



Polska Travels: Composing (at) the Crossroads

In search of an itinerant musical home



KRISHNA NAGARAJA

EST 60

MuTri Doctoral School

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Abstract

This thesis summarises and disseminates the findings of my artistic doctoral project *Polska Travels*, which applies the practice of composition and arrangement to the hybridisation of several musical genres, with folk music from Sweden, Finland, and Norway and Western art music as points of departure. The research studies the history of the *polska* tune family from its late renaissance and early baroque origins to the development of modern-day local variants, using the collected knowledge as the basis for original compositions and arrangements.

The geographical areas where the *polska* prospered and still thrives today provided the themes for a series of four concert programmes and one CD recording, presented for the fulfilment of the doctoral degree. My last doctoral composition, *Stringar* for string quartet (2020), is taken here as a case study to provide an example of how and where a specific folk repertoire – the music for the Norwegian Hardanger fiddle – can meet and permeate elements as foreign as progressive metal, Indian rhythms, and Western contemporary art music techniques. Each of the three movements in the quartet stems from a particular type of *springar* (a Norwegian relative of the *polska*), the boundaries of which it surpasses by stretching the inner characteristics of the tunes, reaching out to new territories.

Stringar constitutes the most relevant artistic answer to the research question of how to compose a “musical home” at the crossroads of different elements and influences. The interstitial space between disciplines and genres is the ground where composition is used as a research method to create a hybrid musical language that connects differences and transcends them. The research methodology is interdisciplinary: fields such as ethnomusicology, music theory, historically informed performance practice, and contemporary composition interact to generate common strands that are marshalled to gather the necessary knowledge for the foundation of the artistic outcomes. The outcomes themselves are transcultural, or hybrid, in that they aim to access a deeper level of dialogue between “Others”; various elements are synthesised into a personal, hybrid type of composition, which values the collected interdisciplinary knowledge as its foundation.

Based upon these premises, the findings of my research advance the idea of *Stringar* as a *temporary* musical home, and of the compositional process as an *itinerant* musical home. These artistic spaces are shaped through the agency of a *personal tradition*,

wherein the individual composer and the surrounding bodies of knowledge are constantly negotiating their respective identities. By describing the construction of *Stringar* and explaining the reasons behind my artistic choices, I show how the composition answers the research question and contributes to the growing research that establishes connections between different musical fields and disciplines. With the present thesis I place the composition itself and the full doctoral project in the framework of academic artistic research, with the intention of expanding the concept of “contemporary music” into a broader, genre-free means of artistic expression.

Keywords: *artistic research, musical home, hybridity, interdisciplinarity, folk music, contemporary music, composition, polska, springar*

Tiivistelmä

Tämä tutkielma kertoo taiteellisen tohtoritutkintoni *Polska Travels* tuloksista. Tohtoriprojektissani olen käyttänyt säveltämistä ja sovittamista erilaisten musiikinlajien ja musiikillisten tyylien hybridisoimiseen. Lähtökohtinani on ollut kansanmusiikkiperinteitä Ruotsista, Suomesta ja Norjasta sekä länsimaisen taidemusiikin perinne. Olen projektissa syventynyt *polskan* historiaan sen myöhäisen renessanssin ja varhaisen barokin aikaisista juurista aina tämän päivän paikallisiin toisintoihin saakka. Tutkimuksessa kertynyttä tieteellistä ja taiteellista tietoa olen käyttänyt uusien omien sävellysten ja sovitusteni lähtökohtana.

Ne maantieteelliset alueet, joilla polska kukoisti ja joilla se vielä nykyäänkin menestyy, tarjosivat teemat tohtoritutkintoni neljälle konserttiohjelmalle ja yhdelle CD-levylle. Viimeinen tohtoriprojektini sävellys *Stringar* jousikvartetille (2020) on tapaustutkimus, esimerkki siitä, kuinka ja missä kohtaa tietty kansanmusiikkisävelmistö – tässä tapauksessa norjalaisen hardangerviulun repertoaari – voi kohdata ja läpäistä sille niinkin vieraat elementit kuin progressiivinen metallimusiikki, intialaiset rytmit ja länsimaisen nykymusiikin tekniikat. Jokainen kvartetton kolmesta osasta nojaa tiettyntyyppiseen *springariin* eli norjalaiseen versioon polskasta, mutta ylittää sen rajapintoja käsittelemällä ja laajentamalla kappaleiden luonteenomaisia ominaispiirteitä, kurottaen uusille alueille.

Stringar on tärkein taiteellinen vastaukseni siihen tutkimuskysymykseen, kuinka ”musiikillisen kodin” säveltäminen erilaisten materiaalien ja vaikutteiden risteyksessä on ollut mahdollista. Musiikillisten tyylien ja lajien välinen tila on maaperä, jossa säveltäminen on tutkimusmetodini. Sen avulla pyrin luomaan yhteen sulautuneen musiikillisen kielen, joka toisaalta yhdistää erilaiset elementit ja toisaalta läpäisee ne. Tutkimuksen metodologia on tieteiden- ja taiteidenvälinen: esimerkiksi etnomusikologian, musiikin teorian, historiatietoisuuden esittämisen (HIPPO) ja säveltämisen kentät ovat vuorovaikutuksessa ja tuottavat tietopohjan taiteellisten komponenttien luomista varten. Taiteelliset tulokset itsessään ovat transkulttuurisia tai hybridisiä: ne pyrkivät pääsemään syvempään dialogiin ”Toisten” kanssa; moninaiset elementit sulautuvat persoonalliseksi, hybridiseksi säveltämisen tavaksi, joka arvostaa kerättyä monialaista tietoa, taitoa ja ymmärrystä lähtökohtanaan.

Näiden lähtökohtien pohjalta tutkimukseni määrittelee *Stringarin väliaikaisena* musiikillisena kotina ja säveltämisen prosessina, joka on *mukana kulkeva* musiikillinen

koti. Nämä taiteelliset tilat muotoutuvat *omakohtaisen perinteen* kautta. Siinä säveltäjä ja häntä ympäröivät tietämysten kokonaisuudet muokkaavat jatkuvasti uudelleen omia identiteettejään. Samalla kun kerron Stringarin rakentumisesta ja taiteellisten valintojeni perusteluista, näytän miten säveltäminen vastaa tutkimuskysymykseen ja osallistuu siihen kasvavaan tutkimukselliseen keskusteluun, joka luo yhteyksiä erilaisten musiikillisten alojen ja perinteiden välille. Tämän tutkielman avulla sijoitan säveltämisen itsensä ja koko tohtoriprojektini taiteellisen tutkimuksen kentälle, tavoitteenani laajentaa ”nykymusiikin” käsitettä genrevapaan, laajemman taiteellisen ilmaisun suuntaan.

Asiasanat: *taiteellinen tutkimus, musiikillinen koti, hybridisyys, taiteiden- ja tiedeidenvälisyys, kansanmusiikki, nykymusiikki, säveltäminen, polska, springar*

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Caminante, son tus huellas
el camino y nada más;
Caminante, no hay camino,
se hace camino al andar.
Al andar se hace el camino,
y al volver la vista atrás
se ve la senda que nunca
se ha de volver a pisar.
Caminante, no hay camino
sino estelas en la mar.

(Antonio Machado)

Traveler, your footprints
are the only road, nothing else.
Traveler, there is no road;
you make your own path as you walk.
As you walk, you make your own road,
and when you look back
you see the path
you will never travel again.
Traveler, there is no road;
only a ship's wake on the sea.

(Translation by Mary G. Berg and Dennis Maloney)

1 Introduction

1.1 Thesis framework

The present thesis describes the research undergone for the composition of my last doctoral component, the string quartet *Stringar*, connects it to the overall scheme of the *Polska Travels* project, analyses the piece as a case study to suggest possible answers to the research question, and elaborates final reflections pulling the threads of the six-year-long artistic process. The overall form of the work presents a tripartite structure, wherein the study of the composition in chapters 3, 4, and 5 is preceded by a theoretical contextualisation in the first two chapters and followed, in the last one, by an argumentation on the relevance and the implications of *Stringar* within the scope of the doctoral project. The central analytical chapters constitute the core of the monograph, retrospectively correlated to the beginning and at the same time preparatory to the conclusions. The text is best read following the current order of chapters and sections by cause of the multiple cross-references that connect the several parts. Nevertheless, due to the variety of topics included the reader may wish to extract individual sections for separate reading, while keeping in mind their relation to the general context.

The background of both the research and the researcher, and the placement of the project within the academic framework are presented in this Introduction, along with a description of the *Polska Travels* doctoral process, the research question and methodology, and the focus of the thesis. Chapter 2 unpacks the historical and musicological context at the basis of the research, problematising in 2.1 the central theme of the folk and art music terminology, as well as the complex relationship between the two realms informing the very heart of my doctoral production. After a summary of the conceptualisation of the terms during the 18th and 19th century, the category of “popular” music is added and the discourse is further expanded into the 20th century, with a particular mention of the ethnomusicological work of Béla Bartók. The overview continues with the impact of the late 1900s folk revivals, the institutionalisation of folk music, the current takes on the concepts of folk and traditional, and ultimately a personal insight about how the two forces intertwine in my artistic view.

The purely historical and musicological section is completed in 2.2, where the origins and developments of the polska during late Renaissance and Baroque times are described, and local variants are examined in their general characteristics; the main folk

music form featured in the thesis, namely the Norwegian *springar*, is introduced here. Chapters 3, 4, and 5 are dedicated to a detailed study of each movement of the *Stringar* quartet. The analytical sections are preceded by a description of the specific *springar* type used in the movement, as well as of the other musical influences at play in the piece. For instance, 3.2 and 3.3 deal with the importance of progressive metal and Indian rhythms in the composition of the first movement; 4.2 and 4.3 shed light on the issue of asymmetrical metres, and their notation and study in modern folk research; 5.2 presents the characteristics of the Norwegian fiddle, or Hardanger fiddle, whose repertoire forms the basis of *Stringar*. Section 6.1 provides a summary of the complete thesis, followed by my reflections concerning the ways in which the artistic outcome responds to the research question and reveals my position in relation to the folk traditions I studied and used. The ideas disseminated throughout the whole work are then collected and elaborated into personal conclusions and wishes for future research.

The innermost interdisciplinary nature of my project addresses several research areas and unpacks a diversity of practical and intellectual topics. Nonetheless, for lack of space and need for focus, some of the underlying subjects are either briefly touched upon or not addressed in the present thesis. The post-colonial theory of the “third space” (Bhabha, 1990) is mentioned later in 1.3.1 as a referential field for the attempted qualification of *Stringar* as hybrid music: nevertheless, due to the far-reaching ramifications into the field of postcolonial studies, an in-depth literature review on the subject and its cultural and political implications is not included in these pages. The answer to the research sub-question regarding the categories of folk and art music (see 1.4) refers to a broad cultural discourse which is partly described in section 2.1; the discussion on the complex relationship between nationalism and folk/art music is, however, left out of the thesis framework. Lastly, a documentation and reflection on the rehearsal and performance practices adopted during the doctoral project is also omitted, despite their significant role in the realisation of the concerts and recording. Other issues were raised by the research, without possessing enough pertinence to this thesis to be included in its pages; due to their importance, they are nonetheless mentioned in the concluding chapter among the suggestions for future research projects.

1.2 Personal background

My research is situated within the framework of the Folk Music Department at the Sibelius Academy in Helsinki, Finland. My first contact with what is nowadays termed folk music, however, did not take place until a rather late stage in my life. After spending my childhood years listening to various musical genres, I showed enough signs of musical talent to convince my schoolteacher that I should take up an instrument. The choice fell on the violin, and at thirteen years of age I started my long, still unfinished training in Western art music. While on that path, though, I was continuously side-tracked by discoveries such as heavy and progressive metal, or vocal, choral, contemporary, and baroque music. The more I explored new areas of music-making, the more my curiosity grew; I found myself involved in a diversity of roles I could not have imagined at the beginning of my violin studies, acting as singer, vocal percussionist, a-cappella coach, choir conductor, arranger, and composer.

Only towards the end of my violin degree did folk music present itself in my musical path, in the form of Irish fiddling. From the very first exposure, I was so enraptured by its rhythmic, eloquent, poetic, deep, and raw character that I inevitably found myself immersed in the study and practice of my new passion. Many other doors were subsequently opened by that encounter, including one that ultimately led me to Finland and the many endeavours that I pursued in some of the Nordic countries: when I first listened to Swedish *polskas*, Finnish *runolaulu*, and the Norwegian *hardingfele*, I instantly knew that the impact of this type of folk music would irreversibly change my artistic development.

