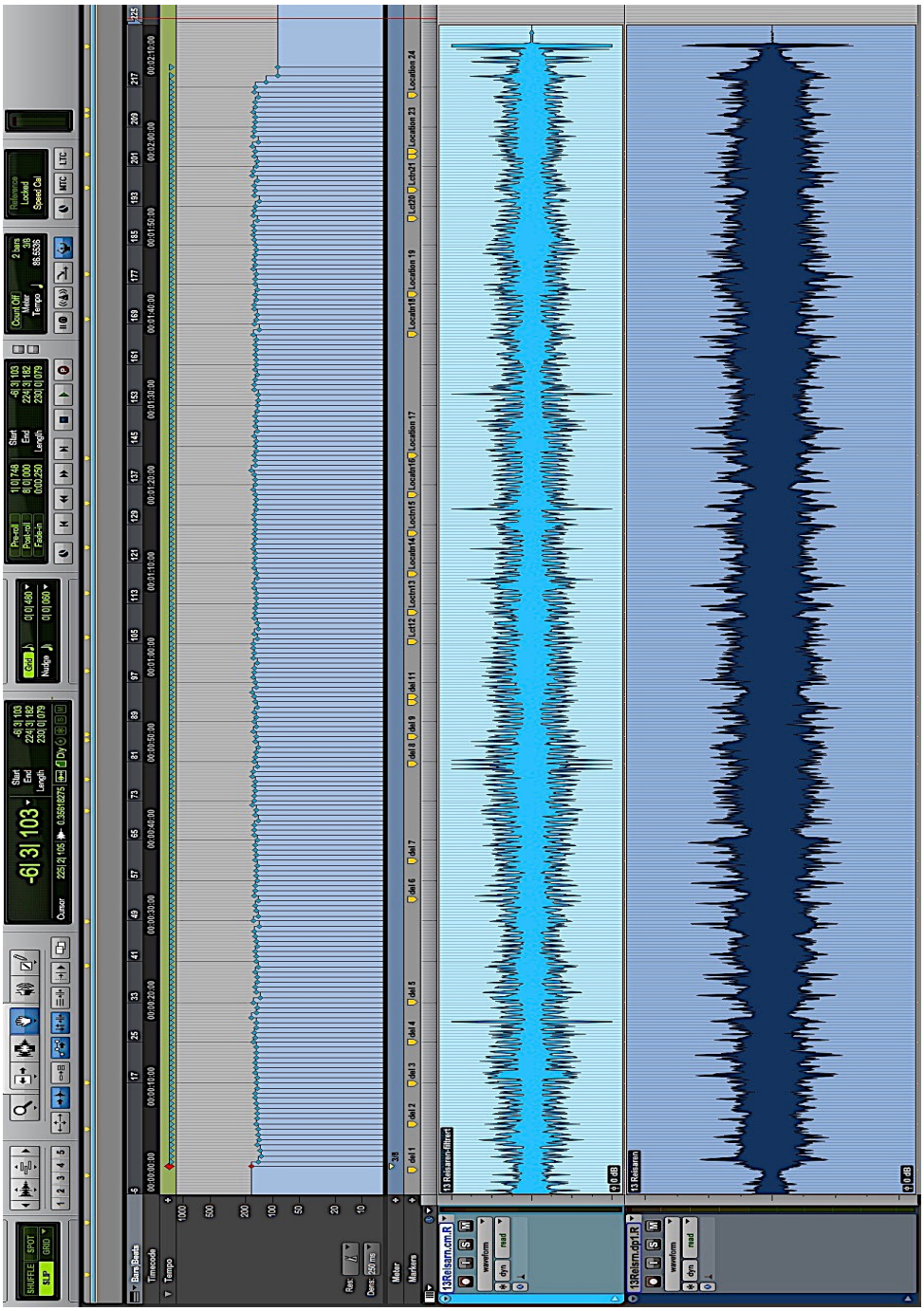
217

Appendix B. Foot stomp's placement, tempo and volume

Skjoldmøyslaget



Reisaren



Appendix C. Rhythmic figures and bow units

Skjoldmøyslaget

Bars	1				2				3				4				5				6			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	x						x				x				x				x				x	

Bars	7				8				9				10				11				12			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	x

Bars	13				14				15				16				17				18			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	x		x				x				x				x				x				x	

Bars	19				20				21				22				23				24			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x						x				x			

Bars	25				26				27				28				29				30			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	x			x	x		x				x				x		x			x	x		x	

Bars	31				32				33				34				35				36			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x		x			x	x		x		pz		x		x	x	x	x

Bars	37				38				39				40				41				42			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	x		x		pz		x		pz		x		pz		x		pz		x		pz		x	

Bars	43				44				45				46				47				48			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	pz		x		pz		x		x			x	x		x				x				x	

Bars	49				50				51				52				53				54			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	x			x	x		x				x				x		x			x	x		x	

Bars	55				56				57				58				59				60			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

Bars	61				62				63				64				65				66			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

Bars	67				68				69				70				71				72			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x								x					

Bars	73				74				75				76				77				78			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x								x				x	x	x		x				x	

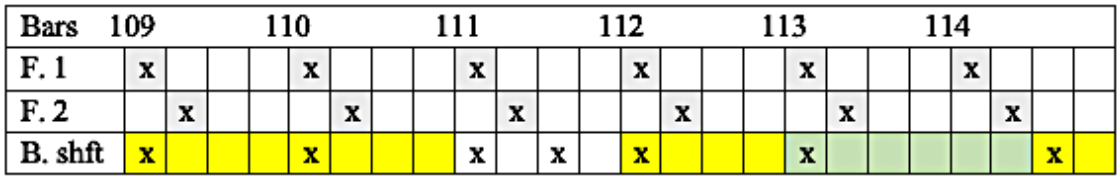
Bars	79				80				81				82				83				84			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

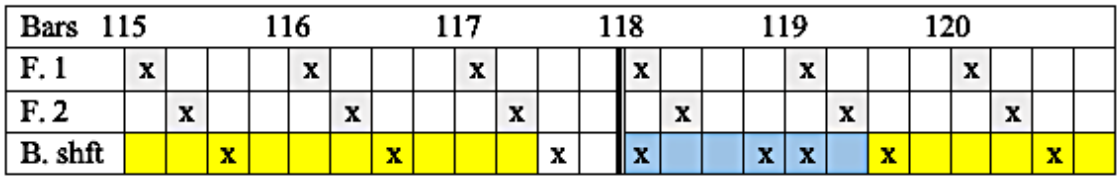
Bars	85				86				87				88				89				90			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x	x	x		x				x				x				x				x	

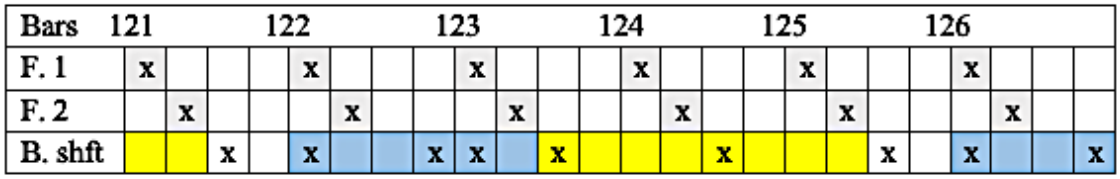
Bars	91				92				93				94				95				96			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

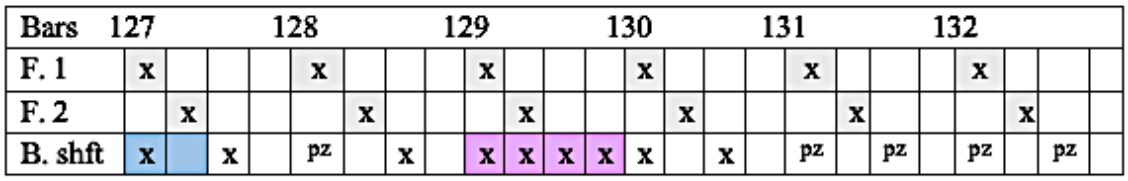
Bars	97				98				99				100				101				102			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

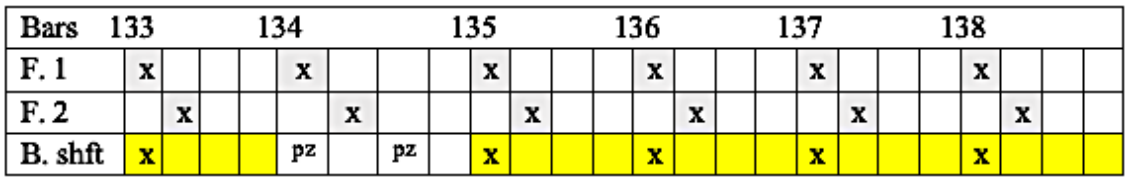
Bars	103				104				105				106				107				108			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x		x			