As my eager ears were absorbing more and more material, engagements with Italian groups playing Swedish and Norwegian music started materialising; my fascination for those cultures was also fuelled by several trips to Sweden, where over the years I became increasingly acquainted with the local folk and choral culture. Meanwhile, I attended a course of studies in baroque violin and viola, delving deep into the Historically Informed Performance Practice. The much-discussed term H.I.P.P. refers to a musical approach that devotes great attention to the performance conventions that were in place when a piece of music was composed, and values the use of historical instruments (or their replicas) from that time. Its emphasis on practice facilitates the embodiment of the historical knowledge into current, live performance acts. At its peak during the 1980-90s, it has now become an established field of specialised musical practice and research,

stirring debates around the concepts of authenticity and questioning the pre-existing romantic and modernist fashions of playing early music.¹

My pursuit of a career as a freelance baroque viola player caused a slight reduction of my involvement in other musical areas, which however remained dormant until, after some years, my eager musical being began looking for different horizons again. The chance to enter another phase arrived when I discovered and joined the Global Music Master Degree (Glomas) at the Sibelius Academy. The seeds of my doctoral research were planted during those Glomas years, largely devoted to the study of the *polska* tune type and investigating possible bridges between my two great passions – folk and baroque music – in the guise of my first arrangements of Nordic folk melodies. The work I undertook for my Master’s studies had its natural continuation in the artistic doctoral research of which the present written work is the final act.

1.2.1 The polska and me

The object of my *Polska Travels* doctoral research project *is* and *isn’t* the polska. My fascination for this folk tune type might be related to my predilection towards the two periods in music history where its origins can be traced, namely the Renaissance and early Baroque. Moreover, I am deeply intrigued by the diversity of the polska phenomenon: each country, area, district, and even village (especially in Sweden and Norway) imbues the same polska-roots with different characteristics, combining them with local features and contributing to a unique “musical biodiversity” distinguished by dozens of local polska variants. Any research on the polska necessarily addresses several fields, due to the polska’s transversal influence on both high and low social classes, neighbouring and distant European countries, as well as bygone and contemporary generations of musicians. The exquisitely musicological part of my research investigates the early stages and subsequent developments of the polska through time and geographical areas; in this sense, polska *is* indeed the research object.

There is, however, a deeper level of attraction between the polska and me. The polska seems to balance its strong, recognisable identity with a perpetual process of transformation and adaptation. Like a restless traveller, it moves across borders and

¹ See Bruce Haynes, *The End of Early Music: A Period Performer’s History of Music for the Twenty-First Century* (Oxford University Press, 2007), 14.

territories, longing for home and yet venturing beyond it, suggesting that home is something that is carried inside, not looked for outside. To a certain extent, in this metaphor I recognise my own story, so that researching the polska became in a way researching a part of *myself*. The process therefore revolves around the polska *and* me: the artistic dialogue I entertained throughout the doctorate with the polska as my interlocutor is woven through the creative works I produced and performed, ranging from arrangements of folk tunes in baroque style to entirely new compositions based on folk elements such as *Stringar*, the string quartet analysed in the present thesis and inspired by Norwegian folk music related to the polska.

1.3 Artistic research framework

My doctoral project is undertaken inside the field of artistic research, an area of academic research defined by Finnish philosopher Juha Varto in this way:

Artistic research [...] takes place at universities of the arts and has the same goals as any research on science, arts, or ethnology: to produce information, develop skills, and add understanding about the world and the human beings as part of it.²

Academic artistic research, Varto continues, emphasises the importance of an epistemological, methodological, critical, and ethical approach, and requires artistic *practice* as a precondition.³

My research focus is the space wherein several musical genres or elements can interact and provide the foundations for the creation of new compositions which are no longer the simple result of juxtaposition, mixing, or blending, but rather aim at achieving a personal synthesis of the different influences and produce a hybrid entity. As a researcher active in the field of composition, this process is fundamental for me to the construct a personal *musical home*, intended as an ideal place where, despite its constant development and reorientation, I can safely recognise my artistic identity. In recent years, artistic research has increasingly offered an academic framework within which projects exploring the interaction between cultural discourses can be developed: the next four sections 1.3.1 to 1.3.4 will clarify some of the most crucial concepts related to interdisciplinarity, offer some examples of interaction between folk and baroque music

² Juha Varto, *Artistic Research: What Is It? Who Does It? Why?*, Aalto University Publication Series. Art + Design + Architecture 6/2018 (Espoo: Aalto University, School of Arts, Design and Architecture, Department of Arts, 2018), 10.

³ Ibid., 10.

in the H.I.P.P. environment, provide a survey of cross-genre artistic endeavours with characteristics relevant to my research, and describe my point of departure in the *Polska Travels* doctoral project.

1.3.1 Interdisciplinarity and hybridity in the research project

A reflection on how different musical elements can communicate with each other within the framework of a single arrangement or composition lies at the roots of my research. The unfolding of this relationship is reminiscent of the complex interaction between individualities and collectivities, a central characteristic of folk music traditions that has been widely investigated in anthropological and humanistic studies. In his book *Facing the music* (2009),⁴ music education professor Huib Schippers describes a four-stage continuum where this negotiation varies from “monoculturality” (one dominant culture as the only reference frame) to “multiculturalism” (the coexistence of separate different strands of culture), then to “interculturality” (different strands loosely interacting), and finally to “transculturality” (significant, deeper level of interaction).

Applying this model to the use of multiple disciplines and genres in my research, I can define my approach as *interdisciplinary* and *inter-genre*, in that several areas are addressed within the single framework of the doctoral project in order to produce the artistic outcomes through an interaction whose composition varies in the different instances of the doctoral process. For instance, musicology, history, and music theory are often used interdisciplinarily, since the gathering of the scholarly knowledge preceding the realisation of the artistic outcomes touches on areas where their respective specificities intersect.

The interaction of musical genres, however, addresses a deeper creative level in that it is directly involved in the composition of the doctoral music itself. Different genres and elements are conflated in a quest for a more transformative, *transdisciplinary* outcome, which requires more nuanced solutions in order to frame the field where my doctoral compositions – especially *Stringar* – can be appropriately placed. The currently available terminology offers a variety of answers to the question of how to define my pieces: instead of the term “cross-over”, often controversial for its entanglement with

⁴ Huib Schippers, *Facing the Music* (Oxford University Press, 2009), 30–31, <https://doi.org/10.1093/acprof:oso/9780195379754.001.0001>.

cultural appropriation, “cross-genre composition” (Penderbayne, 2018)⁵ seems a more viable alternative. This expression, though, still relies too much on the very idea of clearly identified musical genres that I seek to avoid, in the attempt to create pieces that stem *from* genres but essentially elude their categorisation (and cross-categorisation, such as “folk-baroque”, “folk-contemporary”, and similar).

I argue that the concept of “hybrid” composition is better suited to my case, as it invokes a dialogic field similar to the “third space” proposed in the early 1990s by the Indian post-colonial theorist Homi Bhabha concerning cultural interaction:

But for me the importance of hybridity is not to be able to trace two original moments from which the third emerges, rather hybridity to me is the ‘third space’ which enables other positions to emerge.⁶

This idea is increasingly well received by researchers who adopt a transcultural approach where differences are intentionally used as positive material in the creative process, therefore positioning their artistic outcomes in the space of *hybridity*. I also define my research area as “interstitial” in the sense proposed by Bhabha as a “passage between fixed identifications”, which “opens up the possibility of a cultural hybridity that entertains difference without an assumed or imposed hierarchy” (op. cit., 4).⁷

Australian-born artistic researcher and performing musician Nathan Riki Thomson is active in transcultural contexts and receptive of Bhabha’s conceptualisations. Riki Thomson outlines the four phases he went through in his musical life, carried out in disparate parts of the world (Australia, Africa, and Europe):

Phase One: being seduced by ‘exotic’ musical cultures and wishing I had somehow been born into them.

Phase Two: trying to learn as much as I could about these cultures and somehow get close to playing their music.

Phase Three: accepting that I may be inspired by these different cultures, but I will never be able to fully integrate into the culture or play the music in the same way as someone who had been born into that culture.

⁵ Samuel John Penderbayne, ‘Cross-Genre Composition: Encoding Characters in the Chamber Opera I.Th.Ak.A. with Semiotic Elements Derived from Commercial Music Genres’ (PhD dissertation, Hamburg, University for Music and Theatre, 2018), 68.

⁶ See the interview to Homi Bhabha in Jonathan Rutherford, *Identity: Community, Culture, Difference* (London: Lawrence & Wishart, 1998), 211.

⁷ The adjective is also used in biology to characterise a fluid or tissue situated in between the cells: see ‘Interstitial Fluid - Definition and Examples - Biology Online Dictionary’, Biology Articles, Tutorials & Dictionary Online, 7 October 2019, <https://www.biologyonline.com/dictionary/interstitial-fluid>.

Phase Four: The formation of an emerging artistic identity informed by my experiences, through intercultural dialogue and transculturality.⁸

The progression from initial attraction to thorough study of a musical culture, recognition of personal individuality, and finally to the creation of a new identity gained through the contact with the culture, mirrors the overarching structure in my own doctoral project, wherein my knowledge of the polska tradition grew parallel to the awareness of my specificity as an artist who incorporates multiple influences. The boundary between specific identities and the diversity that surrounds them is approached from the perspective of musical creations which might be seen as the compositional equivalent of Riki Thomson's "intercultural dialogue and transculturality", exploring the ongoing negotiation between folk traditions and different elements.

1.3.2 Baroque music: folk-inspired approaches

Blending different musical genres such as folk, art, popular music, and others is an artistic practice that nowadays operates at several levels. From my exposure to the H.I.P.P. scene, for instance, I noticed how the number of baroque musicians who incorporate folk music elements in their playing or musical programmes has certainly been on the rise since at least the 2000s. Baroque and folk music (especially Scottish, Irish and, more recently, Polish) are considered by many to be neighbouring fields: their closeness has inspired several projects where the fusion is realised at the level of the performance style. Adding articulations, ornaments, sound effects, instruments, and groove borrowed from folk traditions seems to have become part of the early music specialist's approach to playing folk-related baroque pieces.⁹

For example, the evocative world of Vivaldi's *Four Seasons* is a notoriously favourite playground for many baroque groups to experiment with, exposing the score to borrowed influences such as tango, contemporary music, or an imagined idea of folk. The latter is the case for a recent release by Finnish group Barocco Boreale entitled [Folk](#)

⁸ Nathan Riki Thomson and Otso Lähdeoja, 'Forming a Sonic Identity through the Integration of Transculturality and Technology', *Body, Space & Technology* 18, no. 1 (12 March 2019): 44, <https://doi.org/10.16995/bst.316>.

⁹ The opposite approach, namely the application of the baroque performance style to the historical repertoire of folk melodies, has been used by the Swedish fiddler Anders Rosén, among the first to strive for a historically oriented practice of old Swedish polskas and minuets. The first of his two recordings on the history of the polska focused on its late Renaissance origins: cf. Convivium Musicum, *Ställer an En Polskner Dans – Polskans Historia I*, LP (Folia Skivproduktion – KRLP-5, 1985). The follow-up LP was devoted to the early baroque period: cf. Convivium Musicum, *Opp Med Snälla Snabba Fötter! – Polskans Historia II*, LP (Folia Skivproduktion – KRLP-6, 1988).

[*Seasons*](#).¹⁰ Some artists seem to venture further and revisit baroque pieces with playing styles that are not immediately (or at least generally) related to the composer in a philological sense. One of the many notable examples of this folk accentuation in baroque music is [*Bach på Svenska*](#)¹¹ by Swedish violinist Lisa Rydberg and organist Gunnar Idenstam. The profile of a baroque-folk musician,¹² versed in both genres and pursuing a sort of cross-genre playing style, has gained ground and reputation in recent years, and led to achievements such as – to name a few – François Lazarevitch’s [*For ever fortune*](#),¹³ interpreting anonymous Scottish melodies, and Paweł Iwaskiewicz’s [*Telemann’s Poland*](#),¹⁴ based on Telemann’s Rostock manuscript TWV45.

Apart from these valuable and pioneering works of juxtaposition or blending of the two elements, I noticed within the early music environment a certain lack of examples that explored the performance practice of folk music with a matching level of depth and rigour to that applied to its baroque counterpart. Furthermore, even when this was realised very rarely did the approach venture beyond mere folk music quotation or stylistic performance reference. I have experienced instances where baroque music seemed to turn to folk music mostly to solve its inner problems of survival in a growingly saturated musical marketplace, not dissimilarly from the romantic and early 20th-century attitude of “aestheticizing the folk”¹⁵ and its use as a revitalising cordial for the art music establishment. The restyling or renewal of baroque music is certainly a legitimate concern: however, the so-called folk-baroque experiments sometimes show a tendency to overlook a thorough study of the folk element, which would instead allow a proper musical inter-genre dialogue. Regrettably, a certain fashionable use of folk or non-classical genres that only investigates the surface of the phenomenon is, in my observation, often the case.

¹⁰ Kreeta-Maria Kentala and Barocco Boreale, *The Folk Seasons* (Alba Records – ABCD-402, 2017).

¹¹ Lisa Rydberg and Gunnar Idenstam, *Bach På Svenska* (Gazell – GAFCD-1092, 2007).

¹² The reversed denomination “folk-baroque” is commonly – and revealingly – used. Besides the problematic order of the terms, suggestive of a hierarchy that most often is invalidated by the predominance of the baroque influence, the expression bears potentially misleading connections to the unrelated “folk baroque” guitar style developed in England in the 1960s.

¹³ François Lazarevitch, Les Musiciens de Saint-Julien, and Robert Gretchell, *For Ever Fortune – Scottish Music in the 18th Century* (Alpha Classics – ALPHA-531, 2012).

¹⁴ Paweł Iwaskiewicz and Orkiestra Czasów Zarazy, *Telemann’s Poland* (Ayros – AY-CD01, 2017). Whether the tunes in the manuscript are Telemann’s invention or transcriptions of melodies he heard in Poland is not certain. For Telemann’s importance in the affirmation of the Polish style in baroque music, see 2.1.1.

¹⁵ Cf. Matthew Gelbart, *The Invention of ‘Folk Music’ and ‘Art Music’: Emerging Categories from Ossian to Wagner* (Cambridge, UK; New York: Cambridge University Press, 2007), 191. See 2.1.2 for a survey on the “folk” and “art” music categories in the 19th century.

Baroque music, in a way, can be seen as a kind of extended living tradition, in that it stems from a style whose line was abandoned to music history but has now been rediscovered and revisited; both of these operations require a re-contextualisation – and consequent transformation, to varying degrees – of baroque music in our contemporary world, to avoid its relegation to mere archaeological status. Baroque music is inherently actualised by every performer, just like folk traditions are reshaped by every rendition a fiddler gives of a tune. My belief is that, when this is valued as the centrepiece of the musical blending, a valid foundation for its solidity is secured.

However, the interaction between different types of music proposed by my research is different, since it is realised primarily at the level of the conception of the music itself, with the various influences providing basic material and inspiration for new pieces which, ultimately, are self-standing personal creations. Intervening directly at the source of the musical piece allows more freedom to incorporate new components and to mould the musical work into shapes that respond to the artistic need of combining folk music with elements external to it.

1.3.3 Contemporary music: hybrid approaches in Artistic Research projects

From Georg Philipp Telemann to Béla Bartók, from Edvard Grieg to Lars Petter Hagen (see 1.6.3 for further names of contemporary composers), Western art music history provides many examples of compositions that incorporate folk traditions or combine them, to various degrees, with other genres.¹⁶ Moreover, composing music that crosses boundaries is a topic that has entered artistic research especially in the last decade: the remainder of this section overviews some examples of this strand, whose contents resonate with aspects of my own project.

The already quoted work by Samuel Penderbayne (2018) explores the ideology of cross-genre composition, mixing elements from the commercial music genres with contemporary music in the chamber opera *I.th.A.K.A.* Penderbayne reflects on the concept of the musical genre, contextualises the implications of intercultural exchanges within a discourse influenced by post-colonialist thinkers such as Homi Bhabha, and suggests a

¹⁶ Among the Swedish 18th-century composers who used folk melodies in their compositions, court violinist Anders Wesström (1720–1781) composed a sonata for violin and cello whose last movement is a set of variations on an old Swedish polska with the interesting title “Polonesse Suezeso”, where the influence of his Italian studies under Tartini and the emerging galant style are clearly audible.

definition for the cross-genre ideology as the attainment of a compositional border zone that translates Bhabha's theories of the "third space" into music:

However, with a composer, a third option becomes available through the creation of new music: 'crossing' genres, like the process 'cross-fertilisation' in plants or 'cross-breeding' in dog breeds. The listener cannot perform this, since they only consume, however the composer can produce a 'cross-genre' music through their creative process. Therefore, the cross-genre approach applies the idea of omnivorous cultural tastes to the creation of new artistic work and demonstrates a third path unique to the creative process: cross-genre.¹⁷

Considerations of the ideas of genre and hybridity in composition can be found in the introductory chapter of Jonathan Dimond's PhD thesis 'Folio of Compositions with Critical Commentary: An exploration of intercultural influences in contemporary composition'.¹⁸ The author bases his work on the practice of combining jazz improvisation and rhythms with Western art compositional techniques, defined in 1957 by the American composer Gunther Schuller as *Third Stream*, which Dimond considers to be one of the earliest examples of hybridisation between the two genres. To these recognisable influences in his compositions, Dimond adds Asian rhythmic features such as the southern Indian art of *konnakol* (based on the vocal recitation of percussive syllables, see 3.3 in the present thesis) with its structures and techniques, and elements of Balinese drumming. The analysed pieces are deeply imbued with rhythmic asymmetries and polyrhythms; these concepts, explained in detail by Dimond, also inform the first movement of *Stringar*.

The use of *konnakol* in Western art composition lies at the basis of Timothy Dargaville's "Speaking in tongues": an investigation into a compositional practice informed by intercultural exploration',¹⁹ an artistic research project whose outcomes portray the author's involvement with Carnatic music,²⁰ referred to as "Hybrid India – Crossing the Borderland through the art of *konnakol*" (op. cit., 13). Dargaville infuses his pieces with elements taken both from southern Indian music and from Indian culture in general, including rituals and spirituality. The intercultural exchange between

¹⁷ Penderbayne, 'Cross-Genre Composition', 68.

¹⁸ Jonathan Dimond, 'Folio of Compositions with Critical Commentary: An Exploration of Intercultural Influences in Contemporary Composition' (PhD Thesis, The University of Queensland, 2019), <https://doi.org/10.14264/uql.2019.190>.

¹⁹ Timothy Dargaville, "Speaking in Tongues": An Investigation into a Compositional Practice Informed by Intercultural Exploration' (PhD Thesis, Melbourne Conservatorium of Music, 2019), <http://hdl.handle.net/11343/227619>.

²⁰ "Carnatic" and "Hindustani" refer to music from the south and north of India respectively. The two traditions however share many common elements, sometimes termed differently according to the area of provenance.

“contrasting learnings, practices and experiences” is resolved with the creation of a synergy between these forces, which ideally allows the composer’s creative mind to move between the several rooms of his own musical house with fluidity. It is worth noting that another composition by Dargaville (*Crossing the Borderland*, 2008, predating the PhD project) uses konnakol as a reference for the rhythmic architecture of the various parts of the piece, similar to the case of *Udelt takt* in *Stringar*.

Polymetries and interlocking patterns also characterise Trevor Coleman’s output for ‘Polycyclic Comprovisation’,²¹ a doctoral project that takes Indian, African, and Gamelan music as ethnomusicological points of departure, and proposes a juxtaposition of composition and improvisation into a new methodological practice that “fosters the act of improvisation upon composed cyclic motifs in varying but complementary time signatures that occur and interact simultaneously” (op. cit., 3).

Another researcher from New Zealand, Jeremy Mark Mayall, presents a “hybridity table” as a tool to overcome the problem, inherent in composing hybrid music, of the different elements not readily matching, and therefore creating possible inconsistencies in the composition. In his PhD dissertation ‘Portfolio of Compositions: Systematic composition of cross-genre hybrid music’ (2015),²² Mayall elaborates his idea of a two-sided algorithmic table, where on one side the composer lists the characteristics of each source genre according to specific parameters such as construction, form, tempo, freedom, rhythm, complexity, etc. After a comparative analysis based on this visual scheme, the other side of the table is filled with annotations concerning the strategies used to juxtapose or synthesise the elements. Mayall applies the hybridity table to the compositions in his portfolio, and explains how the structure of the pieces is based on the genre comparison generated by the compositional tool: “The resultant clarity offered by the hybridity table directs the creation of poly-genre hybrids towards equilibrium between the selected genre elements in each piece” (op. cit., 53).

All of these projects invoke hybridisation as a possible resource to resolve the broader anthropological issue of the interaction between two or more cultural discourses, as problematised, among others, by Christian Utz in his book *Musical*

²¹ Trevor Alexander Coleman, ‘Polycyclic Comprovisation’ (PhD Thesis, University of Otago, 2016), <http://hdl.handle.net/10523/6874>.

²² Jeremy Mark Mayall, ‘Portfolio of Compositions: Systematic Composition of Cross-Genre Hybrid Music’ (PhD Thesis, Hamilton, New Zealand, University of Waikato, 2015), 53ff.

Composition in the Context of Globalisation (2021).²³ The increasing degree of multiethnicity and multiculturalism in contemporary society has largely demonstrated how the contact between cultures creates a “web of entangled intercultural influences, demarcations, and connections” (op. cit., 39) where entities are anything but separated, and identities are constantly confronted with an – often quite foreign – “Other”. This translates into musical composition as a challenging yet intriguing scenario in which composers must navigate an apparently disorienting “field of possibilities”, in search of a negotiation between their own cultural self and the cultural Other.

By analysing the *Polska Travels* doctoral project, described later in this chapter, and its artistic outcome *Stringar* as case study, it is my intention to offer my work as a contribution to the field of transcultural or hybrid composition. The different hybridised cultures are represented by my diverse musical influences: primary importance is accorded to folk music from Sweden, Finland, and Norway, and to Western art music; further elements of relevance come from other areas such as progressive metal and southern Indian percussion music. My attempt at building a temporary musical home using these components as the foundation can be seen as a contribution to a widespread desire to expand the boundaries of what is commonly perceived as “contemporary music”, which in my opinion refers to the broad spectrum of music written or conceived by living artists, regardless of their stylistic collocation, and therefore questions the equation contemporary music=contemporary *art* music. This idea will be further elaborated in 6.3.3.

It is also my hope to have carried out the research in fulfilment of the principles of respect for folk music traditions which I consider fundamental in intercultural or transcultural exchange, embodied in an approach to those traditions which does not limit the scope of their use to the renewal or rejuvenation of a dominant musical genre, but synthesises them into new artistic works only after a thorough process of study and absorption.

²³ Christian Utz, *Musical Composition in the Context of Globalization: New Perspectives on Music History in the 20th and 21st Century*, Revised and expanded edition, Music and Sound Culture, volume 43 (Bielefeld: Transcript, 2021), 38ff.

1.3.4 *Polska Travels*: point of departure

Due to the innately interdisciplinary nature of the research, my point of departure is threefold, and embraces the following areas:

1. Folk music research, or the academic field that studies folk traditions from a historical, theoretical, ethnomusicological point of view;
2. Historically Informed Performance Practice (H.I.P.P.), or the approach to Western art music of the past based on the study of the history, cultural context and instruments in use during the periods when it was composed;
3. Contemporary Western art music, or a type of musicianship that is referred to and draws from the forms of compositions and performance in use in Western art music today.

Following Henk Borgdorff's tripartite view of artistic research including research *on*, *for*, and *in* the arts,²⁴ my doctoral project *Polska Travels* consists of:

- a) a study of the historical context and the stylistic characteristics of polska forms and their development (gathering knowledge of the phenomenon from a theoretical, factual, and analytical distance: research *on* art);
- b) an exploration of the necessary tools to produce the artistic outcomes (folk-inspired compositions), such as compositional and instrumental techniques (using the phenomenon as the objective rather than the object of the observation, researching crafts and skills in order to create art: research *for* art);
- c) the use of composition as a medium to articulate new musical knowledge obtained through the musical practice itself (conflating research process with research results, merging the subject/object, researcher/practice divides: research *in* art).²⁵

²⁴ See Henk Borgdorff, *The Debate on Research in the Arts*, vol. 2, *Sensuous Knowledge : Focus on Artistic Research and Development* (Kunsthøgskolen i Bergen, 2006), 6–7. A similar trichotomy was suggested by Christopher Frayling, *Research in Art and Design*, vol. 1, 1 (London: Royal College of Art, 1993). It has been picked up by a chain of researchers such as Dombois (2006), Schiesser (2015), Klein (2017), Penderbayne (2018).

²⁵ Research *in* art might be conceived as similar to research *through* art, as suggested by Frayling and explained by Penderbayne ('Cross-Genre Composition', 268): "The theory of 'research through art' supposes that an artist works in their practice with artistic knowledge – concepts, theories, experiences, understandings – and the art object articulates this knowledge better [than] any theoretic text. It is controversial because it is so highly detached from the basics of objective, declarative scientific inquiry that skeptics see its inclusion in academia to be a purely tactical one of seeking research money for artistic projects, ultimately helping neither the academy nor the artistic world, which can both exist happily in parallel to one another without such collision".

Further elements such as the ideas of the *object*, *subject*, *place*, and *practice* of the research can help in outlining the underlying structure of my project. The *polska* constitutes the main research *object*, with its history and characteristics investigated by me as the research *subject*: the subject, according to the concept of research *in art*, might at a deep research level identify with aspects of the object, turning the exploration process into a self-reflective endeavour. The observation of the object is realised within a multiplicity of research areas and musical genres, at whose intersection I position myself as subject: the *place* of the research is therefore an interstitial space where all of the different yet neighbouring directions and paths become functional to the fulfilling of the research scope.

Composition is used as the main *practice* to provide the answer to the research question, a methodological tool which at the same time investigates the question and produces the artistic outcomes, integrated by a variety of other ancillary methods. Through composition, the *crossroads* in the *Polska Travels* project – to which the title of this thesis refers – is not simply the point where several research paths intersected, but also the *outcome* to be composed. The fusion between practice and object, or research and researcher (research *in art*), ultimately turns composing *at* the crossroads into composing *the* crossroads itself. Composing to find my own musical home results in composing the musical home itself, however temporary and in a state of constant reassessment it might be.