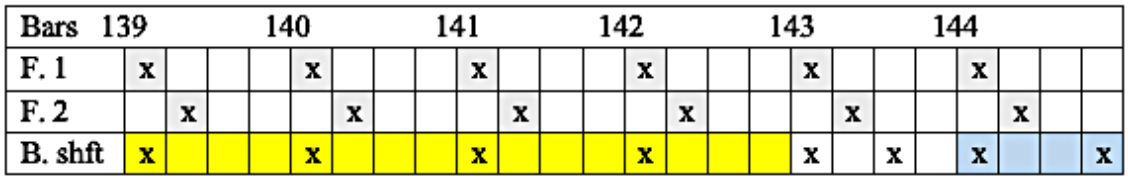

Bars 109 110 111 112 113 114
F. 1
F. 2
B. shft

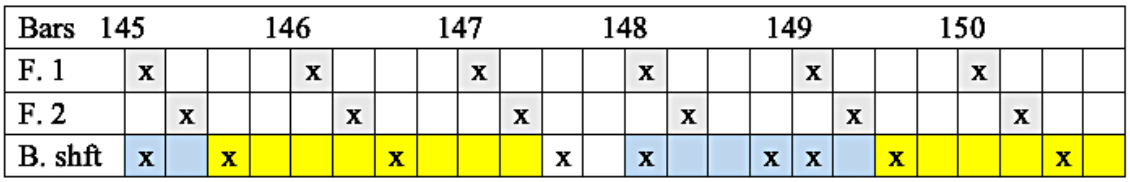

Bars 115 116 117 118 119 120
F. 1
F. 2
B. shft

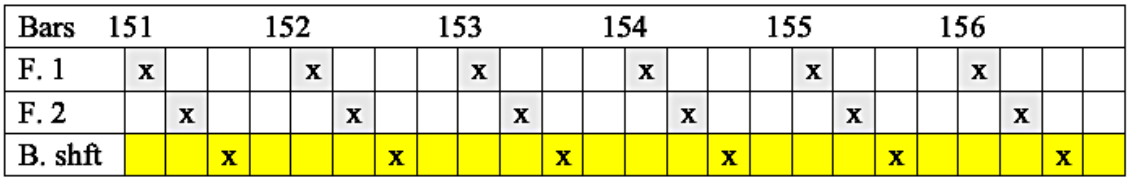

Bars 121 122 123 124 125 126
F. 1
F. 2
B. shft

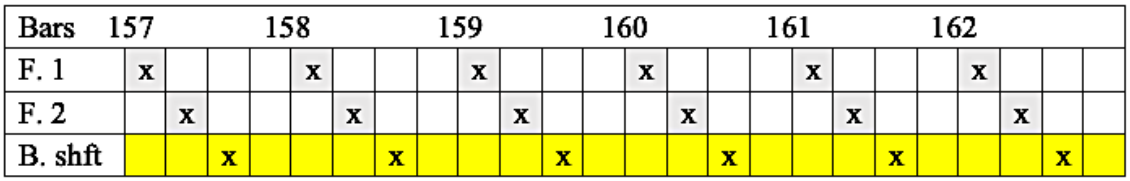

Bars 127 128 129 130 131 132
F. 1
F. 2
B. shft
pz

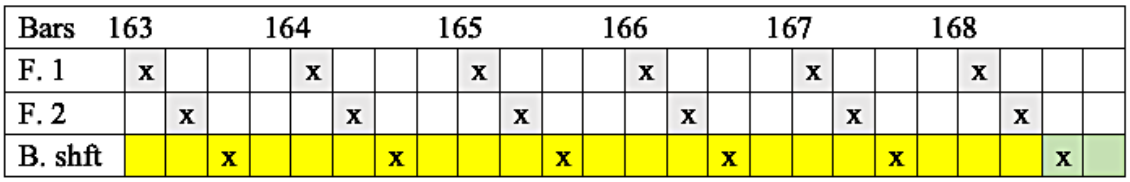

Bars 133 134 135 136 137 138
F. 1
F. 2
B. shft
pz

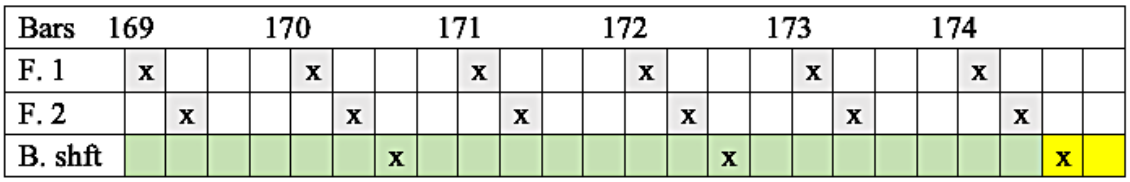

Bars 139 140 141 142 143 144
F. 1
F. 2
B. shft

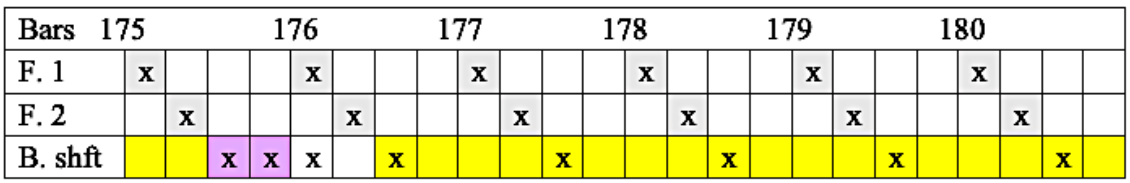

Bars 145 146 147 148 149 150
F. 1 x x x x x x
F. 2 x x x x x x
B. shft x x x x x x x x x x x x


Bars 151 152 153 154 155 156
F. 1 x x x x x x
F. 2 x x x x x x
B. shft x x x x x x


Bars 157 158 159 160 161 162
F. 1 x x x x x x
F. 2 x x x x x x
B. shft x x x x x x


Bars 163 164 165 166 167 168
F. 1 x x x x x x
F. 2 x x x x x x
B. shft x x x x x x


Bars 169 170 171 172 173 174
F. 1 x x x x x x
F. 2 x x x x x x
B. shft x x


Bars 175 176 177 178 179 180
F. 1 x x x x x x
F. 2 x x x x x x
B. shft x x x x x x x x x x x x

Bars	181				182				183				184				185				186			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

Bars	187				188				189				190				191				192			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

Bars	193				194				195				196				197				198			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

Bars	199				200				201				202				203				204			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x				x				x				x				x	

Bars	205				206				207				208				209				210			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft			x				x		x				x				x				x			

Bars	211				212				213				214				215				216			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		
B. shft	x				x					x				x		x				x				

Reisaren																							
Bars	1			2			3			4			5			6			7				
F. 1		x			x			x			x			x			x			x			
F. 2			x			x			x			x			x			x			x		
B. shft	x	x		x		x	x	x	x		x	x		x		x		x	x	x	x		

Bars	8			9			10			11			12			13			14				
F. 1	x			x			x			x			x			x			x				
F. 2		x			x			x			x			x			x			x			
B. shft	x	x		x		x		x			x		x	x		x		x		x			

Bars	15			16			17			18			19			20			21				
F. 1	x			x			x			x			x			x			x				
F. 2		x			x			x			x			x			x			x			
B. shft		x		x	x		x		x		x	x	x	x		x	x		x		x		

Bars	22			23			24			25			26			27			28				
F. 1	x			x			x			x			x			x			x				
F. 2		x			x			x			x			x			x			x			
B. shft		x	x	x	x		x	x		x		x		x			x		x		x		

Bars	29			30			31			32			33			34			35				
F. 1	x			x			x			x			x			x			x				
F. 2		x			x			x			x			x			x			x			
B. shft	x		x		x			x		x		x	x		x		x	x	x		x		

Bars	36			37			38			39			40			41			42				
F. 1	x			x			x			x			x			x			x				
F. 2		x			x			x			x			x			x			x			
B. shft		x	x	x		x		x	x	x		x		x	x	x		x		x	x		

Bars	43			44			45			46			47			48			49		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x		x	x	x		x		x	x	x		x		x	x	x		x

Bars	50			51			52			53			54			55			56		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x	x	x		x		x	x	x			x			x		x		x	x

Bars	57			58			59			60			61			62			63		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x			x			x		x		x	x	x		x		x	x	x		x

Bars	64			65			66			67			68			69			70		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x	x	x		x					x			x		x		x			

Bars	71			72			73			74			75			76			77		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x			x		x		x		x			x		x		x	x		x

Bars	78			79			80			81			82			83			84		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x			x		x			x			x		x		x	x	x		

Bars	85			86			87			88			89			90			91		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x			x		x		x	x	x			x			x		x		x	x

Bars	92			93			94			95			96			97			98		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x			x			x		x					x			x		x		x

Bars	99			100			101			102			103			104			105		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x			x		x		x	x		x		x			x		x		

Bars	106			107			108			109			110			111			112		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x			x		x		x	x	x			x			x		x		x	x

Bars	113			114			115			116			117			118			119		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x	x		x	x		x		x		x	x	x	x		x	x		x		x

Bars	120			121			122			123			124			125			126		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x			x		x	x		x		x		x			x		x	x	

Bars	127			128			129			130			131			132			133		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x		x	x	x	x		x	x		x		x		x	x	x	x	

Bars	134			135			136			137			138			139			140		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x	x		x		x		x			x		x		x	x		x		x	

Bars	141			142			143			144			145			146			147		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x		x		x	x		x		x	x	x		x		x	x	x		x

Bars	148			149			150			151			152			153			154		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x	x	x		x		x	x	x		x		x	x	x		x		x	x

Bars	155			156			157			158			159			160			161		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x		x	x	x		x		x	x	x		x		x	x	x		x

Bars	162			163			164			165			166			167			168		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x	x	x		x		x	x	x		x		x	x	x			x		

Bars	169			170			171			172			173			174			175		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x		x	x	x			x			x		x		x	x	x		x

Bars	176			177			178			179			180			181			182		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x	x	x		x		x	x	x		x					x			x	

Bars	183			184			185			186			187			188			189		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x		x			x		x		x	x		x		x			x	

Bars	190			191			192			193			194			195			196		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x			x			x		x		x	x	x			x			x		x

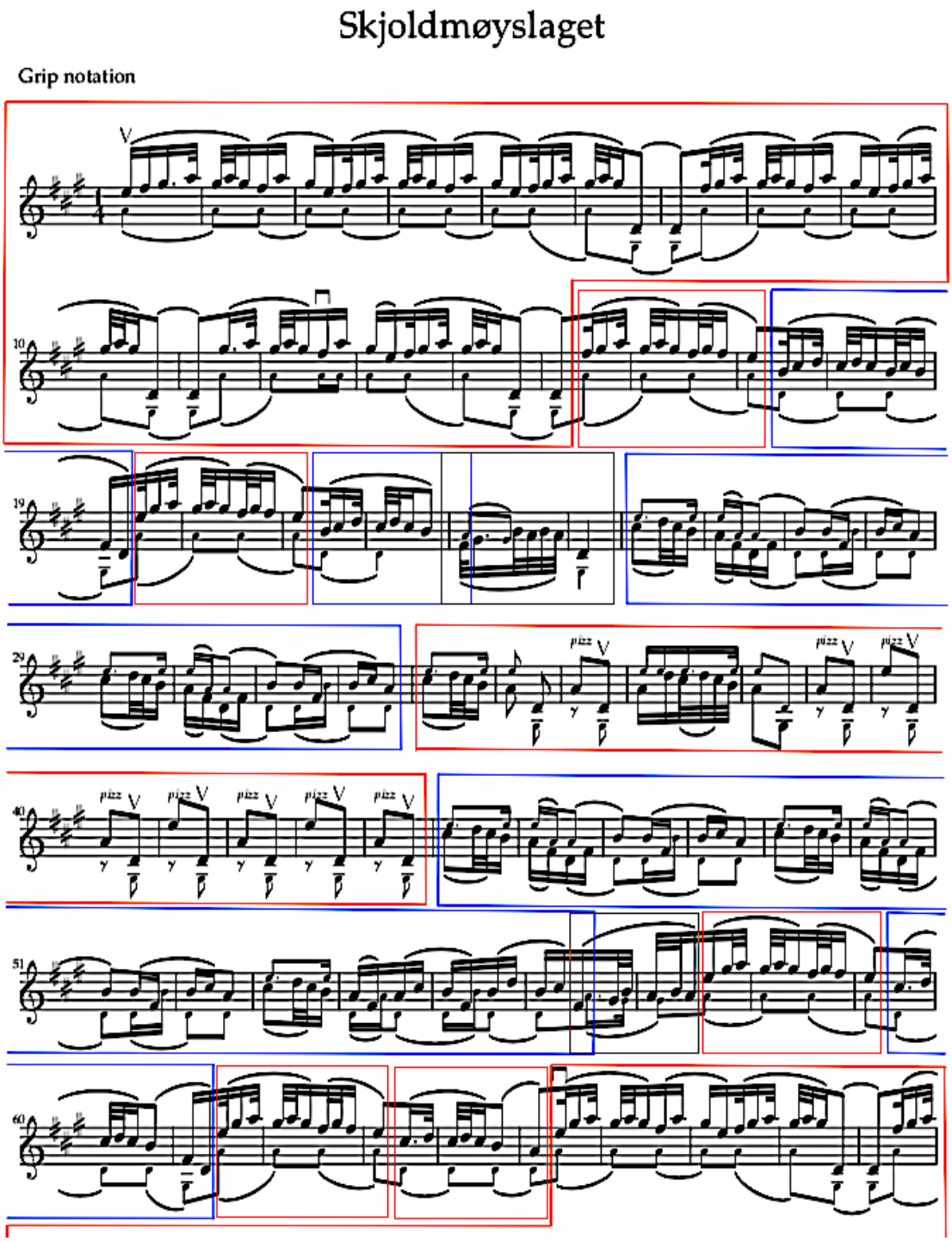
Bars	197			198			199			200			201			202			203		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft		x	x	x			x			x		x		x	x	x			x		

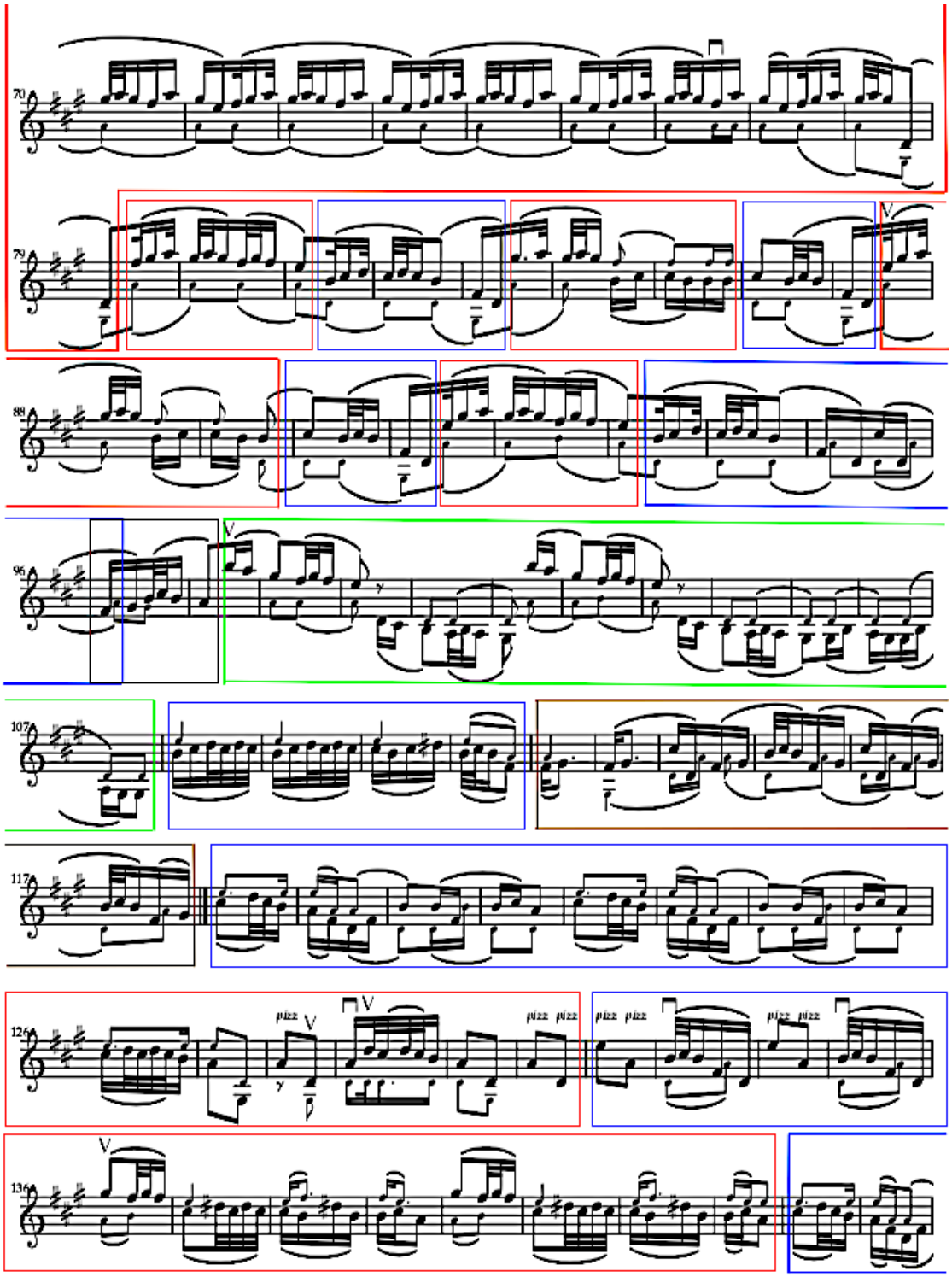
Bars	204			205			206			207			208			209			210		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x					x			x		x		x		x			x	

Bars	211			212			213			214			215			216			217		
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
B. shft	x		x	x		x		x			x		x			x			x		x

Bars	218			219			220		
F. 1	x			x			x		
F. 2		x			x			x	
B. shft		x	x	x			x		

Appendix D. Punctuation




70
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88
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107
117
126
136
V
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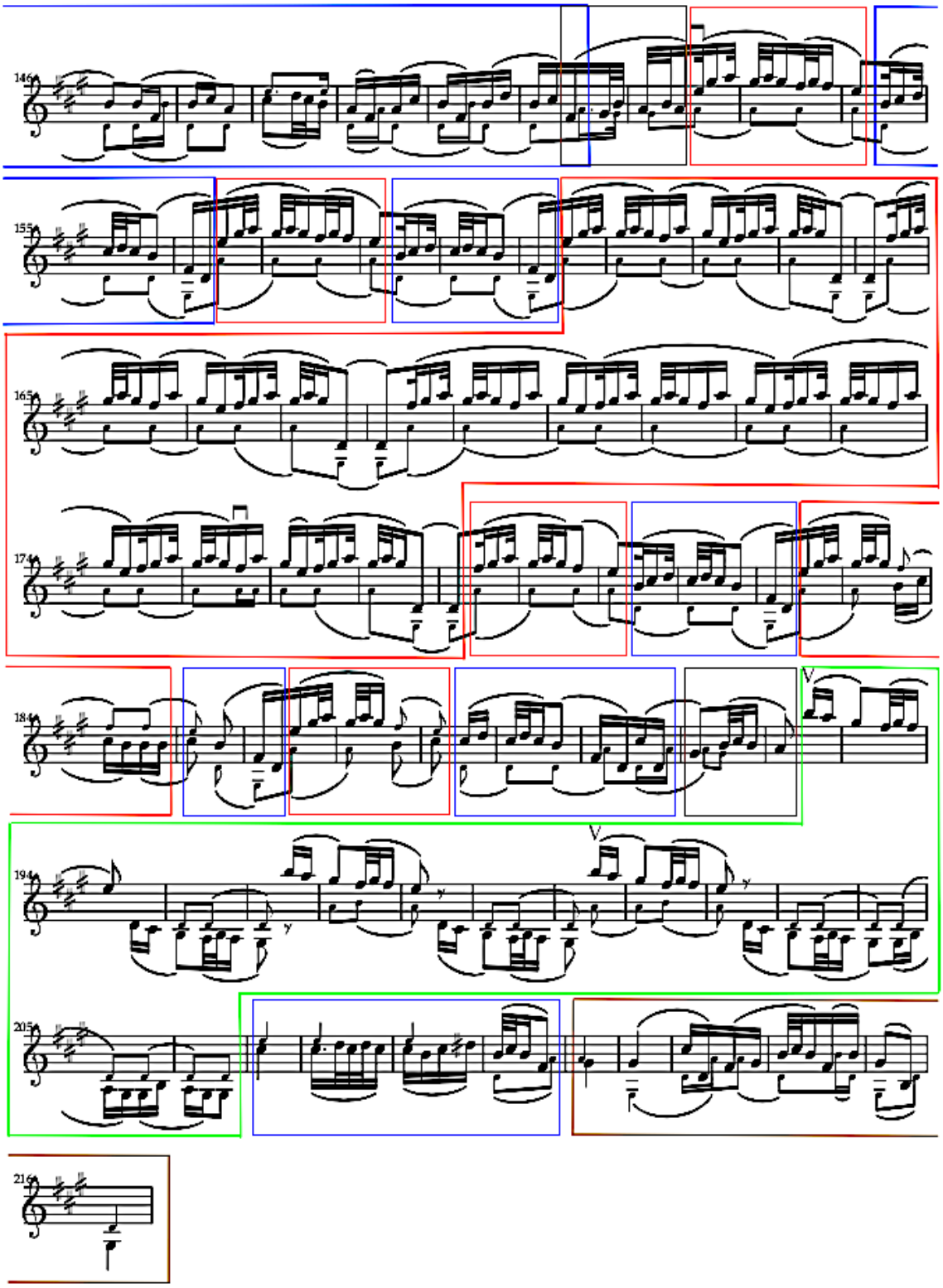
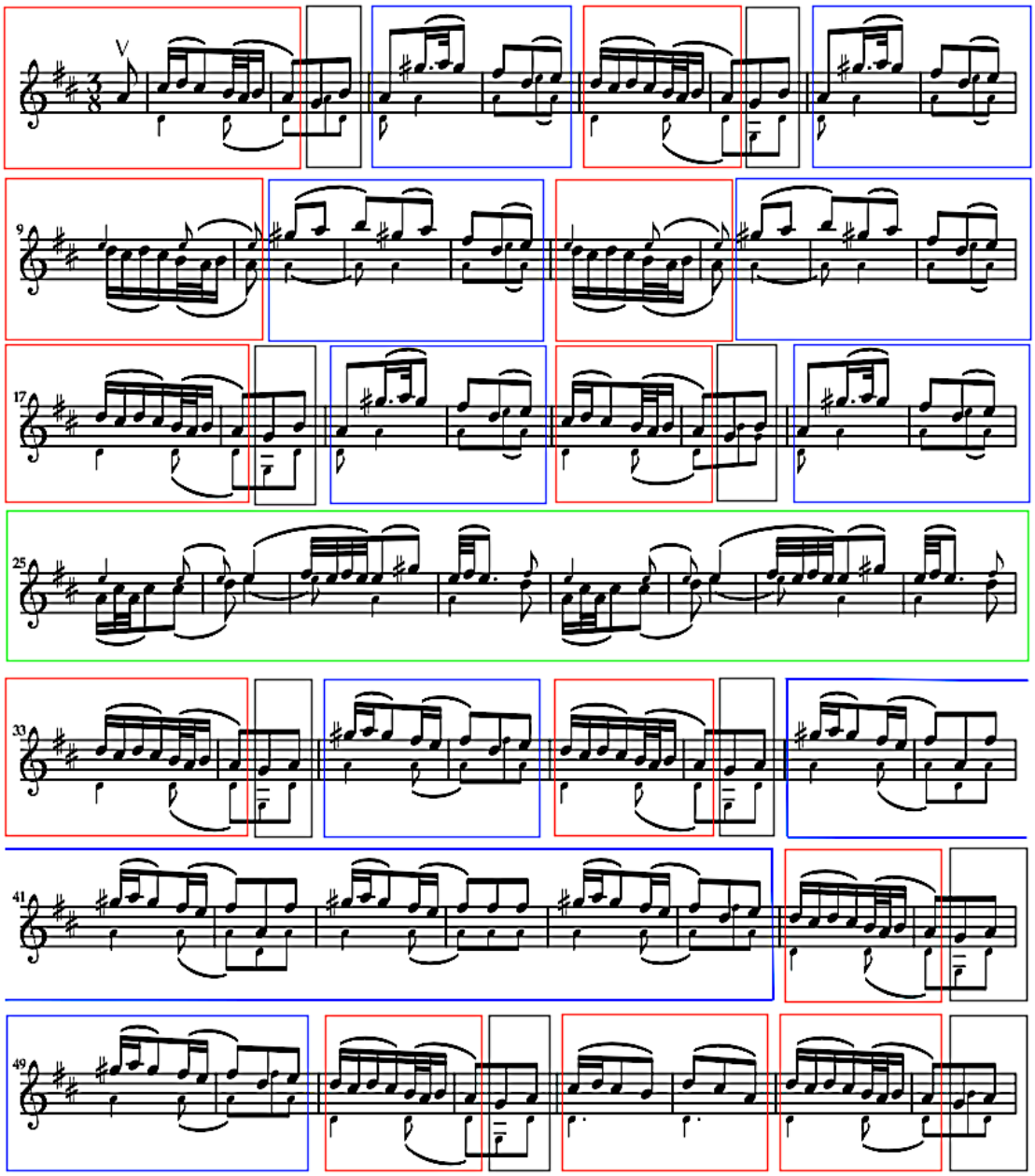
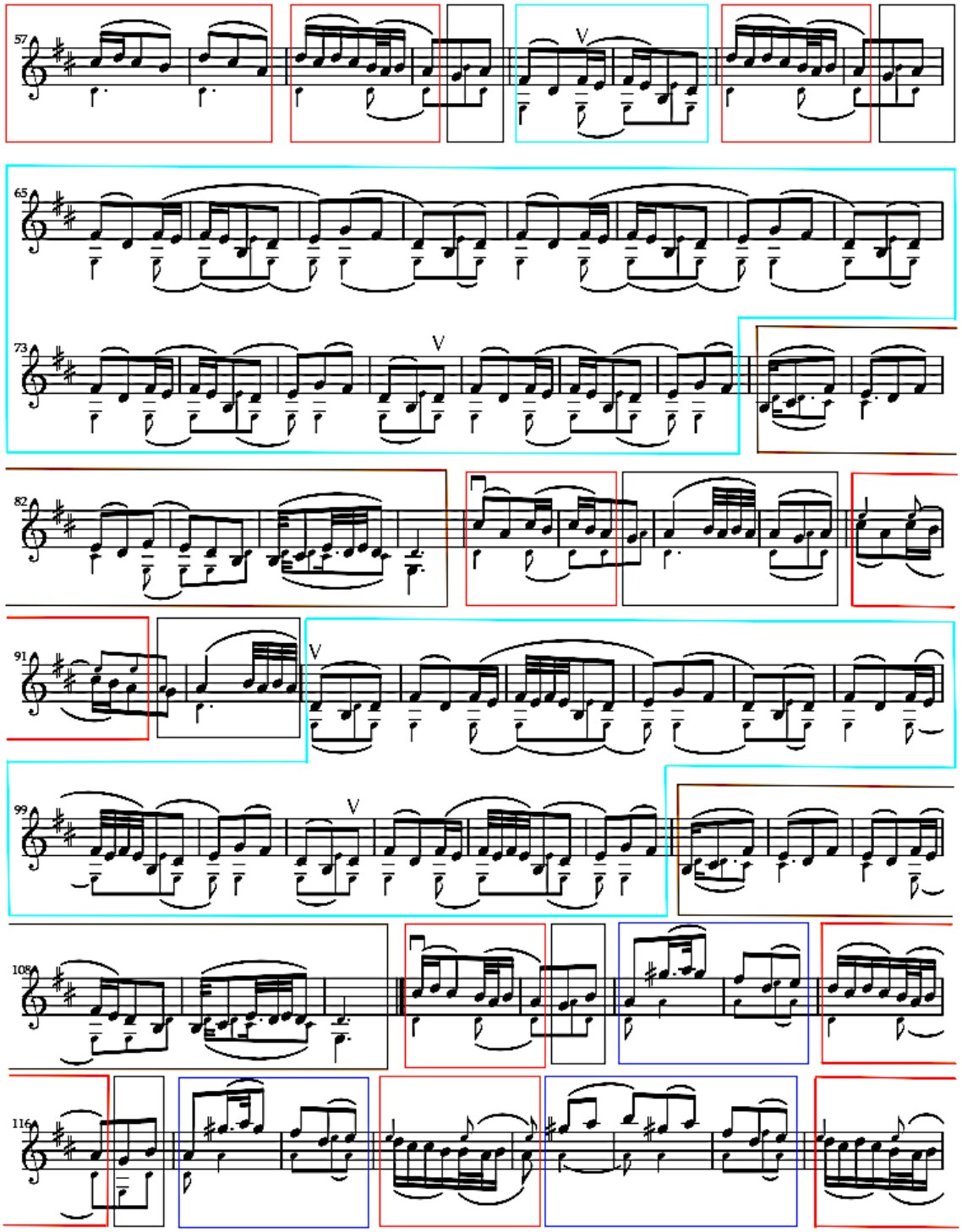