The overall artistic activity in this project encompasses the above elements of research *on, for, in art*, and the ideas of *object*, *subject*, *place*, and *practice*. It exploits their interaction, focusing on the creation of new artistic material that attempts a synthesis and transcendence of the original elements. It intends to study, find, and establish new connections, and to use them as knowledge material; it ultimately aims at “composing (at) the crossroads”.

1.4 The research question

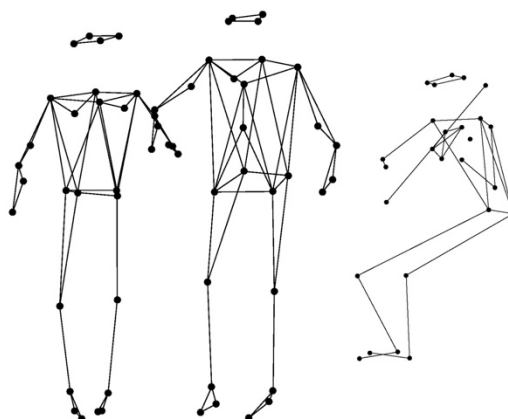


Figure 1: Telespringar mo-cap

The motion capture picture in Figure 1 appears on the cover page of *Stringar*, the composition presented as a case study in this thesis, and portrays a couple dancing the Norwegian folk tune *telespringar* to the sound of a seated fiddler. The image is taken from Mari Romarheim Haugen's 2017 article 'Investigating musical meter as shape';²⁶ the researcher has kindly consented to its use both for the piece and for the present thesis. In mo-cap technology, the moving body is schematised into a series of lines that connect dots corresponding to fulcra, whereby the motion is enhanced and captured in several samples per second, conveying a skeletal rendition that proves very useful for the study of the essential elements of movement.

Getting to the essence of a complex phenomenon in order to uncover its essential characteristics is a cognitive pattern I applied to my doctoral research *Polska Travels*, whose focus is the polska in many of its local variants, including the Norwegian *springar*. Romarheim Haugen's application of mo-cap to folk dance research is analogous to my approach to composing new pieces based on the specific folk elements that I investigate in my research; in order to select those components, I study the essential constituents of

²⁶ Mari Romarheim Haugen, 'Investigating Musical Meter as Shape: Two Case Studies of Brazilian Samba and Norwegian Telespringar', *Proceedings of the 25th Anniversary Conference of the European Society for the Cognitive Sciences of Music*, 2017, 67–74. Mari Romarheim Haugen has a PhD in Musicology from the University of Oslo, Norway, and is a postdoctoral fellow at the Centre for Interdisciplinary Studies in Rhythm, Time and Motion. She has collaborated with the motion capture lab FourMs in a project that applies this technology to the study of Norwegian folk dances such as the telespringar. See FourMs Lab, *Motion Capture - Norwegian Telespringar*, 2016, <https://www.youtube.com/watch?v=oM07BhzCHa0>.

the primary source from multiple perspectives, such as pure theory, case observation, listening to and viewing of live performances, and performing folk tunes myself.

In her paper, Romarheim Haugen quotes Charles Keil (1987; 1995), who considers music primarily as a *process*, not as a *structure*.²⁷ The interplay between a phenomenon and its extrapolated image is intriguing and crucial for artists who try to understand a folk or traditional element and embed it in their own work. This dialogue has been my starting point for the creation of the doctoral compositions, and one that constantly reappeared during their realisation. Just as the sequence of captured images produces the illusion of the actual movement, my attempts to frame the complex Norwegian rhythms in categories I could grasp were continuously questioned by the actual flow of the springar music, elusive of rigid delimitations yet clearly recognisable in their identity. This resulted in an incessant chase, whose resolution demanded the entrance into a new realm, where creativity transcended analysis and used it as a foundation to develop music that aimed at being not simply the product of its artistic parents but a self-standing work, transcendent and independent of them.

The choice of the cover image therefore reveals substantial sides of my approach to the fundamental research question innervating my entire doctoral project:

Composing (at) the crossroads:

How can composition be used as a tool to construct an interstitial “musical home” between different genres and influences?

A set of research sub-questions arises from the application of this general question to the specific “genres and influences” that I identify as the targets of the doctoral project, namely Nordic folk music related to polska and the music commonly referred to as Western art music. These sub-questions emerged as the research progressed, and the several research areas and topics revealed themselves. They address issues that were relevant in specific moments of the research; some sub-questions were exhausted during their respective phases (such as those connected to the combination of baroque and folk styles), whereas others resurfaced at later stages. The most salient of these sub-questions

²⁷ See Haugen, ‘Investigating Musical Meter as Shape: Two Case Studies of Brazilian Samba and Norwegian Telespringar’, 67.

may be formulated as such, ideally following the chronological unfolding of the research process:

- What is “folk” and “art” music?
- What are the history and characteristics of the polska?
- How can I combine polskas with baroque music and style?
- What are the “asymmetrical metres” in Swedish and Norwegian folk music?
- What is a Norwegian springar and which varieties were selected for the composition presented as a case study?
- Which other influences are included in the case study? What are their characteristics and why are they included?
- How did I approach and incorporate asymmetrical metres and rhythmical oddities in my composition?
- Which aspects of the Hardanger fiddle and its sound and repertoire are relevant to the case study, and how does the composition incorporate them?
- Where do I position myself, and the temporary musical home created through the composition, in relation to the Nordic folk traditions I studied?

Every doctoral concert, while focusing on the repertoire from a geographical area where the polska tunes prospered and developed, attempted a different answer to the main research question and to the sub-questions related to the respective phases of the doctoral research. The dialogue between the actors at play, notably folk, baroque, and contemporary music, was woven each time with varying balances of their interaction and produced an array of pieces that ranged from arrangements in specific styles (baroque overtures on folk themes) to entirely original compositions such as the case study analysed here. Being the last doctoral piece to be composed, *Stringar* represents the culmination of my artistic reflection around the research question. Its predecessors (*The 2½ Seasons* and *Gränser*) were still partly influenced by an arranging approach to the creation of cross-boundary music, and therefore only related to the “composing *at* the crossroads” part of the question.

The other piece included in the last doctoral programme (*A Norwegian Suite*) drew closer to the core idea of “composing *the* crossroads” in that all of the material was originally composed; yet, references to the two main sources of inspiration – the Norwegian folk tradition from Setesdal and early music – were clearly palpable and

somehow restricted the freedom of the compositional style. Moreover, the Suite was largely written on the instrument, whereas *Stringar* adopted the entirely internal practice of composition which is normally dominant in art music. As an experiment where folk music is treated according to a creative process normally foreign to the genre, I chose *Stringar* as the most suitable among my doctoral works to be used as a case study in the present thesis. The compositional strategies I applied in the piece exemplify my current approach to the issue of writing new music based on different genres or elements, and their analysis constitutes the object of the largest part of this written work.

1.5 The doctoral project and perspective: *Polska Travels*

My doctoral project explores the origins and development of the polska, a popular folk dance tune that spread into Sweden, Finland, and Norway starting from the late 16th and early 17th century. The body of artistic components consists of an array of new arrangements and compositions based on the theoretical and practical knowledge gained through the study of the history and characteristics of the polska, across centuries and geographical areas.

Arguably more than any other Nordic folk dance tune type, the polska displays a long and often little-known history of migration, evolution, contamination, and crossing of geographical and social boundaries. Its ancestors originated during the late Renaissance and early Baroque period in central Europe, spread across both high and low social classes, and quickly became very popular dances in courts as well as among peasants, while being at the same time exported from the continent into Sweden, Finland, and Norway through cultural and economic exchanges. As a musician, I have similarly travelled across several musical territories, and have found in the polska a fitting object for my artistic endeavours in search of common elements that connect apparently distant realms. *Polska Travels* weaves a dialogue between the research fields of folk, baroque, and contemporary music, hence exploring paths where they can interact and influence one another. The artistic outcome plan included four concerts devoted to the respective geographical areas where the polska spread and prospered, and one CD recording of the last doctoral concert programme.

1. [*Polska Travels: Finnish Folk Music for a Baroque Orchestra* \(2017\)](#)²⁸

This first concert explored the polska upon its arrival and diffusion in Finland: the programme imagined the musical scenario that might have been heard in continental 17th-century Europe, and then ventured beyond in the recreation of polska dance tunes as seen through a baroque perspective (*A Finnish Suite*, an orchestral overture composed in baroque style on themes taken from both ancient tune books and the aural tradition) as well as in a homage to the eastern Finnish folk music tradition (*The 2½ Seasons*, concerto for Jouhikko and baroque string orchestra).

Helsinki, Musiikkitalo – 19.1.2017

SibA FolkBaroque String Orchestra

Concertmaster: Peter Spissky

Dir. James Kahane

Soloists: Arto Järvelä (fiddle), Ilkka Heinonen (jouhikko)

A German Suite

Georg Muffat (1653–1704) *Splendidae Nuptiae* (1698)

Georg Philipp Telemann (1681–1767) *Overture/Suites TWV 55*

A Finnish Suite (2016)

Trad. Finnish/arr. Krishna Nagaraja

Lappfjärd Set (2016)

Trad. Finnish/arr. Krishna Nagaraja

The 2½ Seasons – Concerto for Jouhikko and (possibly baroque) string orchestra (2017)

Krishna Nagaraja

EastWest

Improvisation on two Finnish folk tunes

2. [*Polska Travels 2: Swedish Folk Music for a Baroque Orchestra* \(2018\)](#)²⁹

The second episode featured an orchestral dance suite in baroque style on Swedish tunes and an original composition. *Gränser* for 5-string Viola d'Amore and strings explored a part of the folk repertoire referred to as “border music” (*gränslandsmusik*) from the western regions of Sweden.

Copenhagen, KoncertKirken – 25.5.2018

Malmö, S:t Andreas Kyrka – 26.5.2018

²⁸ See Krishna Nagaraja, *Polska Travels: Finnish Folk Music for a Baroque Orchestra - Full Concert*, 2018, <https://www.youtube.com/watch?v=zb4Sda-zGzs>.

²⁹ See ‘Polska Travels 2: Swedish Music for a Baroque Orchestra - YouTube’, accessed 2 February 2022, <https://www.youtube.com/playlist?list=PLawJ800vmVswzfesQpC3KUIVqgavjM1to>.

Hurra Baroque String Orchestra

Concertmaster: Peter Spissky

Dir. James Kahane

Soloist: Mats Edén

A Swedish suite (2018)

Trad. Swedish/arr. Krishna Nagaraja

Gränser – Concerto for 5-string viola d'amore and string orchestra (2018)

Trad. Swedish/Krishna Nagaraja

3. *Polska Travels 3: Baroque Roots* (2018)³⁰

This concert programme aimed at displaying the importance of Polish dances in central European areas at the height of their diffusion between 1650 and ca. 1720. The research on the early stages of the development of the polska dance uncovered many important relations between the Polish origins of the tunes, their diffusion in lands that are now part of Germany and the neighbouring countries, and their subsequent migration towards Scandinavia. The programme featured pieces written by baroque composers from those areas, providing an overview of the Polish style of composing instrumental music in the baroque period, a feature that Johann Sebastian Bach himself, at the end of the first long golden age of the early *polonoises*, considered to be a “vital and valuable component of a composer’s or virtuoso’s craft and as a sign of musical education”.³¹

Helsinki, Musiikkitalo – 20.9.2018

Aira Maria Lehtipuu, Alina Järvelä: baroque violins

Anna Pohjola, Krishna Nagaraja: baroque violas

Louna Hosia: baroque cello

Marianna Henriksson: harpsichord, regale

Daniel Speer (1636–1707)

Suite of Ballets-Proportions from *Musikalisch-Türkischer Eulen-Spiegel* (1688)

Johann Valentin Meder (1649–1719)

Der Polnische Pracher, sonata a 5 (1689)

Johann Heinrich Schmelzer (1620–1680)

Polnische Sackpfeiffen, sonata a 3 (1680)

Georg Philipp Telemann (1681–1767)

Sonata *Polonese* a 3, TWV42:a8

³⁰ See ‘Polska Travels Pt.3: Baroque Roots - YouTube’, accessed 2 February 2022, <https://www.youtube.com/playlist?list=PLawj800vmVsxdk989aPCDnubBy-PfHj8j>.

³¹ Szymon Paczkowski, *Polish Style in the Music of Johann Sebastian Bach*, Contextual Bach Studies (Lanham: Rowman & Littlefield, 2016), 20.

4. [**Polska Travels 4: Tales from Norway \(2021\)**](#)³²

The fourth and final concert drew inspiration from the Norwegian cousin of the polska, the springar, and revolved around the iconic Hardanger fiddle or *hardingfele*. The programme presented the world premiere of two original compositions: *A Norwegian Suite* for solo Hardanger fiddle and *Stringar* for string quartet.