146
155
165
174
184
V
194
V
205
216

Reisaren

Grip notation

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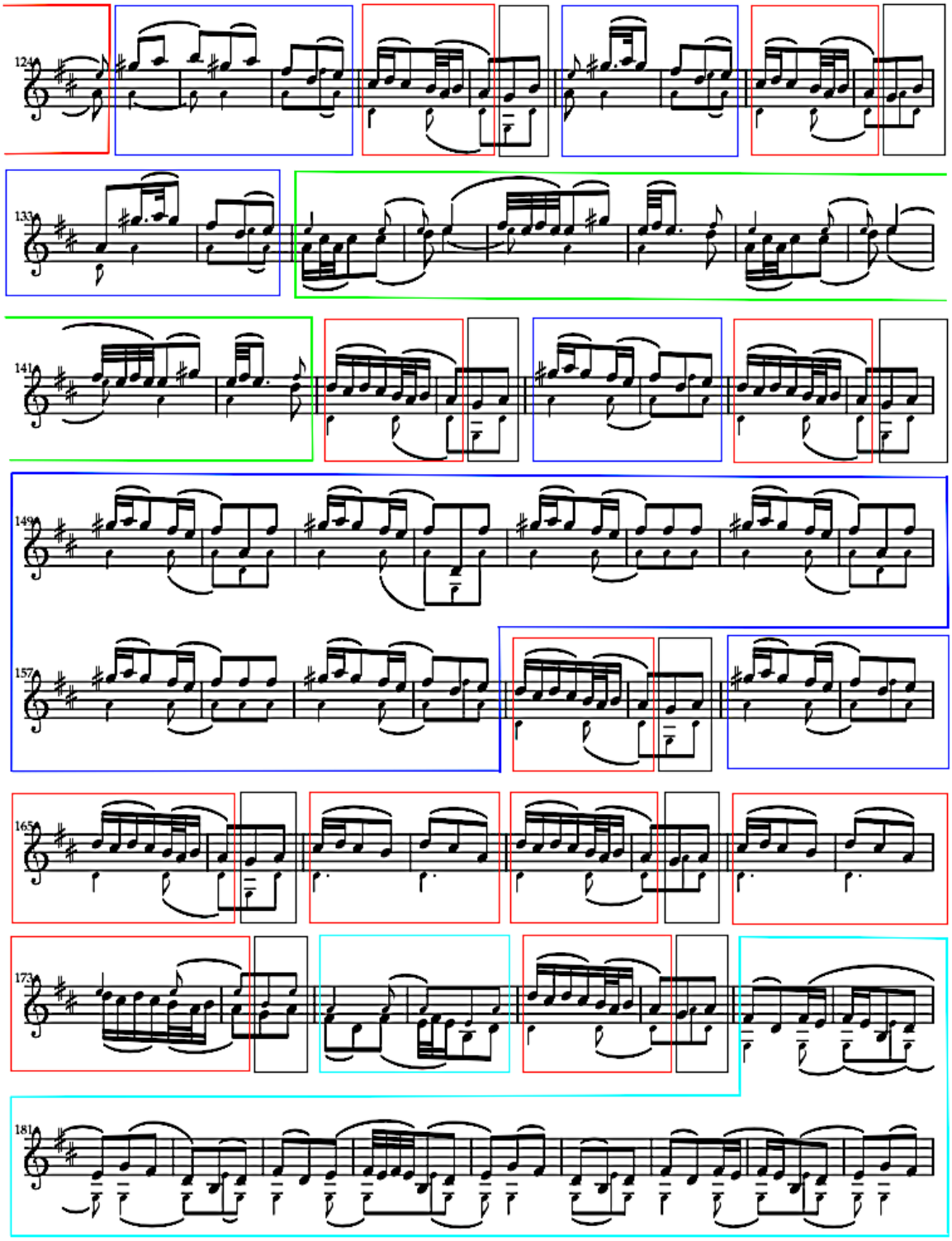
V
65
73
V
82
91
V
99
V
108
116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149
157
165
173
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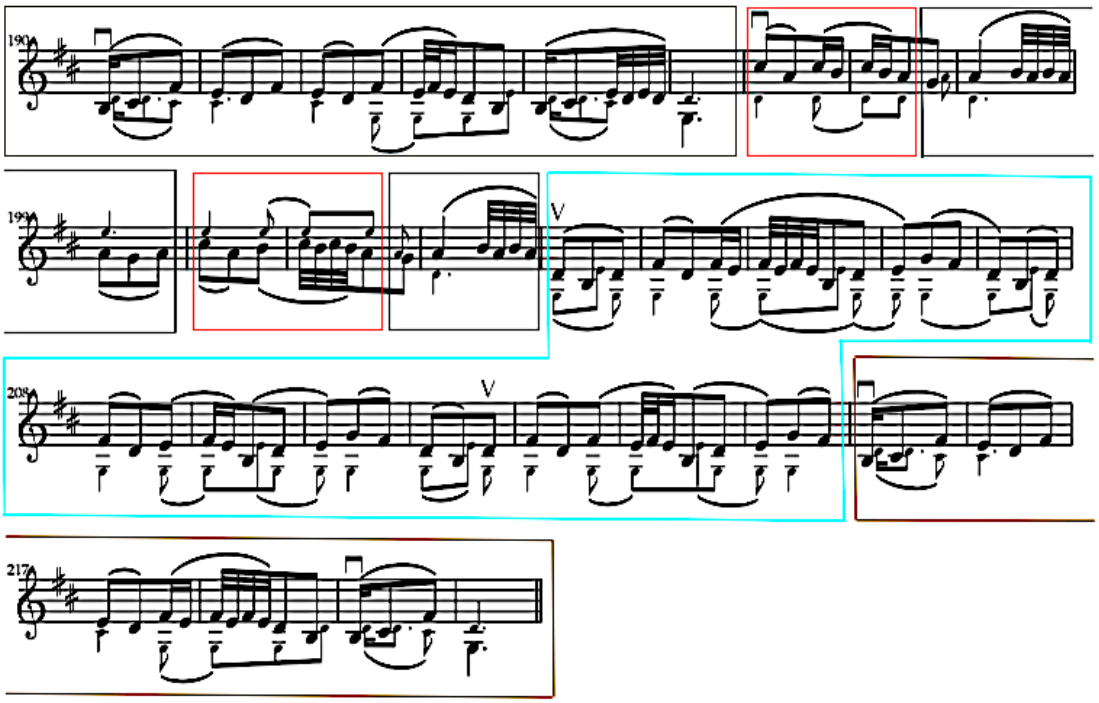
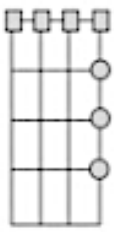
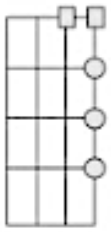
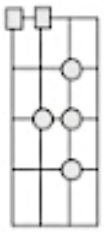
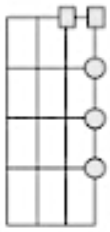
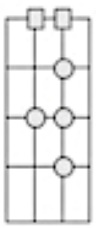
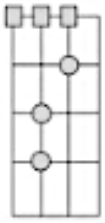
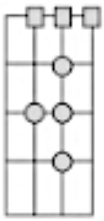
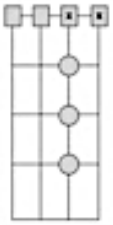
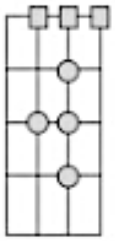
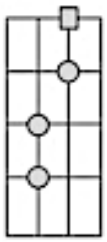
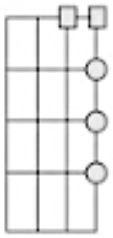
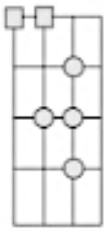
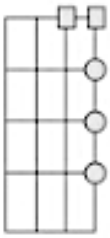
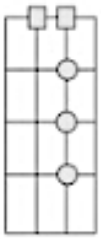
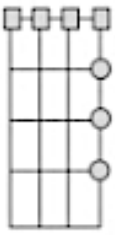
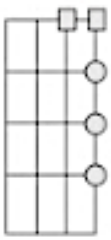
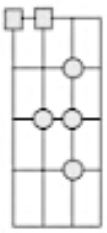
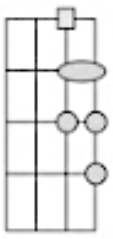
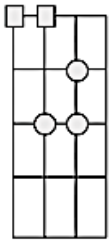
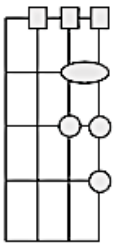
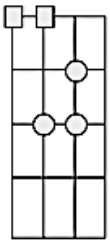
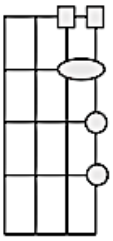
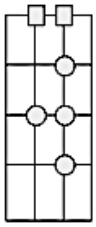
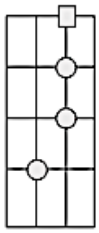
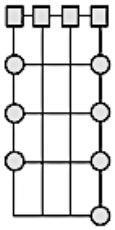
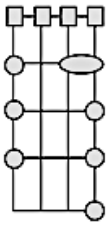
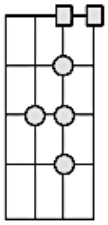
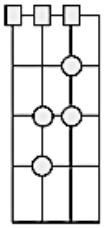
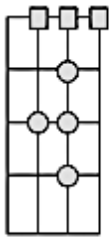
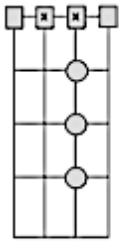
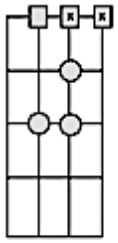
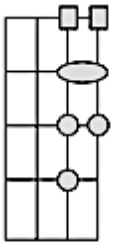
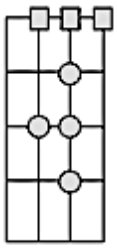
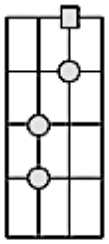
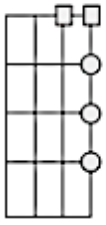
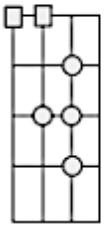
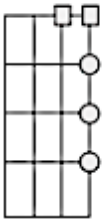
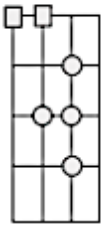
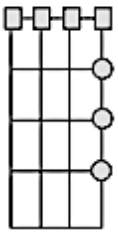
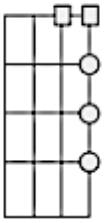
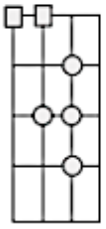
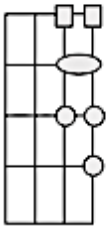
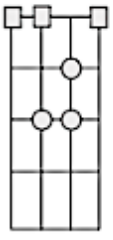
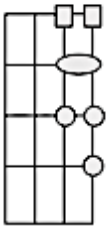
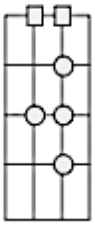
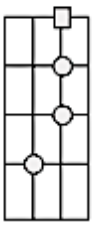
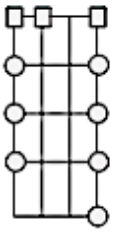
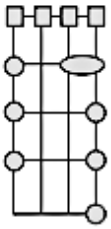
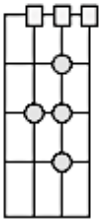
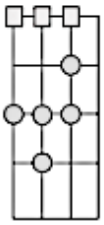

190
195
V
V
205
217

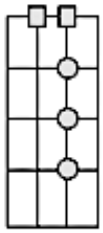
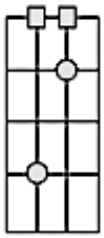
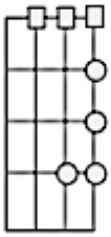
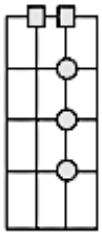
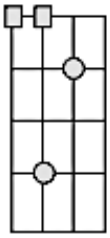
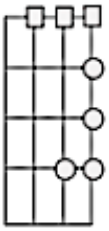
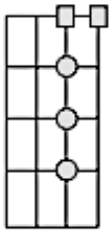
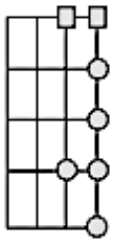
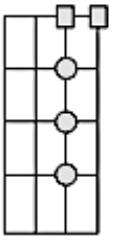
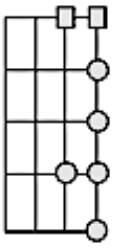
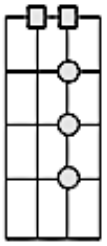
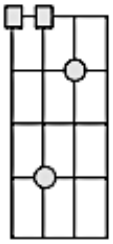
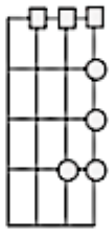
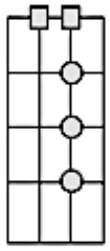
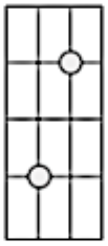
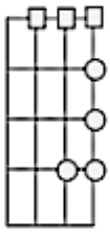
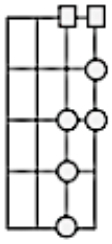
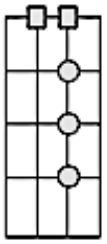
Appendix E. Tablatures

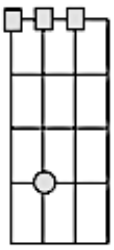
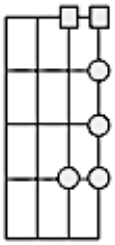
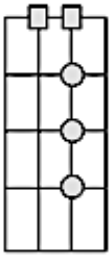
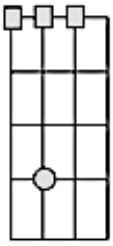
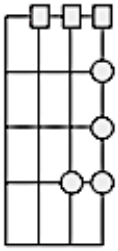
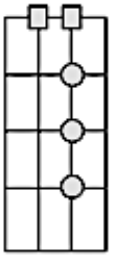
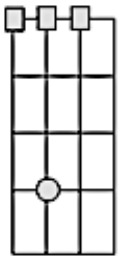
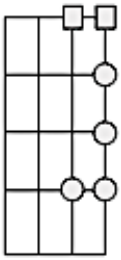
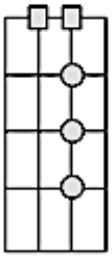
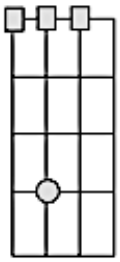
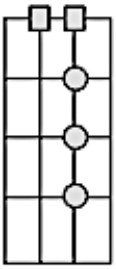
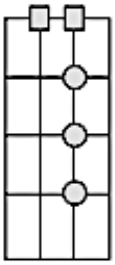
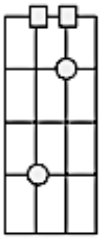
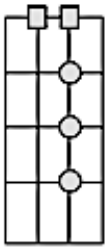
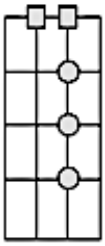
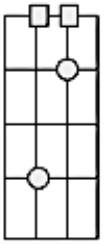
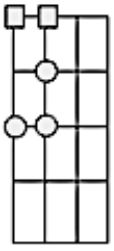
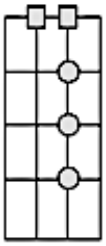
Round 1 in *Skjoldmøyslaget*						
Taks	A	A	B	A	B	C
Tabs						
Bars	1-in 15	In 15-in 17	In 17-in 19	In 19-in 21	In 21-in 23	23-24
Taks	B	A	B	C	A	B
Tabs						
Bars	25-32	33-44	45-in 56	In 56-in 57	In 57-in 59	In 59-in 61
Taks	A	A	A	A	B	A
Tabs						
Bars	In 61-in 63	In 63-in 65	In 65-in 79	In 79-in 81	In 81-in 83	In 83-85

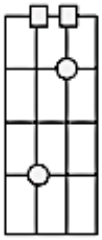
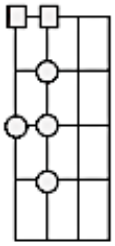
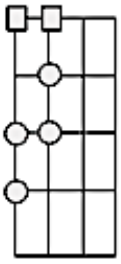
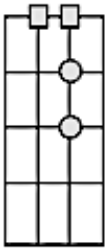
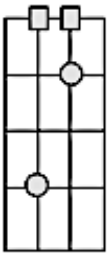
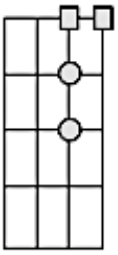
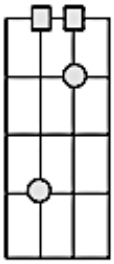
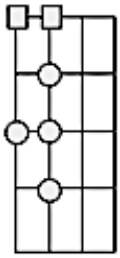
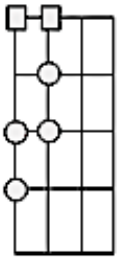
Taks	B	A	B	A	B	C
Tabs						
Bars	86-in 87	In 87-89	90-in 91	In 91-in 93	In 93-in 96	96-in 97
Taks	D	D	B	C		
Tabs						
Bars	In 97-in 101	In 101-107	108-111	112-117		

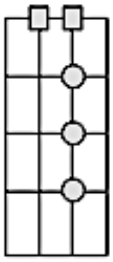
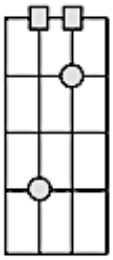
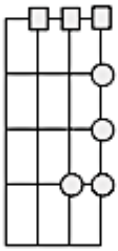
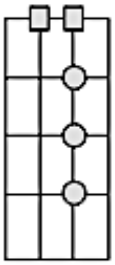
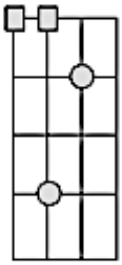
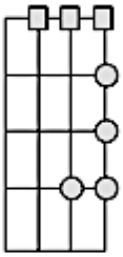
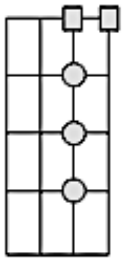
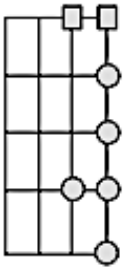
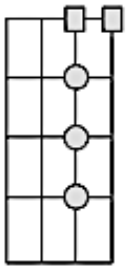
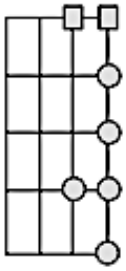
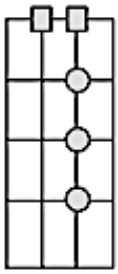
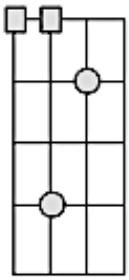
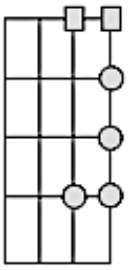
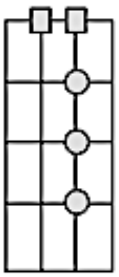
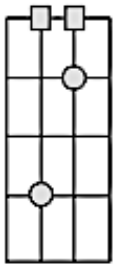
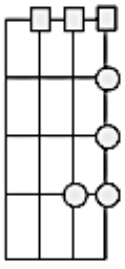
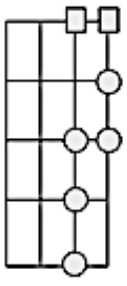
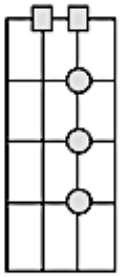
Round 2 in *Skjoldmøyslaget*						
Taks	B	A	B	A	B	C
Tabs						
Bars	118-125	126-131	132-135	136-143	144-in 151	In 151-in 152
Taks	A	B	A	B	A	A
Tabs						
Bars	In 152-in 154	In 154-in 156	In 156-in 158	In 158-in 160	In 160-in 178	In 178-in 180
Taks	B	A	B	A	B	C
Tabs						
Bars	In 180-in 182	In 182-184	185-in 186	In 186-in 188	In 188-190	191-in 192

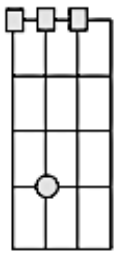
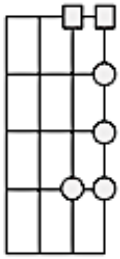
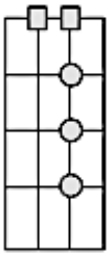
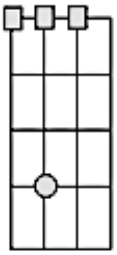
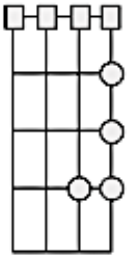
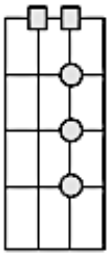
Taks	D	D	B	C
Tabs				
Bars	In 192-in 196	In 196-206	207-210	211-216

Round 1 in *Reisaren*						
Taks	A	B	C	A	B	C
Tabs						
Bars	1-in 2	In 2-2	3-4	5-in 6	In 6-6	7-8
Taks	A	C	A	C	A	B
Tabs						
Bars	9-in 10	In 10-12	13-14	In 14-16	17-in 18	In 18-18
Taks	C	A	B	C	D	A
Tabs						
Bars	19-20	21-in 22	In 22-22	23-24	25-32	33-in 34

Taks	B	C	A	B	C	A
Tabs						
Bars	In 34-34	35-36	37-in 38	In 38-38	39-46	47-in 48
Taks	B	C	A	B	A	A
Tabs						
Bars	In 48-48	49-50	51-52	In 52-52	53-54	55-in 56
Taks	B	A	A	B	E	A
Tabs						
Bars	In 56-56	57-58	59-in 60	In 60-60	61-62	63-in 64

Taks	B	E	F	A	B	A
Tabs						
Bars	In 64-64	65-79	80-85	86-in 87	In 87-89	90-in 91
Taks	B	E	F			
Tabs						
Bars	In 91-92	93-104	105-110			

Round 2 in *Reisaren*						
Taks	A	B	C	A	B	C
Tabs						
Bars	111-in 112	In 112-112	113-114	115-in 116	In 116-116	117-118
Taks	A	C	A	C	A	B
Tabs						
Bars	119-in 120	In 120-122	123-in 124	In 124-126	127-in 128	In 128-128
Taks	C	A	B	C	D	A
Tabs						
Bars	129-130	131-in 132	In 132-132	133-134	135-142	143-in 144