Helsinki, Musiikkitalo – 11.5.2021

Vegar Vårdal, Krishna Nagaraja: Hardanger fiddle

String Quartet Meta4

Krishna Nagaraja (1975)

A Norwegian Suite (2019)

Stringar (2020)

5. [**CD recording: Tales from Norway \(2022\)**](#)³³

The recording of the last concert programme was added as fifth artistic outcome, in order to provide the material for the audio examples in the present thesis. *A Norwegian Suite* was entirely recorded by me on the Hardanger fiddle.

Tales from Norway, Challenge Classics

Recorded, edited, mixed and mastered between May and September 2022

String Quartet Meta4

Krishna Nagaraja: Hardanger fiddle

Krishna Nagaraja (1975)

Stringar (2020)

A Norwegian Suite (2019)

Within the arch of the four concerts, the research perspective was subjected to changes on several levels. The role of composition shifted from being used as a secondary tool at the beginning of the process to subsequently becoming the main practice in the research. I summarise this evolution under three headings.

1. From arrangements to compositions

The first concert mostly featured my arrangements of tunes, some of which were purposely realised in specific styles (the baroque Suites), whereas the last only included my own compositions. The aim was to find an increasingly personal way

³² See Krishna Nagaraja, *Polska Travels Part 4: Tales from Norway*, 2022, <https://www.youtube.com/watch?v=DJbnPb6aXMg>.

³³ Krishna Nagaraja and Meta4, *Tales from Norway* (Challenge Classics – CC79214, 2022).

to treat and re-interpret the folk material. The following gradient provides an overview of this process, from hardly any personal input to total invention:

Notation→Transcription→Arrangement in style→

Style-free arrangement→Composition

2. From folk-baroque to folk-contemporary

The presence of early music elements was reduced throughout the concert series, ranging from all-baroque programmes (*Polska Travels 3*, ideally the first but postponed to the third place for practical reasons) to the entirely contemporary fourth concert. Early music still continued to inform my production, through the compositional techniques or the musical material it shared with folk music,³⁴ but gradually ceased to be a relevant subject to be specifically addressed in the concert programme.

3. From composer-performer to composer

In the first three concerts I was performing on stage with my colleagues in orchestras and a chamber ensemble. This role was progressively replaced by a stronger focus on composition during the successive research years, and largely disappeared in the last concert, which was almost entirely performed by others.³⁵ This was mainly caused by the conscious decision to devote more time to compositional studies.

These three strands share the composition of new music as the common, final stage of their progression, and underline the increase of its relevance throughout the research, ultimately achieving the status of the main underlying strategy applied in the project. The next section paints a complete picture of the research methodology, relating composition to the other methods applied in the research.

³⁴ The folk tradition that inspired most of the *Norwegian Suite* for solo hardingfele – the *rammeslåtts* from Setesdal – is believed by some scholars to have roots in medieval music. See for instance Morten Levy, *The World of the Gorrlaus Slåtts: A Morphological Investigation of a Branch of Norwegian Fiddle Music Tradition*, Acta Ethnomusicologica Danica 6 (Copenhagen: Kragen, 1989). The author suggests the influence of *Magnushymnen*, a 13th-century hymn and the first known example of multiple voice singing in the Nordic countries, on the formation of the modal material found in the *rammeslåtts*.

³⁵ Due to last-minute technical difficulties, the solo Hardanger fiddle Suite in four movements was performed partly by Vårdal remotely from Norway and partly by me, live in Helsinki, instead of being entirely premiered by Vårdal.

1.6 The research methods

Composing music that stems from folk traditions and combines them with other genres requires not only a knowledge of the different elements, but also an investigation of their interaction, a refinement of the researcher's abilities in the practice of the targeted musical areas, and the realisation of the actual compositions, informed by the study of pre-existing analogous pieces. In order to fulfil these needs, I devised a four-step methodology for the preparation of each of the required concerts as artistic outcomes:

1. Historical contextualisation and musicological study of the folk material
2. Stylistic study of the folk material
3. Study of the existing examples of folk-inspired compositions
4. Own compositional practice

It is important to note that these four phases were often overlapping and interacting, as parts of an ongoing self-feeding process. However, in general terms the chronological succession unfolded as listed.

1.6.1 Historical and musicological studies

Preliminary investigations on the history of the polska throughout a time frame ranging approximately from 1600 to 1750 provided a contextualisation for the origins of the basic characteristics that the tunes display even today (see 2.2). Some of these rhythmic and melodic features can be traced back to practices from the late Renaissance and to cultural exchanges taking place during the Baroque period; they surface in many tunes contained in ancient collections, widely used as source material for two of my early doctoral compositions (*A Finnish Suite*, 2016; *A Swedish Suite*, 2018).³⁶ Further examination of musicological literature regarding the formation of the “folk” and “art” music categories, described in 2.1, shaped my understanding of these concepts and therefore their use in my personal artistic practice.

Since some of the targets of my last research year – and of the present thesis – are identified with the Norwegian relatives of the polska that display metrical oddities, a survey of the existing musicological studies concerning asymmetrical metres and their perception proved to be crucial in order to grasp the essence of these phenomena from a

³⁶ For a list of historical Finnish and Swedish sources, see Eero Nallinmaa, *Barokkimenuetista masurkkaan: sävelmätutkimuksia* (Tampere: E. Nallinmaa, 1982), 319–431.

theoretical perspective, and to transfer the collected knowledge into the composition of the *Stringar* quartet (see especially 4.1, 4.2, and 4.3). A study of the elements external to the Norwegian folk tradition and yet incorporated in *Stringar* was equally important during the final stages of the doctoral project; the findings are summarised in 3.2 and 3.3.

Finally, the theoretical part of the *Polska Travels* research was integrated with organologic studies of the instruments involved in three doctoral compositions: the Finnish *jouhikko*,³⁷ featured in *The 2½ Seasons* (2017), the 5-string *Viola d'Amore*,³⁸ featured in *Gränser* (2018), and the Norwegian *hardingfele* with its folk repertoire,³⁹ protagonist of the *Norwegian Suite* (2019) and *Stringar* (2020). For all these reasons, the historical and musicological investigation was fundamental in anchoring the artistic practice onto a solid, “on-art” research basis.

1.6.2 Stylistic studies

Each concert of the doctoral series focused on national or local variants of the polska, which required an analytical study of their characteristics to integrate the historical and musicological contextualisation. Melodies from the aural or written (i.e., collected) repertoire of Finland and Sweden constituted the material for the first two concerts, whereas the third one included baroque compositions influenced by the *Polnischer Art* (Polish style), imaginatively related to Polish folklore.

The Norwegian springar repertoire for Hardanger fiddle was featured in the fourth concert. As in the case of the concerts with Finnish and Swedish polskas, the methodology used for the preparation of this piece consisted firstly of the selection of specific Norwegian districts as geographical frame for the material: the folk traditions from Vestland, Telemark, and Valdres were chosen for their distinctive rhythmic qualities, displaying irregularities and asymmetries that attracted my attention for reasons which will become clear later in this text throughout the study of *Stringar* (see especially 3.2.1).

³⁷ See Rauno Nieminen, *Jouhikko – The bowed lyre*, 2. korjattu painos, Kansanmusiikki-instituutin julkaisuja 61 (Ikaalinen: Rauno Nieminen, 2017).

³⁸ See for instance a video where the instrument is played by Mats Edén, the Swedish fiddler who premiered *Gränser*: FOLK - et ljudarkiv, *Mats Edén - Två Slätter På Viola d'amore*, 2019, <https://www.youtube.com/watch?v=Vnr0G1r55q4>.

³⁹ See Bjørn Aksdal, *Hardingfela: felemakerne og instrumentets utvikling* (Trondheim: Tapir, 2009).

The stylistic research began with the survey of the folk material from the targeted areas. A primary method consisted in consulting relevant audio and video footage, both online and on CDs. The otherwise ideal alternative of fieldtrips to the selected Norwegian areas, with the purpose of listening to and learning from local musicians, was not feasible due to the travel and work restrictions in place during the pandemic year 2020; it was replaced with the use of recorded audio and video material, both publicly sourced and collected upon my previous visits to Norway. Expert guidance concerning the interpretation of the material was also dispensed via email by my Norwegian contacts.

A second strategy I intended to adopt was the individual study of Norwegian tunes on the Hardanger fiddle. Attempting the embodiment of the complex Norwegian rhythms is of fundamental importance for the comprehension of their subtleties: especially – but not solely – in folk music, it is always advised to experience rhythm and dance in first person, in order to achieve a deeper and more organic grasp of their essence. During my last year of research this could be realised only to a lesser extent than what I had initially devised, for reasons that demonstrate how methodological choices are sometimes restricted by the tools available in specific moments of the research.

My project encompasses at least three different countries where the polska prospered, which in turn are home to dozens of other local variants. My personal and professional life was however mostly spent far from and largely unaware of those traditions; this fact deprived me of the vantage point of fiddlers who have grown up within the folk tradition. However, since the very start of my project, I wondered whether any player in the Nordic countries could master all the different styles equally well; at any rate, I would have had to devote a large part of my doctoral efforts solely to the learning of those polska types. The unrealistic idea of becoming a sort of all-round polska *spelman* was therefore discarded. In the case of the Norwegian concert, for instance, I soon realised that the difficulties presented by the springar types I had chosen as objects of study were considered very challenging by more experienced players than myself. Even finding the downbeat in a telespringar pattern can initially be rather demanding for fiddlers who are not well versed in the genre. The question was therefore whether to spend most of my research year raising the level of my playing enough to feel at ease with those tunes, or to hone my compositional skills and use that time to write the new doctoral pieces. It was very unlikely that I could succeed in doing both at the same time:

given the focal point that my artistic research had increasingly acquired, I chose to devote my efforts to composition.

Practicing Norwegian music on my own Hardanger fiddle was therefore subjected to time management and other circumstances (the lack of experts in my country of residence, Finland, and the difficulties in travelling to Norway during the Corona pandemic) and restricted to a minimum. Despite this, I consider personal practice as one of the most powerful tools to grasp any type of music, much in the same way as languages are not simply learned from books but need to be spoken in actual life.

This mixed approach based on a balance of listening and practicing was integrated with a third resource, namely the theoretical study of the material. Analysing and dissecting Norwegian hardingfele music may seem dry and even counterproductive if seen from a pragmatic, entirely performance-centred approach. It is true that such literature can be intimidating and is hardly accessible to non-specialists; moreover, theoretical studies alone can depict but a partial picture of such multi-layered phenomena as musical traditions. I nonetheless found that they can provide an abundance of analytical information which greatly illuminates the knowledge gained through a more direct access to the folk material.

The fact that the literature I consulted was written by Norwegian and Swedish researchers who are also performing artists (fiddlers, dancers, or both, and some – if not all – very well-reputed) reinforces the idea that an approach addressing all three aspects is to be strived for whenever possible.

1.6.3 Study of folk-inspired compositions

Becoming acquainted with the state of the art is one of the first advisable steps in research endeavours. Learning from other artists' work, though, needs to be balanced with a respect for our own uniqueness; vice versa, following our path does not exclude being open to the environment that surrounds us. In my case, the study of pre-existing examples of compositions where the folk element is prominent was particularly relevant, in order to incorporate suggestions of possible paths to explore, or to avoid.

The genre I addressed in this respect was that of contemporary art music for Hardanger fiddle, since it was closer to my musical language than contemporary folk, perhaps due to the relevance of art music in my upbringing as a musician. Even if my artistic aim is to reach a personal hybrid style where labels cease to be necessary or even

useful, I somehow looked for the safety of a preferred gravitational orbit. Operating in that space without being strictly tied to it gave me the chance to acknowledge my background while also casting my glance beyond it: the twists and pulls of the forces at play in the interaction between the different genres I studied kept my research very much alive and stimulating.

Bjørn Aksdal, an influential fiddler and musicologist from Norway, has conducted a research on the use of the Hardanger fiddle in art music, mainly focusing on the 19th and 20th centuries with references to works written until 2005.⁴⁰ Sofie Thorsbro Pedersen's Master's thesis 'The use of hardingfele in contemporary music'⁴¹ contains a list of more recent pieces by composers from all around the world; the thesis itself analyses *Philtre* by Liza Lim (1997), which Pedersen performed herself. Most of the music mentioned by the two researchers, though, focuses on the Hardanger fiddle as an instrument, not primarily on its folk repertoire. Since my aim was to write pieces inspired by both aspects, I also looked for other examples where the composer dealt with the use of Norwegian or Nordic folk elements.

In a few cases the music embraced the two aspects in equal measure: such is the case, for instance of Lars Petter Hagen's concerto for Hardanger fiddle and orchestra *To Zeitblom* (2011).⁴² Other works display a different balance of the two, notably Geirr Tveitt's two concertos for Hardanger fiddle and orchestra (1951 and 1965).⁴³ Other composers who have written for the instrument or have been inspired by Norwegian folk music are Eivind Groven (*Fjelltonar*⁴⁴ for orchestra, 1938; *Springar*⁴⁵ for Hardanger fiddle and orchestra from Symphony no. 1, 1938), Arvid Gangsø (*Kolastykkje*⁴⁶ for solo Hardanger fiddle, 1999; *Eigestille*⁴⁷ for solo Hardanger fiddle, 2000), Johann Kvandal

⁴⁰ Bjørn Aksdal, 'The Norwegian Hardanger Fiddle in Classical Music', *Tautosakos Darbai – ICTM Study Group on Folk Musical Instruments/Proceedings from the 16th International Meeting XXXII* (2006): 15–25. Concerning the use of Norwegian folk in art music during the 19th century, Aksdal underlines the central role of violin virtuoso Ole Bull (1810–1880). Norwegian folk melodies inspired some of his compositions, such as *Et Sæterbesøg* for violin and orchestra, which features many motivic traits and bowing patterns borrowed from *gangar* tunes. Bull was also a great advocate of the diffusion of Norwegian folk in art music circles: in 1849, with his help, the legendary Telemark fiddler Torgeir Augundsson (known as "Myllarguten") was the first Hardanger fiddler ever to give a public concert in Norway.

⁴¹ Sofie Thorsbro Pedersen, 'Die Verwendung Der Hardingfele in Der Zeitgenössischen Musik' (Master's thesis, Graz, Universität für Musik und darstellende Kunst, 2015).

⁴² In Lars Petter Hagen, *Lars Petter Hagen* (Aurora – ACD5074, 2013).

⁴³ Geirr Tveitt, *Concertos for Hardanger Fiddle* (BIS – BIS1207CD, 2002).

⁴⁴ See James Stuart, *Eivind Groven: Fjelltonar Suite [Dreier-Trondheim CO]*, 2016, <https://www.youtube.com/watch?v=hk-5-radJmQ>.

⁴⁵ In Eivind Groven, *Towards the Mountains* (BIS – BIS1312CD, 2006).

⁴⁶ Arvid Gangsø, *Kolastykkje* (Oslo: Nasjonalbiblioteket – NB Noter, 1999).

⁴⁷ Arvid Gangsø, *Eigestille* (Oslo: Nasjonalbiblioteket – NB Noter, 2000).

(Quintet for Hardanger fiddle and string quartet op. 50, 1978),⁴⁸ Henrik Ødegaard (*Brudemusikk* for Hardanger fiddle and organ, 1997),⁴⁹ Therese Birkelund Ulvo (*Fragile* for solo Hardanger fiddle, 2019)⁵⁰ and composer-performers such as Nils Økland (*Bris*,⁵¹ *Kjølvatn*,⁵² *Glødetrådar* ⁵³) and Britt Pernille Frøholm (*Behemoth* for solo Hardanger fiddle and electronics, 2012).⁵⁴

The cases I examined provided a wide palette of possibilities to exploit the instrument's sonic properties as applied to idiomatic traits of its repertoire, re-interpreted through every individual's mind. It was interesting to see how composers with varying degrees of exposure to Norwegian folk (ranging from hardly any exposure to the expertise of Norwegian fiddler-composers) stressed and amplified different aspects of the Hardanger fiddle phenomenon in their own production. It was then my turn to have my own say amidst such an extensive body of knowledge coming from the folk tradition, the theoretical analysis, and the scrutiny of existing folk-inspired music, finally putting the useful information I had collected to the service of my own compositions.

1.6.4 Compositional practice as research method

The composition of the doctoral pieces was the very field where I could test strategies to answer the research question. Issues about notation, rhythmic flexibility, and metrical distribution of beats became all the more pressing as soon as I started composing the first notes and faced the challenges of how the folk material could communicate with other elements without compromising its integrity. Besides using composition lessons and composition itself as learning tools, during the last research year I incorporated the direct use of the instrument into the writing process of *A Norwegian Suite* for solo Hardanger fiddle, included in the programme of my fourth concert and in the fifth artistic outcome, the CD *Tales from Norway*. The piece was largely written on the instrument, the product

⁴⁸ In Åshild Breie Nyhus and Ingrid Breie Nyhus, *Halvorsen. Kvandal. Nyhus – Hardanger Fiddle in Art Music* (Simax Classics – PSC1333, 2016).

⁴⁹ Henrik Ødegaard, *Brudemusikk for Hardingfele Og Orgel* (NB Noter, 1997).

⁵⁰ See Britt Pernille Frøholm - Topic, *Fragile*, 2019, https://www.youtube.com/watch?v=_UnaZ0HWTcE.

⁵¹ Nils Økland, *Bris* (Rune Grammofon – RCD2042, 2004).

⁵² Nils Økland, *Kjølvatn* (ECM – ECM2383, 2015).

⁵³ Nils Økland, *Glødetrådar* (Hubro – HUBROCD2632, 2021).

⁵⁴ See AlruneRod2811, Britt Pernille Frøholm - *Behemot* (2012), 2012, https://www.youtube.com/watch?v=UkzMpswt_KQ.

both of a thought-out compositional approach and of improvisations or extemporary ideas realised by playing the instrument myself. The possibility of trying out the ideas directly on the fiddle made the music not only more idiomatic but also moulded it in shapes that were perhaps only possible through a physical action on the instrument. The ideas were then organised and developed more speculatively with decisions about the form, structure, and narrative arch of the four movements. The general methodology was therefore a mixed compositional approach combining intuition and reasoning, playing and writing, immediacy and reflection, sound and thought.

A compositional approach based on instrumental practice, more common in folk circles, was combined with the conventional Western art music way of thinking and writing music: the intriguing relationship between the two methods proved to be central in contribution to the realisation of those compositions, as it had been done for all of the other doctoral pieces. Being destined for a string quartet, the case of *Stringar* was naturally different: it required a more conceptual approach to which I was not habitually accustomed. Moreover, the study of the material used as source for the compositions brought an awareness of its sheer vastity, making the task of composing music that embraced its span rather intimidating. The early stages of the composition of *Stringar* were hindered by such issues, and the creative flow was held back for a period of time. I confessed the hesitation to my composition teacher Eero Hämeenniemi during the course of an e-mail correspondence in early 2020:

Regarding the composition I am [...] feeling quite blocked and scared, [...] it's just mind-boggling to realise how much work a composer undergoes. [...] after an awful lot of speculation and delay I more or less know what I'll deal with in the quartet and have started working on the first movement, combining a particular type of Norwegian springar with...well, polyrhythms, konnakol etc. Hopefully I'll manage to give these ideas the shape of some notes and put them on paper, time flies and I have less than 4 months to complete a 20–25-minute quartet.⁵⁵

Hämeenniemi's guidance unblocked the situation with some advice paraphrased from the Finnish writer Mika Waltari:

Dear Krishna, [...] "If anyone wants to write a novel, they'll just need to put a sheet of paper in the typewriter and start typing." (Mika Waltari) I think I have already quoted this to you before, but here [it] goes...⁵⁶

⁵⁵ Krishna Nagaraja to Eero Hämeenniemi, 'Our Lesson', 4 January 2021.

⁵⁶ Eero Hämeenniemi to Krishna Nagaraja, 'Re: Our Lesson', 4 January 2020.

Encouraged by those words, I decided to tackle the research challenges about composition by means of composing music. In this sense, added to the other methodological implications described above, the practice (*composition*) can be seen as a method to achieve the outcome (*compositions*).

After this introduction of the essence, scope, and placement of my research project, the discussion will continue in the next chapter with an overview of the emergence and implications of the “folk” and “art” music categories, followed by sections about the history and characteristics of polska and springar tunes which prepare the analysis of *Stringar* in the central part of the thesis.

2 Historical and musicological background

This chapter summarises the findings of the scholarly research behind the artistic outcomes that are relevant to the present written work, namely the formation of the concept of folk and art music (2.1) and an overview of the history and basic characteristics of the polska tune family (2.2). An exhaustive dissertation covering such vast and ramified topics exceeds the boundaries of this thesis; however, due to their importance in forming the background of the research and its terminology, a short summary of the literature is provided in this chapter. A few publications, integrated with other works, are taken as primary reference, and cited at the beginning of the respective sections.

2.1 “Folk” and “Art” music: *vexata quæstio*

In the book *The invention of ‘Folk Music’ and ‘Art Music’*, briefly mentioned in 1.3.2 regarding the tendency to “aestheticize” folk music diffused among the Romantics, Matthew Gelbart argues that

folk music and art music became meaningful concepts only in the late 18th and early 19th centuries, and only in relation to each other.⁵⁷

The concepts of folk and art music are, as Gelbart explains in his book, cultural products of the last two hundred years; the first two paragraphs of this section, 2.1.1 and 2.1.2, summarise the content of Gelbart’s publication, used as a primary reference to understand the origins and development of the phenomenon over the course of the 18th and 19th centuries.

The use of these nowadays charged terms stimulates reflection, stirs discussion, and at times reinforces the barriers that decades or even centuries of cultural history have erected between the genres they are believed to represent. Genres intended as fixed categories seem to be used more for marketing purposes than for actual artistic needs, and indeed products fitting into specific genres usually do share common features. However, these distinctions can arguably be of more avail if contextualised within the fluidity of an actual artistic field, mapping the territory in a fashion that is more reminiscent of the variations in natural landscapes than of the conventional national

⁵⁷ Gelbart, *The Invention of ‘Folk Music’ and ‘Art Music’*, i.

borders traced by political decisions. Their outline does not unfold with unnegotiable straight lines, but rather with the irregular contours of natural elements, subjected to constant mutation.

Within those areas, every individuality (a tune, a single fiddler, a composer) engages in a constant dialogue with their collective body of knowledge; the uniqueness of their voice and the unavoidable – desirable, even – exposition to some forms of “otherness”, however, undermine any claim of genre-based purity. Quoting the words of Robert Jay Wolff, one of the pioneers of abstract painting in the United States: “Tradition is not a form to be imitated but the discipline that gives integrity to the new” (1949).⁵⁸ Claims of authenticity and purist attitudes in music are increasingly questioned in the current intellectual debate, whereas critics of syncretist positions raise issues concerning cultural appropriation and the protection of musical traditions against external exploitation. Since the present thesis, the composition it analyses, and the overarching research project all revolve around the areas of folk and art music, it is important to clarify the multi-layered process that led to their formation, from the beginning of the philosophical discussion on “natural” and “artificial” music (terminological ancestors of the modern terms) to the categories in use today for practical orientation in the field of musical genres.

2.1.1 The formation of “folk” and “art” categories

During the 17th and early 18th century, musicians were less preoccupied with the provenance of a melody than we might nowadays be. As Gelbart explains, music was categorised mostly according to its genre, and genres were based on functions: what mattered was how the material was used, rather than where it had originated and who had used it (op. cit., 15ff.) The concept of authenticity was less focused on whether a supposed Polish or Greek or Russian tune really possessed the characteristics that made it qualify as music from those countries.⁵⁹ Even if national styles and their characteristics did appear for instance in instrumental manuals, reliable musical taxonomies that could explain and prove the origins of an Italian *pavana*, an English jig, or a French *minuet* were

⁵⁸ ‘Guy Wolff’, Guy Wolff Pottery, accessed 21 January 2022, <https://www.guywolff.com/guy-wolff>.

⁵⁹ For example, Polish-born German composer Danier Speer (1636–1707), whose music I included in my doctoral concert *Polska Travels 3: Baroque Roots*, composed a large number of dance sets named after specific nations (*Hungarische, Russische, Polnischer, Walachische ballets*) whose connection to the actual folk traditions or national styles appears to be based on the conventional stereotypes of a perceived idea of the folk. The music is collected in *Musikalische-Türkischer Eulenspiegel* (1688).

not yet fully established. However, musicians knew how a pavana, a minuet, and a jig functioned: they were more interested in the practical use of the material than in how, where, and when the material had been created or collected.

Musical classification mostly relied on the purpose or destination of the composition: the division into “church, theatre, and chamber styles [was] not only absolutely correct; but also necessarily thus, and could and must not be done in any other way”, as was noted by the Italian musician Marco Scacchi (ca. 1600–1662), active at the court of Sigismund III Vasa King of Poland and Sweden, reported by Johann Mattheson in his treatise *Der Vollkommene Capellmeister* (1739).⁶⁰ Mattheson specifies how these styles do not necessarily refer to physical places, since “a sacred piece can just as well be performed as a dinner concert”, and “something religious can indeed be performed on a theatre stage; [...] one may perform a concert there as well as in a chamber: what does the time and place have to do with the essence of the thing?” (op. cit., 191). Despite their differences – “What is *elevated* in the theatre is very different from what is elevated in dinner music” (ibid., 191) – styles could be used according to the occasion and purpose of the performance, not primarily fulfilling a supposed original (i.e., localised, in space or time) character.