Taks	B	C	A	B	C	A
Tabs						
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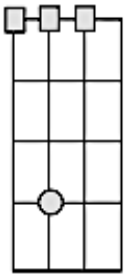
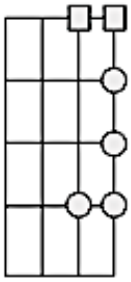
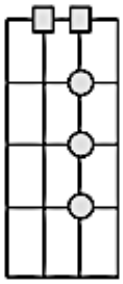
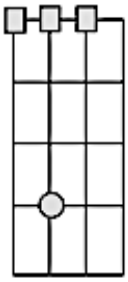
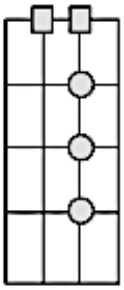
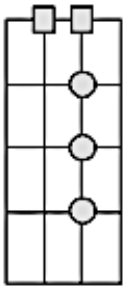
Taks	B	C	A	B	A	A
Tabs						
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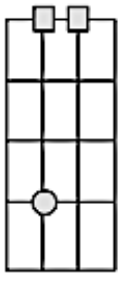
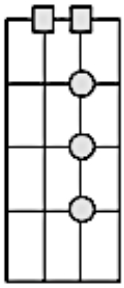
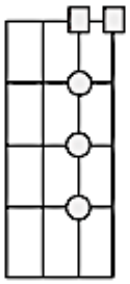
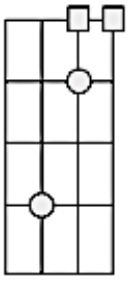
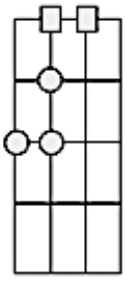
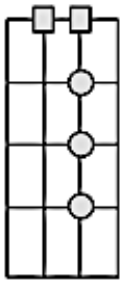
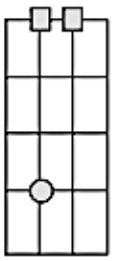
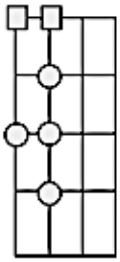
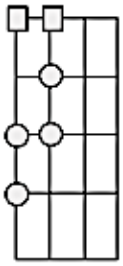
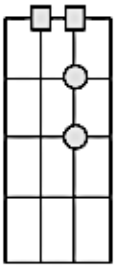
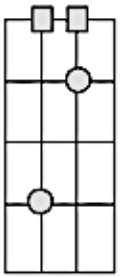
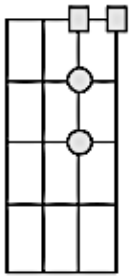
Taks	B	A	A	B	E	A
Tabs						
Bars	In 170-170	171-172	173-in 174	In 174-174	175-176	177-in 178

Taks	B	E	F	A	B	A
Tabs						
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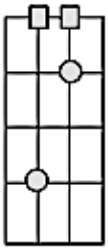
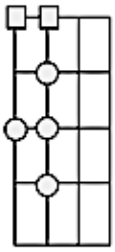
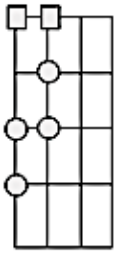
Taks	B	E	F			
Tabs						
Bars	In 201-202	203-214	215-220			

Appendix F. Complete overview of figures

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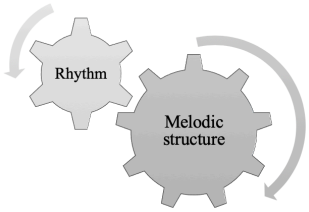	
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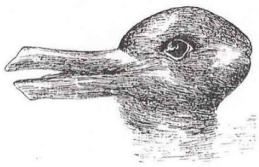	
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	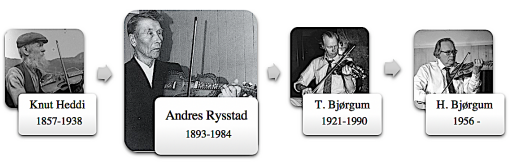

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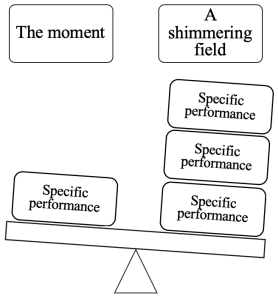	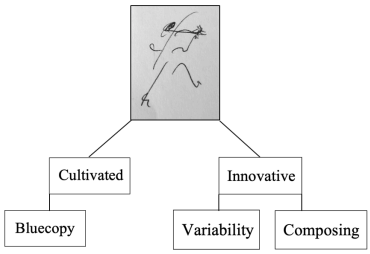
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	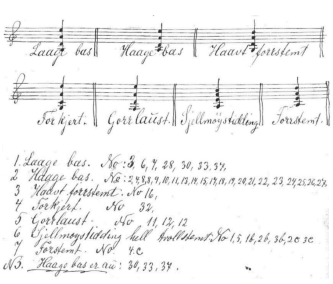

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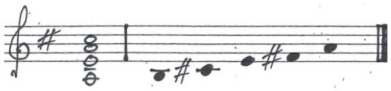	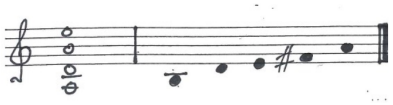
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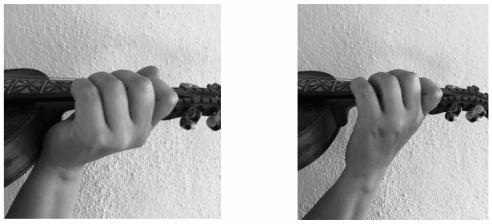	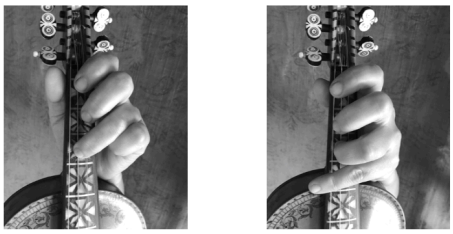
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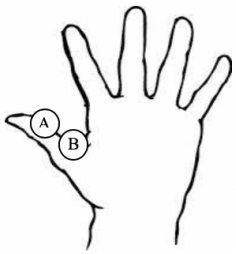	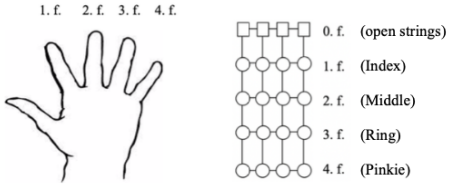

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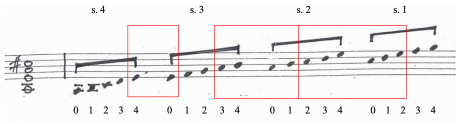	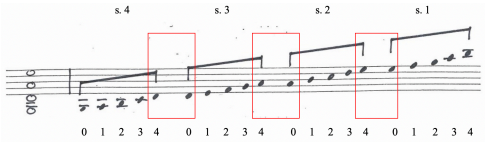
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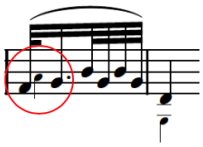	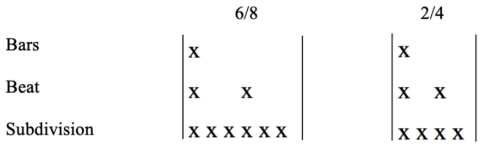
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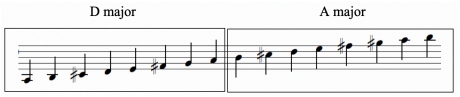	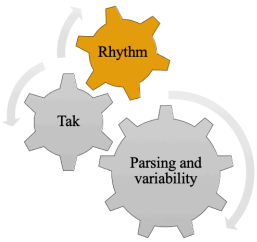
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	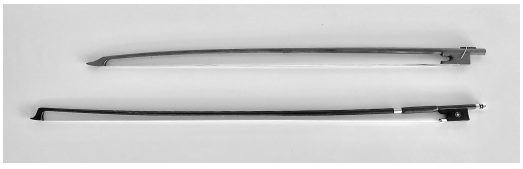
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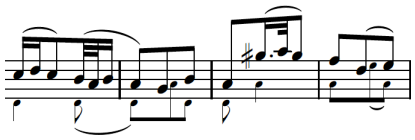	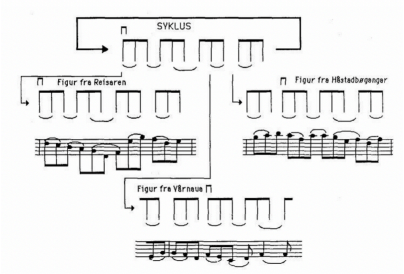
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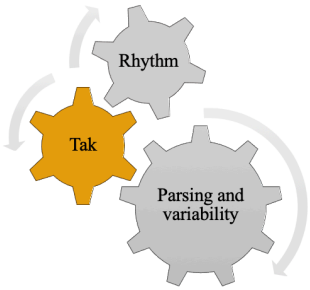	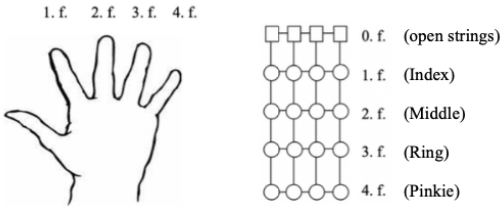
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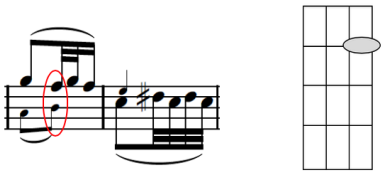	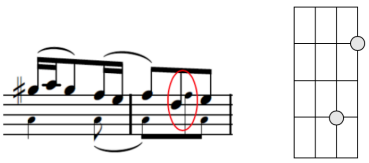
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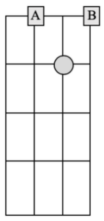	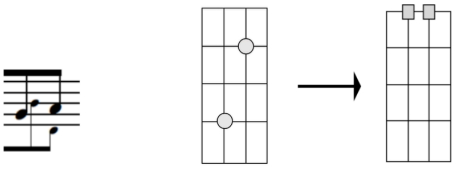

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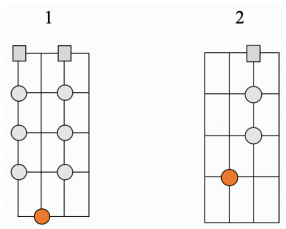	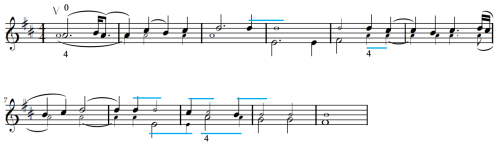
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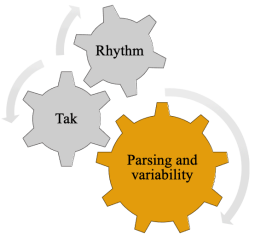	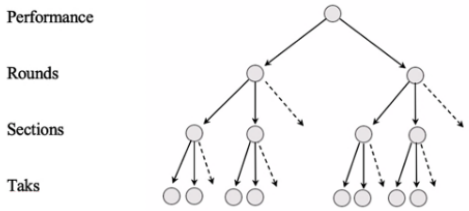
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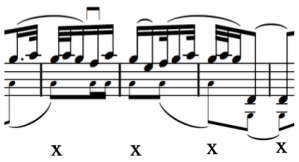	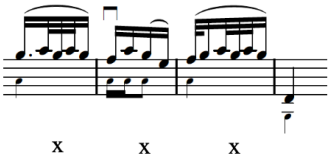
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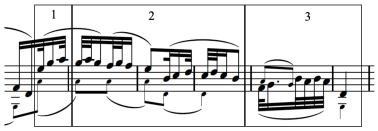	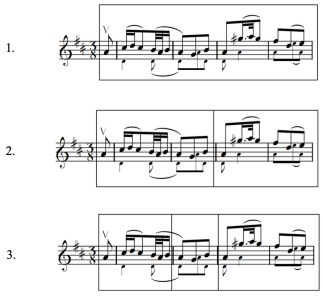

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	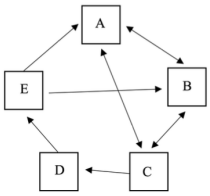
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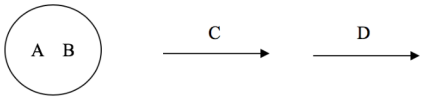	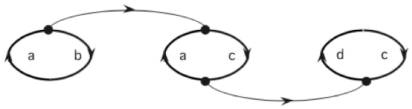
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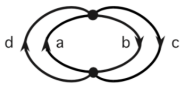	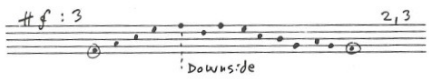
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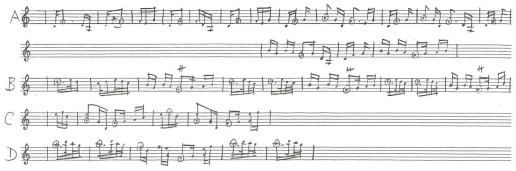	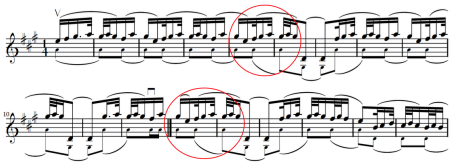