Besides the contextual function, the idea of passions or affects of the human soul as underlying forces to be represented in a musical piece was also largely applied to the categorisation of styles. Mattheson mentions the deeply influential “doctrine of affections” or *Affektenlehre*⁶¹ in his treatise (ibid., 104–11), listing a range of “temperaments and emotions” that music was supposed to reflect, with love and sadness experienced “more than the other passions” such as joy, stubbornness, anger, jealousy, hope, pity, and others. Affects in the sense of temperaments – shared, dominant characteristics – could also be related to national cultures: Mattheson concludes that “one must not do things in the same way in France as in England, and must act differently in Italy than Poland and Germany.” However, he continues, this advice is primarily functional, that is, to be followed “if one wants to move the affections according to the

⁶⁰ Johann Mattheson, *Johann Mattheson's Der Vollkommene Capellmeister: A Revised Translation with Critical Commentary*, ed. Ernest Charles Harriss, vol. 1, Studies in Musicology, no. 21 (Ann Arbor, MI: UMI Research Press, 1981), 190.

⁶¹ This elaborate theory was developed in music during the late Renaissance, rooted in a pre-existing body of knowledge dating to as early as Greek antiquity, when music was believed to have deep effects on the state of mind. The idea that music should stir the listener's affects continued and flourished particularly in the Baroque period: specific correspondences between affects and musical figures were established, for example by Athanasius Kircher in *Musurgia Universalis* (1650).

temperament of the land” (ibid., 263).⁶² Polish, French, English, Spanish, and Italian melodies were analysed and used in relation to their character rather than to any supposed authentic cultural origin. Folk and art music as origin-based concepts therefore appear to be anachronistic concepts if uncritically applied to music from that period, as Gelbart concludes (op. cit., 262).

Among the many voices which in the Baroque period testified to the compresence and proximity of the two realms, in an autobiography published by the same Mattheson in 1740 Georg Philipp Telemann recounts his acquaintance with Polish and Moravian music and their “barbaric beauty”, acquired in frequent visits to local taverns during his years of service at Silesian courts. Such is his description of the fiddlers and bagpipers he heard on those occasions:

It is impossible to imagine the fantastic musical ideas they presented between dances when the dancers rested and the musicians improvised music together to fill out the time. Anyone who paid very close attention could pick up in eight days sufficient musical ideas to last a lifetime. In short, in this music there is much that is good if you know how to work with this material properly.⁶³

No words could better reflect the pragmatic approach of 17th- and 18th-century composers to the so-called national styles of music. Telemann, largely credited as the first great advocate of Polish music, received a lasting impression from these first-hand experiences and held them in high consideration not merely for the sake of being authentic (i.e., genuine, uncorrupted), but especially for the rich reservoir of musical material they provided.⁶⁴ An increased attention towards folk music was indeed very common at least until the 19th century, as proved by the fact that almost every composer collected or referred to folk melodies at some stage during the course of their production.

From the early decades of the 18th century, a quest for origins increasingly occupied the intellectual discussion in Europe, partly due to a growing desire to analyse and classify cultural phenomena, and partly fuelled by the necessity to find suitable

⁶² Similar ideas were formulated in 1748 by Montesquieu (1689–1755), concerning the impact of the local climate and temperament on national laws: “If it be true, that the temper of the mind and the passions of the heart are extremely different in different climates, the laws ought to be relative both to the variety of those passions, and to the variety of those tempers.” See Charles Montesquieu, *Complete Works, Vol. 1 The Spirit of Laws* (London: T. Evans, 1777), 292, <https://oll.libertyfund.org/title/montesquieu-complete-works-vol-1-the-spirit-of-laws>.

⁶³ Johann Mattheson, *Grundlage einer Ehren-Pforte* (1740), 360. The English translation by Thomas Braatz (2009) is retrieved from the entry *G.P. Telemann – His Autobiography (Hamburg 1740)* in ‘Bach & Other Composers - Main Page’, accessed 21 January 2022, <https://www.bach-cantatas.com/Other/>.

⁶⁴ National styles are frequently featured in Telemann’s orchestral overture-suites. Two good examples are the suite TWV 55:B5 (“Les Nations”), with movements entitled “Les Turcs”, “Les Suisses”, “Les Moscovites”, and “Les Portugais”, and the *Ouverture des Nations anciens et modernes* TWV 55:G4, where titles even differentiate between “Ancient” and “Modern” Germans and Swedes.

pedigrees for the national cultural material, in a political scenery where nationalist sentiments were constantly on the rise. Gelbart devotes a large section of his book to the description of the role of Scotland in the formation of the category of folk music (see especially chapters 2, 3, and 4). The reaction against the tightening of the English dominion after the Acts of Union of 1706 and 1707 resulted in the construction of a national Scottish poetry and epic through the aggregation of the works of writers such as Allan Ramsay (*Scots songs* collections, started in 1719) and James Macpherson (*Fragments of ancient poetry*, Edinburgh 1760).⁶⁵ The Scottishness of poems and melodies quickly became a symbol for the national culture of a population that was regarded as being closer to nature; by the end of the century, “natural” or “national” music was consolidated as a concept that would be later termed as folk music.

At the same time, late 18th-century counter-Enlightenment currents such as the *Sturm und Drang* shifted the emphasis from objectivity and human rationality onto individuality and emotional intensity. These movements, as well as the first Romantics, were deeply inspired by the work of intellectuals and collectors such as the English bishop and antiquarian Thomas Percy (1729–1811), who in 1765 published the first edition of a collection of poems, ballads, and songs claimed to belong to English antiquity.⁶⁶ Soon afterwards, early Romanticism brought about cultural changes that deeply affected how musicians perceived themselves in relation to nature and the world in general. The role of the artist as an individual genius was on the rise, and nature was no longer the universally accessible pastoral realm, the idyllic abode of simplicity and innocence it had been until the beginning of the 18th century. Instead, it became a more imposing presence, separated from modern society, in turn an antagonist to conquer or a coveted refuge from the pain of the world. Seeing nature as an otherness implied an anthropocentric view of the world, and consequently of music: the rising importance of early anthropology as a scientific discipline was reflected in the attempt by many thinkers

⁶⁵ References to this publication frequently recur throughout Gelbart’s book in relation to the myth of Ossian: the supposed 3rd-century bardic figure was believed to be the source of the fragments that Macpherson allegedly received after they had been forgotten for centuries. A subsequent heated debate regarding the authenticity of Macpherson’s claims and of Ossian himself did not prevent the myth from becoming highly influential for several generations of thinkers and intellectuals both inside and outside Scotland, reaching as far as Napoleon, the German philosopher Herder, and the German composer Johannes Brahms. See, for instance, Gelbart, op. cit., 60–66.

⁶⁶ Thomas Percy, *Reliques of Ancient English Poetry: Consisting of Old Heroic Ballads, Songs, and Other Pieces of Our Earlier Poets, Together with Some Few Later Date* (Routledge, 1857).

in the late 18th century to investigate the supposed original roots of music, often identified as a primitive stage of musical civilisation, still detectable in some musical traditions.

Even if the distinction between the interdependent categories of art and folk music was not yet made fully explicit, a certain duality began circulating at that time, with the former being referred to as “artifice” or the product of rules and civilization, and the latter represented by the “natural” outcome of a collective body of traditions whose primal origins were not precisely detectable. The idea of oral transmission, as opposed to literate processes, was recognised in musical traditions, resulting in a distinction being made between two realms that were becoming more and more differentiated and complementary.⁶⁷ Art music, on the other hand, remained connected with artifice (therefore stressing the aspect of practice rather than that of the origin of the musical work) until the Romantics promoted the figure of the artist as an individual genius creator of music, a vehicle of the transcendence of beauty through art. The individual musicians (particularly composers) became the real protagonists of the musical *work*, and the question of authenticity was applied to them, thus becoming more and more a question of authorship. The folk/art divide in this sense is described by Gelbart as “based on the criterion of personal origin: professional origin versus anonymous, peasant origin”, where the “low, national music side of the binary was now closely approaching the modern idea of ‘folk music’” (ibid., 101–2).

Individuality, literacy, transcendence, and other similar qualities slowly aggregated into what the late 19th century saw as “classical” musicianship, representative of a canon of classical composed works, widely acknowledged as immortal, universal, and cultivated music. The idealisation of the classics widened the distance from a musical body – that of traditions – which relied mainly on layers of collective production; this reinforced the pre-existing process of the dichotomic development of the two genres, which continued in the 20th century up to the present day.

⁶⁷ Cf. Nicholas Hudson, *‘Oral Tradition’: The Evolution of an Eighteenth-Century Concept*, ed. Alvaro Ribeiro and James G. Basker (Oxford: Clarendon, 1996), 161–76.

2.1.2 The 19th century: Herder, the Industrial Revolution, and the rise of “popular music”

The German intellectual Johann Gottfried Herder (1774–1803) was the first to coin the term *Volkslieder* (“folk songs”, or the songs of the people), in his 1773 essay *Von deutscher Art und Kunst*.⁶⁸ Decades later, the derived form *folk-lore* was used in 1846 by the English antiquarian William John Thoms in a letter to the English journal *Athenaeum*, where he referred to the “manners, customs, observances, superstitions, ballads, proverbs, &c., of the olden time”.⁶⁹ In the early 19th century, a number of German professional composers started forming an idea of folk music that could grant them rightful access to material that they could use for their universal mission of conveying the ideals of beauty to the world. This process of “aestheticizing the folk” lies, for Gelbart, at the basis of the modern concept of a higher type of Western art music, separated from folk music yet yearning for it, since “tradition and nation (as ‘nature’) were for them sources of genius that they needed to tap into for their own work” (op. cit., 196).

Around the same period, romantic ideals were also discussed and developed in Swedish intellectual and artistic circles. The Gothic Union (*Götiska Förbundet*), for example, was a literary society whose members expressed dissatisfaction with the atrophy in culture and arts allegedly caused by the Enlightenment. Scandinavian antiquity and Norse mythology were seen as references in the attempt to bring back the values of honesty, freedom, and courage typical of distant and ancient ages. The *Fosforist* poets, named after the literary magazine *Fosforos*, similarly criticised the current state of literature and advocated a new poetic style to contrast the rationalism diffused among the older “academics” (*akademisterna*). Both movements championed the power of imagination against what was perceived as sterile, mechanical literature, and were imbued with ideals of heroism, chivalry, and patriotism.⁷⁰ In Sweden, the concepts of nation and music were brought together in a single formulation since as early as 1802,

⁶⁸ Johann Gottfried von Herder, *Von Deutscher Art Und Kunst* (Hamburg: Bode, 1773). The term *Volkslieder* appears also in the titles of two collections of European folk song texts he published in 1774 and 1778/79. It should be noted that Herder mostly referred to songs as poetry, mentioning music only vaguely.

⁶⁹ See a reprint of the original letter in Alan Dundes, *The Study of Folklore* (Englewood Cliffs, NJ: Prentice Hall, 1965), 4–6.

⁷⁰ Prominent exponents of the Swedish romantic current included, for instance, the German-born composer Johann Christian Haefner (1759–1833), the philosopher, composer, and poet Erik Gustaf Geijer (1783–1847), and the poet Arvid August Afzelius (1785–1871). For a description of how Swedish Romanticism influenced the formation of the folk music concept in Sweden, see Thomas von Wachenfeldt, ‘Folkmusikalisk utbildning, förbildning och inbillning: En studie över trädning och lärande av svensk spelmansmusik under 1900- och 2000-talen, samt dess ideologier’ (Luleå, Tekniska Universitet, 2015), 50–83, <http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-26703>.

when the *Svenskt Musikalisk Lexikon* defined national music as a “certain music or song, that is generally in use in a certain nation, and belongs to its character and temperament”.⁷¹

In addition to folk and art music, the category of “popular” music also emerged during the 19th century. Separated from the other two, this third element intervened in the mutual definition of the concepts and contributed to the formation of the domains in use today.⁷² Prior to the mid-18th century, the term popular was usually referred to public cultural material shared across classes, which was then more collective and fluid than in later times. When differentiating between “high” and “low” musical styles in his *Vollkommene Capellmeister*, Mattheson uses the word “common” music not in the modern sense of “music of the masses”, but as a type that reflects “daily, ‘low’ sentiments as opposed to exalted or noble ones” (Gelbart, op. cit., 20).

In the latter part of the 18th century, as the concept of *Volkslied* became increasingly involved with the idea of a national cultural capital, the expressions “national song” and “national music” in the English discourse were used interchangeably with “popular” to signify the same concept as Herder’s term. The Scotsman Alexander Campbell (1764–1824) was keen on tracing a divide between national or popular music on one side and the art music of alleged bardic or ancient origin on the other. His contemporary George Thomson (1757–1851) also “attributed national music to the people” (ibid., 134). Popular music was not yet a synonym for fashionable music, whereas it was conceived in opposition to it by the British supporters of national music and the German advocates of the *Volkslied*. The simplicity and universality of natural, popular music (music of the folk) contrasted with the elitist, artificial taint of the music promoted by a part of the aristocracy: that type of commercial music “did not yet have the characteristics of ‘popular’ music as we know it [...] associated with crafty manipulation for a mass audience” (ibid., 256).