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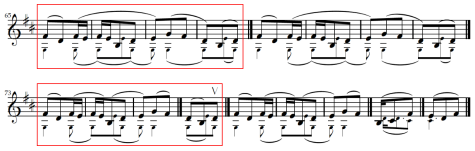	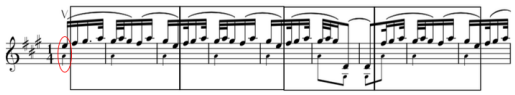
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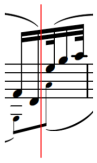	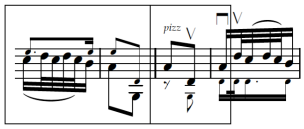
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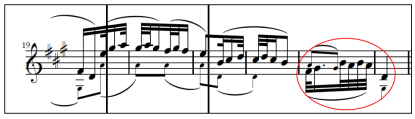	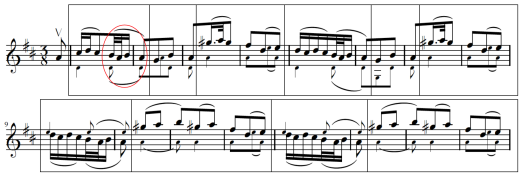
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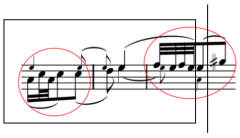	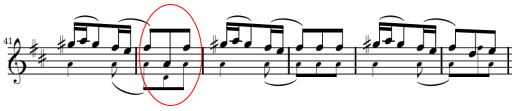
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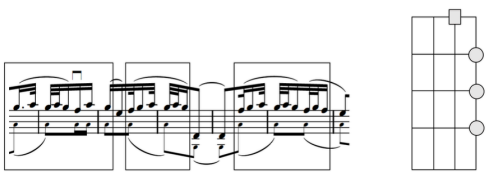	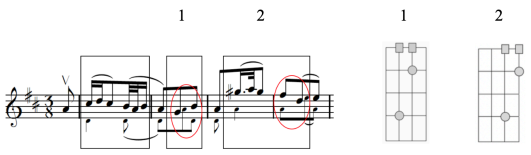

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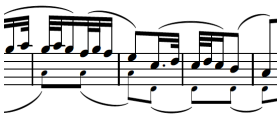

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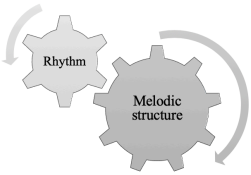


71

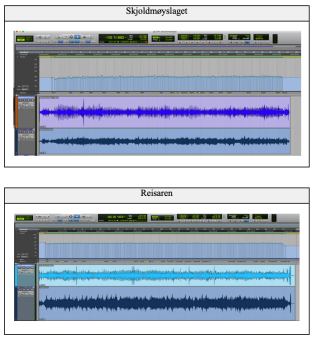
Name of tune	Time and place	Recorded by	Coll. no.	ID
Skjoldmøyslaget	1950s, at Heimigard	Olav or Grunde Rysstad	181	9124
Reisaren	1950s, at Heimigard	Olav or Grunde Rysstad	181	9109

72

Name of tune	Time and place	Recorded by	Reference
Bestelanden	1973, at Rysstad	Jan-Petter Blom and Gunnar Stubseid	(Bjørgum & Sandén - Warg, 2015)

73

74



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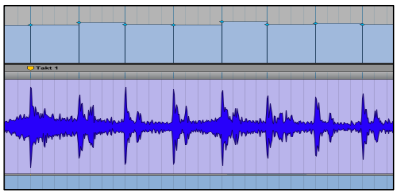

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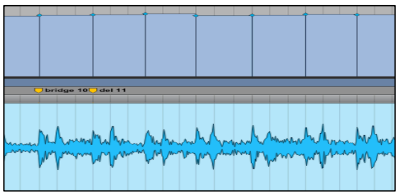


77

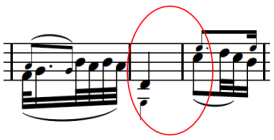
Foot stomp placements in Skjoldmøyslaget

Bars	1				2				3				4				5				6			
F. 1	x				x				x				x				x				x			
F. 2		x				x				x				x				x				x		

Foot stomp placements in Reisaren

Bars	1				2				3				4				5				6				7			
F. 1	x				x				x				x				x				x				x			
F. 2		x				x				x				x				x				x				x		

78



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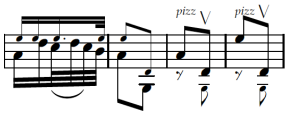


80

Rhythmic figures in *Skjoldmøyslaget*

Bars	1				2				3				4			
F. 1	x				x				x				x			
F. 2		x				x				x				x		
B. shft	x						x				x				x	

Rhythmic figures in *Reisaren*

Bars	1				2				3				4				5			
F. 1		x				x				x				x				x		
F. 2			x				x				x				x				x	
B. shft	x	x		x		x	x	x	x			x	x			x		x		

81

Bow units in *Skjoldmøyslaget*

Bars	1				2				3				4			
F. 1	x				x				x				x			
F. 2		x				x				x				x		
B. shft	x						x				x				x	

Bow units in *Reisaren*

Bars	1				2				3				4				5			
F. 1		x				x				x				x				x		
F. 2			x				x				x				x				x	
B. shft	x	x		x		x	x	x	x			x	x			x		x		

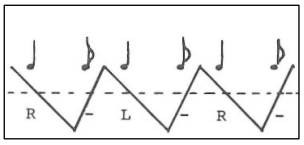
82

Bow units in Skjoldmøyslaget									Numbers
1	x						/	/	6 (8)
2	x								4
3	x	x	/x	/x					1+1 (1+1+1+1)
4	x			x	x				3+1+2
5	x								2
6	pz								2

83

Bow units in Reisaren														Numbers
1	x		x		x	x								2+2+1+1
2	x	x												1+2
3	x		x		x			x						2+2+3+2
4	x		x											2+1
5	x													3
6	x		x					x			x			2+5+3+2

84



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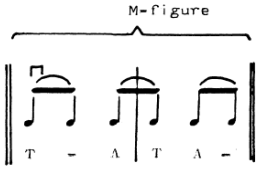	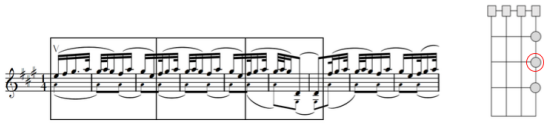
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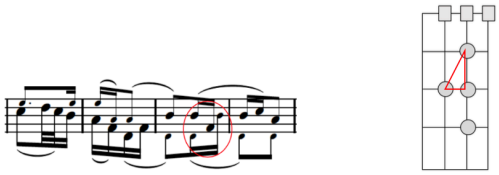	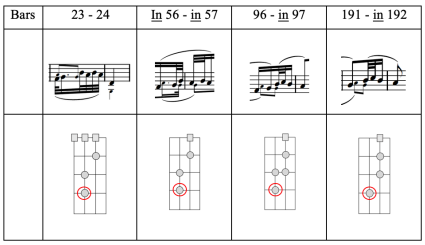
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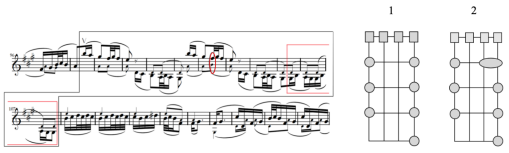
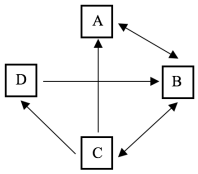
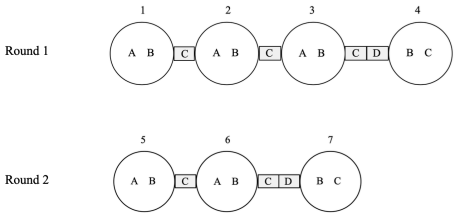
	Round 1: A-A-B-A-B-C-B-A-B-C-A-B-A-A-A-A-B-A-B-A-B-C-D-B-C Round 2: B-A-B-A-B-C-A-B-A-B-A-A-B-A-B-A-B-C-D-B-C
91	**92**
	

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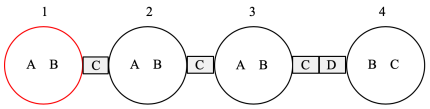	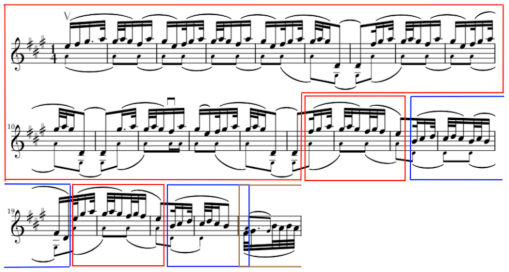
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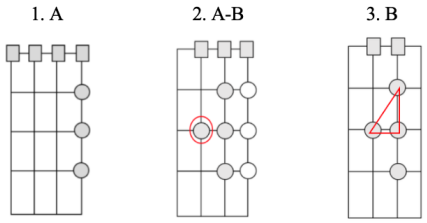	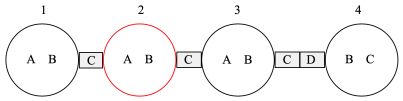
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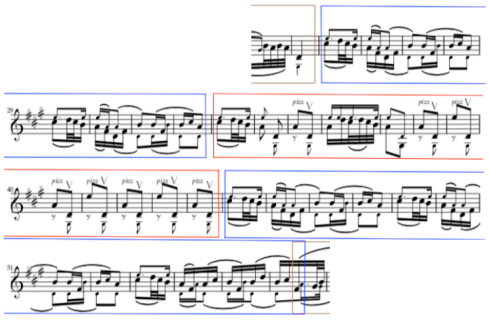	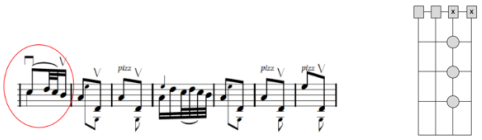
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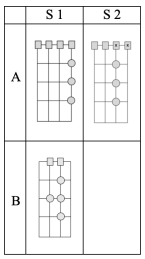	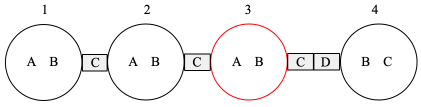

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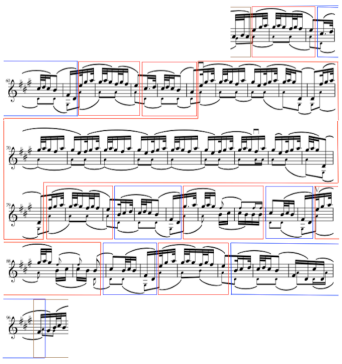	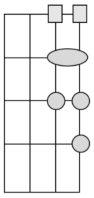
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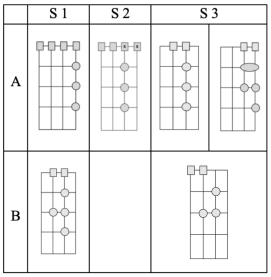	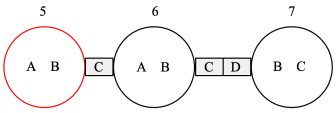
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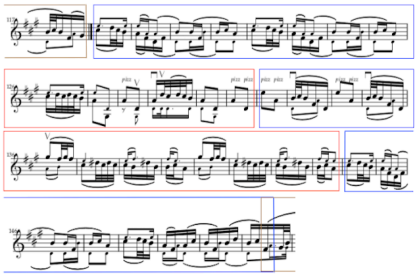	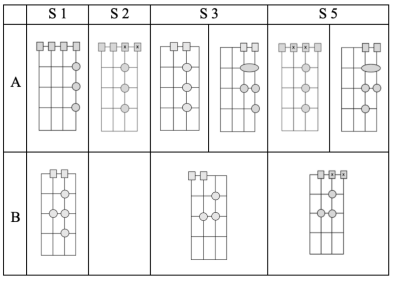
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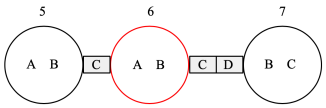	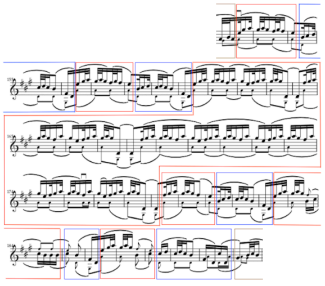

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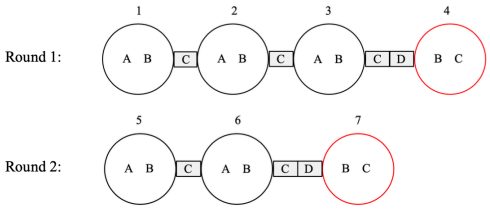	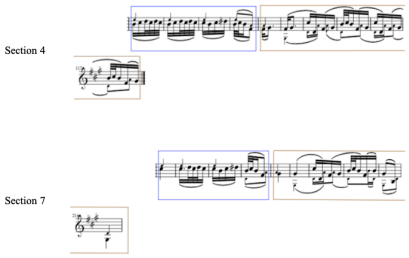
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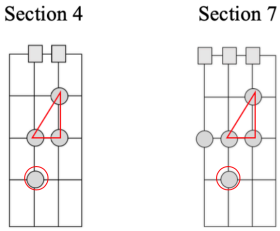	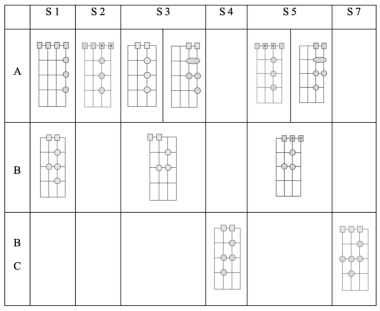
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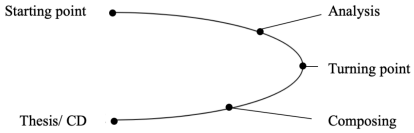	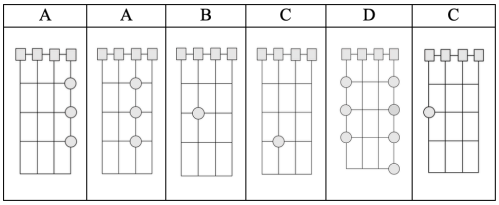
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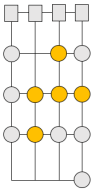	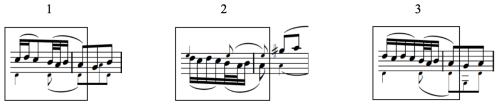

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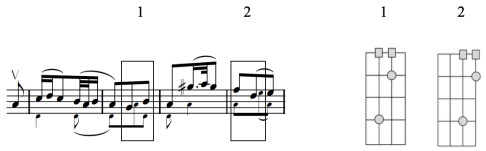	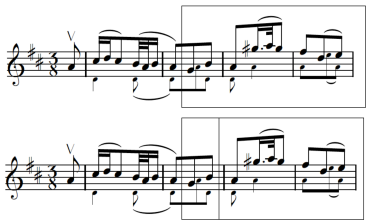
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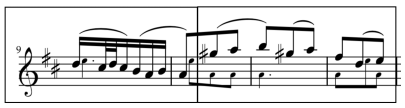	
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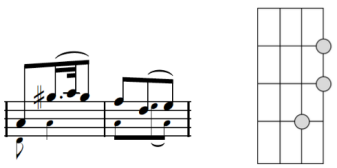	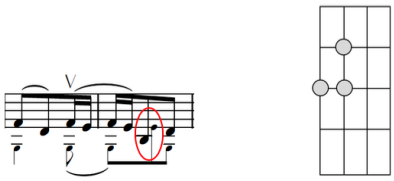
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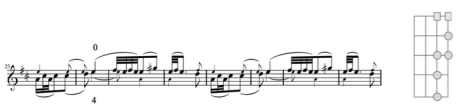	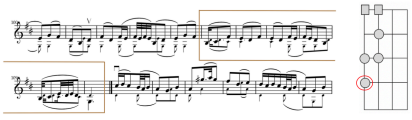

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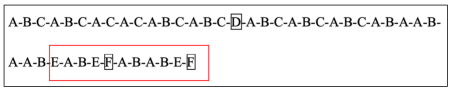	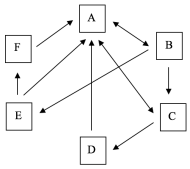
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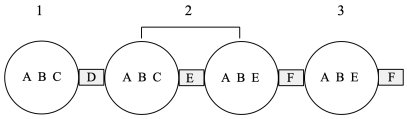	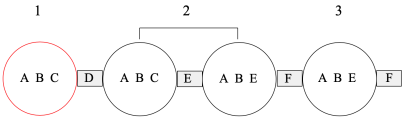
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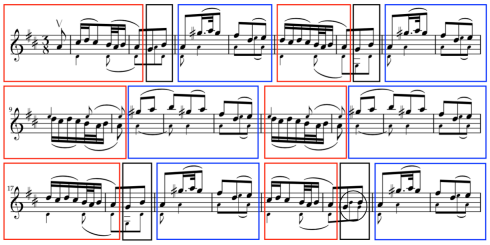	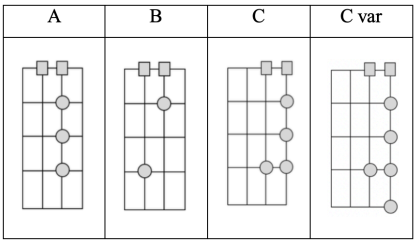
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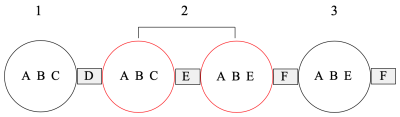	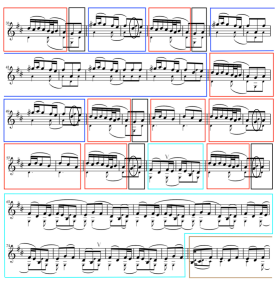

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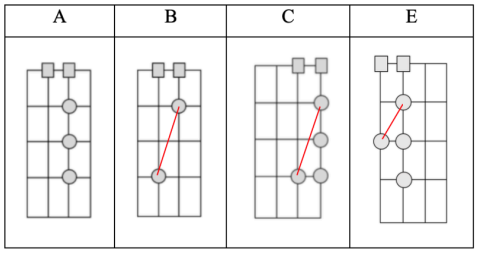	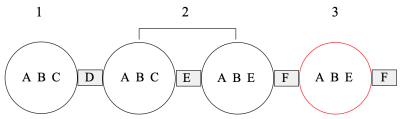
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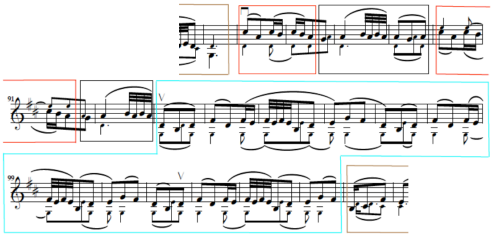	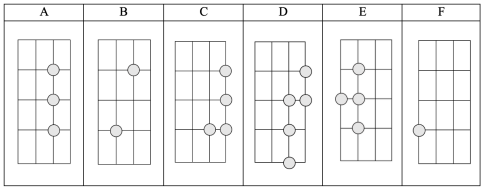
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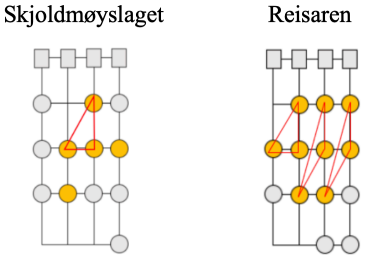	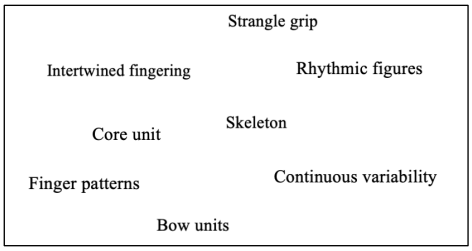
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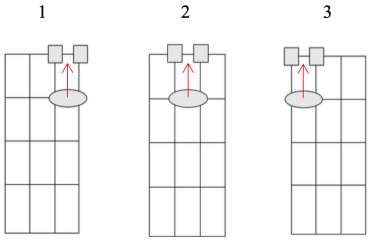
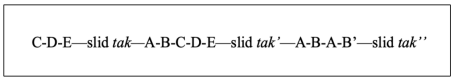
	

141

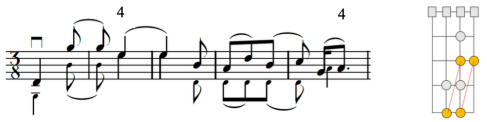
F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
Lyrics							a		t		c		d	e		f			t		

F. 1	x			x			x			x			x			x			x		
F. 2		x			x			x			x			x			x			x	
Lyrics		a	t	w			f					r	f		a	s					

142

1. period with lyrics—instr.—2. period with lyrics

143

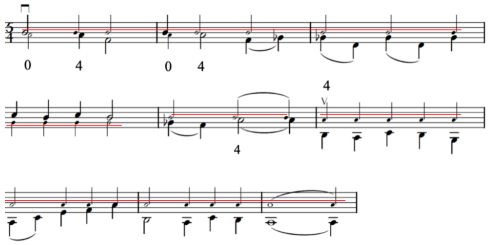


144

Round 1: A-B-A-B'-A-C-D-E-F-E-A-B-A-B'-G-A-C-D-H-I-J

Round 2: A-B-A-B'-A-C-D-E-F-E-A-C-D-H-I-J + tail: G-A'

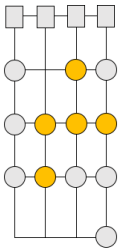
145



146

Intro—A-A-B-C-D-E-F-G-A—tail

147



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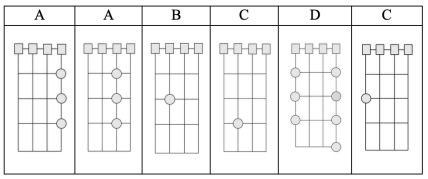
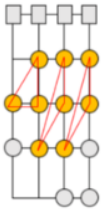
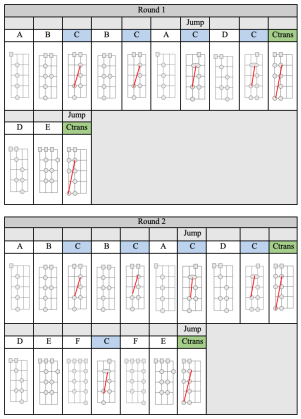


149	150
Bow units in *Prince purple* Bars 1 2 3 F. 1 x x x x x x x x x x x x x x x x B. shft x x x x x x x x x x x x x x x x	A-A-A-B-C-B-D—A-A-B-C-B-D—instr./ solo—A-A-B-C-B-B-D
151	152
	v1—instr.—v2—v3—interlude—v4—tail
153	154
Round 1 A B C C C D E C Round 2 A B C C C D E F C	

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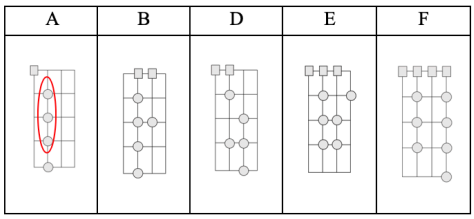
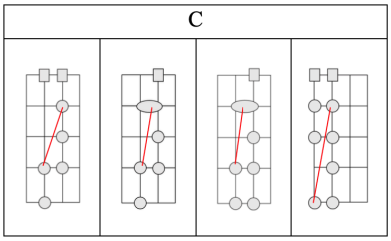
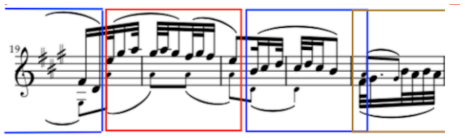
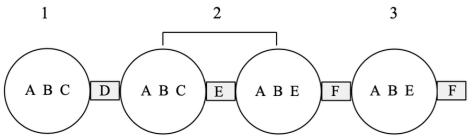
	
157	**158**
	

Appendix G. CDs and DVD

CD 1: ANDRES RYSSTAD

1. Skjoldmøyslaget
2. Skjoldmøyslaget slow
3. Reisaren
4. Reisaren slow

DVD: ANDRES RYSSTAD

1. Bestelanden

CD 2: JANUS

1. Strangled stranger
2. The clock is ticking
3. Unit 1
4. Intertwined
5. Amazon
6. Prince purple
7. A silver spoon
8. Mr. Snaky