However, the differentiation between people as “folk” (*Volk*), from people as “rabble” (*pöbel*, shrieking mob), drawn by Herder himself, was already foreshadowing the separation of folk from popular that characterises the modern use of the words. From the beginning of the 19th century, a growing number of thinkers and professional

⁷¹ See ibid., 64. English translations from Swedish texts in the quotes from this source are by the author of this thesis.

⁷² See especially chapter 8 in Gelbart’s book, 256–77.

composers tended to associate the same attributes of simplicity that had been valued as “natural” with a condescending, degrading attempt to meet the taste of vast audiences, which, with the myth of the individual genius on the rise, were instead supposed to be elevated to the artist’s higher cultural level. The criticism was especially directed towards the genre of salon, virtuoso commercial music proposed and supported by the upper-middle class and part of the aristocracy.

At the same time, from the first half of the century the Industrial Revolution was indelibly transforming the European way of life, causing the emergence of a new urban working class, later to be largely associated with the Marxist idea of uneducated masses manipulated by capitalism (a functional concept in the establishment of the modern category of popular music). The formation of these social strata happened primarily in England, due to the faster rate of industrialisation compared to other countries: in Gelbart’s analysis, by 1850 the lower urban working classes

gained possession of their own recognized category of commercial music – via such emerging institutions as the music hall. [...] “Folk music” and “art music” had become the unequal but symbiotic realms of organic genius, and both were now separated from the commercial world of “popular music”. This completed a century-long transformation of musical categorization.⁷³

Music directed towards those classes was increasingly seen as commercial (popular, in the modern sense) as its base expanded, divorced from the higher-status category of folk music, and was no longer seen as a synonym for it by the end of the century: the modern terminology of folk, art, and popular music had been formed.

The divide between art, cultivated, “serious” music and popular, commercial, “light” music deepened in the 20th century, and influenced the very interaction between folk music and art-musical composers and collectors. For instance, in his appeals for a pure, unpolluted peasant music (discussed in the next paragraph)⁷⁴ Béla Bartók repeatedly attacked the “popular-esque” genre of “cultivated peasant music”, mostly the product of “amateur bourgeois” from the 19th century. He also criticised the “gipsy bands” that spread a commercial repertoire more subject to the volatile fashion of the Hungarian middle class than serving as an expression of the true folk traditions.⁷⁵ The middle class

⁷³ Ibid., 259–60.

⁷⁴ For a source of selected writings by Béla Bartók on folk music, I refer to Béla Bartók, *Scritti sulla musica popolare*, ed. Diego Carpitella (Torino: Bollati Boringhieri, 1997). The English translations of the Italian texts are by the author of this thesis.

⁷⁵ See Béla Bartók, ‘Mi a Népzene?’, *Új Idők*, 1931.; in op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 74. Cf. also Béla Bartók, ‘Magyar Népzene’, in *Révai Nagy Lexikona*, 1935.; *ibid.*, 117–18.

representation then started to be associated with popular music, congregating the idea of “pop” music in use today: the increasingly elitist post-World-War-II view of art music, as Gelbart explains quoting Richard Taruskin, might have been fuelled by a reaction against the “imposition of folkloric styles on composers east of the Iron Curtain”, combined with “the rising and threatening presence of ‘popular’ music genres such as rock”, leading to a “new pan-national fraternity among ‘art music’ practitioners” (op. cit., 272).

Within the complexity of our contemporary society, it seems more and more difficult to apply rigid categorisations to a musical scene whose globalisation, world-wide boundless circulation and capitalisation is arguably inescapable. After decades of expansion and the mutual contamination of new genres such as rock and electronic music, the area of popular music has come to embrace a much wider variety of types than ever before, and therefore challenges the same boundaries it shares with art or folk music. Still, as Gelbart concludes, “the ideas of ‘folk’, ‘art’ (and now ‘popular’) music remain guiding principles in arts funding, the academy, the music industry” (ibid., p. 277), and deeply inform the musical discourse today.

2.1.3 The 20th century: Bartók and the modern discipline of ethnomusicology

All through the 19th century, the unknown, collective origins of folk melodies fascinated romantic composers and intellectuals with its mixture of exoticism and identitarian claims. Art music turned to folk music to find material and narratives that could feed its own needs; it diffusely regarded folk music as an exotic, even mythical phenomenon. Despite this growing interest, research *on* folk music was virtually absent, as the seeds of systematic studies of peoples and cultures – planted during the Enlightenment by the forerunners of modern anthropology – had not fully germinated yet.

The collection of folk melodies did undergo deep changes from the early decades of the 19th century: as Gelbart emphasises (ibid., 164), the great poet Robert Burns (1759–1796) compared variants of the same tune and explored their ancestry, and the above-mentioned Campbell was among the first collectors to cite his musical informants in his publications (ibid., 174). However, the collections were clearly influenced by the

collector's personal view of what actually qualified as Scottish.⁷⁶ The folk material was often bent to the necessities and aesthetics of the musical fashion of the time, and appeared, for example, in the form of pieces with piano accompaniment which were, in fact, partly the outcome of melody collection and partly of re-composition. Sources were not systematically problematised, so that the distinction between actual and perceived folk music was rather blurred. This situation lasted well into the 20th century, when the activity of two Hungarian composers and researchers, Béla Bartók and Zoltán Kodály, contributed to the foundation and establishment of modern ethnomusicology. The work of Bartók is given special emphasis in this section for its pioneering influence on the development of the study and the intellectual discussion of folk music in Europe during the 20th century.⁷⁷

Over a period of several decades starting from 1905, the two friends and colleagues undertook an extensive fieldwork that led to the collection of thousands of melodies from the rural villages of Hungary and other eastern European areas, including Turkey. The use of new technical means such as the phonograph was introduced; the notation of melodies was meticulously codified by Bartók, who was keen on preserving the original character of the songs as sung by the peasants.⁷⁸ As Bartók himself bitterly remembers in his writings, the very fact that celebrated composers spent time, energy, and resources to personally visit remote rural regions not only to prevent old folk melodies from disappearing in a growingly industrialised world, but also to understand their socio-cultural context from first-hand experience, was often met with disapproval by exponents of the art-musical establishment, who were convinced of the inferior nature of those traditions.

Bartók's decision to eliminate any interference from the middle class in folk music collection was extremely firm: sources not belonging to homogenous peasant groups

⁷⁶ Alexander Campbell himself, like many others in his generation, supported the concept of folk music modality, which posited the pentatonic scale as a universal root for all "natural", folk musics. This hypothesis was highly criticised from the early 19th century: the controversy is treated in detail in chapter 4 of Gelbart's book.

⁷⁷ The work of Kodály left a profound trace in music education: his famous method, still used worldwide nowadays, is based on local or national folk music as a source of musical material in the early pedagogical stages, and stresses the central role of singing in the musical development of children.

⁷⁸ In his introduction to the first volume of *Serbo-Croatian Folk songs* (Columbia University Press, 1951), Bartók suggests a transcription method only based on pitch and rhythm, dismissing dynamics and timbre as elements for which no appropriate markings were available or even necessary, due to a certain expressive uniformity of the peasant traditions he was studying. Regarding intonation, he advances the use of arrows to underline deviations from tempered systems (much like our contemporary microtonal accidentals); similarly, he acknowledges the flexibility of rhythm both in *parlato-rubato* songs and in dance music, where the flexible nature of patterns needs to be taken into account in accurate transcriptions.

were discarded and singled out as perpetrators of polluted, revisited versions of the authentic music of the folk.⁷⁹ Even if, in the 19th century, collectors and enthusiasts had strived to discover the supposedly original form of folk melodies, they would invariably deliver it in an “improved” form that satisfied both their own idea of folk music and accorded with the public’s taste.⁸⁰

His view on the possible dangers of an excessively nationalistic approach to folk music was equally critical, persuaded as he was that “while musical folklore is indebted to nationalism, which summoned it to life in the past, ultra-nationalism is now cause for a great damage that largely surpasses that initial utility”.⁸¹ Bartók did abundantly refer to a nationalistic use of folk music, recognising the role of folk music research in the revitalisation of national sentiment, especially in politically oppressed countries, and advocated its use for the creation of a “true Hungarian music” by art composers who would put peasant traditions at the basis of their creations.

Folk music was used by Western art music to pursue the narrative of national styles, which was certainly not a new concept; it also provided it with fresh material that could engender new creative paths. In an article originally published for the journal *Új Idők*,⁸² Bartók describes a threefold manifestation of the influence folk music could exert on art music composition.

1. Folk melodies are simply quoted in art compositions; it is crucial that the new work reflects the constituent characteristics of the original, so as to create a coherent unity.
2. New melodies are composed in folk style; a perfect imitation may only come from a thorough knowledge of the original material (Bartók cites Stravinsky as an example).

⁷⁹ The Swedish journalist and folk song collector Karl Peter Leffler (1863–1922) expressed similar concerns towards the “falsely sentimental market songs” and the “cheap musical hits from lowly soldier camps”. See von Wachenfeldt, ‘Folkmusikalisk utbildning, förbildning och inbillning’, 73.

⁸⁰ Béla Bartók, ‘Miért És Hogyan Gyűjtsünk Népzene?’ , *Népszerű Zenefüzetek*, 1936. In op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 48.

⁸¹ Béla Bartók, ‘Népdalkutatás És Nacionalizmus’, *Tükör*, 1937. In op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 90.

⁸² See the English version published by Cambridge University press: Béla Bartók, ‘The Influence of Peasant Music on Modern Music’, *Tempo*, no. 14 (1949): 19–24.

3. A certain folk consciousness is poured into the very essence of the new musical language; the composer masters the peasants' idiom so well that it becomes an expressive module of the composer's own art.

These points stimulate reflections and call for some problematisation. The first point suggest that an extensive knowledge of the cultural phenomenon is the necessary foundation for any endeavour that aims at relocating a cultural element outside its home environment; folk music quotations that do not respect the essential features of the original element are therefore to be avoided. In addition, Bartók repeatedly stresses the importance of contextualisation in any activity that involves folk music: from the collection of folk songs to their arrangement in art music, the researcher and/or musician should be aware of the vast and complex array of cultural coordinates (historical, social, political, linguistic, etc.) which fertilised the ground where their target element has flourished. In his opinion, it is not possible to be deeply absorb folk music without a live, local, direct exposure to it; referring to archival material is not sufficient, as the typical character of peasant music of which Bartók speaks cannot be fully framed into written or recorded formats.

The second approach stirs the discussion about ownership, authorship, and appropriation, and reveals one unresolved conflict in Bartók's thinking. When he writes (*ibid.*, 21) that there is no substantial difference between the first and the second approach, he implies that it is of no importance whether a folk melody featured in a piece is of actual folk origin or the fruit of the composer's ability to imitate it. This clashes with the references to pure, original peasant music disseminated throughout his writings: as Gelbart underlines (*op. cit.*, 220), "despite his love for tracing themes to 'real' folk sources, [...] there is however something disingenuous in Bartók's claims that it does not matter whether the composer invents his own themes or takes them over." Bartók notes how Stravinsky's scores generally lack specifications as to whether the melodies are real folk material or his own, reflecting a practice that had been dominant in older times: the composer has the right to use musical material of any provenance, and thus it can become a sort of personal cultural property. Following this line of thought, Bartók claims in the above-mentioned article that the question of the origins of the thematic material is not relevant for the artist, and is only to be considered for the purpose of musical documentation (*op. cit.*, 21). Gelbart notes, though, that in a later essay Bartók considers his "original works" (i.e., those where all melodies were entirely his own creation) of

“greater importance” than his transcriptions, which in Gelbart’s opinion is in blatant contradiction to “the assertion that it did not matter where thematic material came from” (op. cit., 220–21).

The third and last approach to a certain extent synthesises and surpasses the other two, and can be understood in modern terms as the arrival point of an arch that stretches from the ethnomusicological study of the material, to its informed arrangement in other contexts, finally culminating in new creations where the absorption of the folk tradition is realised at the very level of the musical language, addressing core aspects such as structure, rhythmic forming, and harmonic and melodic idioms, rather than mere motivic quotations from folk tunes. If considered in the context of Bartók’s own writings, however, this approach reveals problematic issues in his approach to folk music as a composer of art music. Despite the attempts to distance himself from German romantic ideals, which valued the originality of individual genius above all else and turned to folk music as collective, local material to be individualised and universalised through high art music, Bartók often seems to write as if inspired by those same values. In the article ‘The importance of folk music’,⁸³ he grants “artistic importance” to peasant music only when, “through the work of a great creative talent, it succeeds in penetrating high cultivated music and therefore exerting an influence on it.” However debatable this use of the adjective “artistic” is, it seems rather clear that the suggested validation for a higher purpose of folk music is possible with the exclusive agency of art music.

To use Gelbart’s words (op. cit. 218), “this was nothing but a restatement of the ideal of Herderian synthesis, a concrete method for turning folk artifacts from ‘tradition’ into material for aesthetic art.” Furthermore, echoes of romantic universalism emerge in Bartók’s belief that, should the study of musical folklore create a sufficient research data pool, it would be possible to test his suggested hypothesis that all folk musics in the world share a common origin, which can be related to forms, types, and styles.⁸⁴ Gelbart once again scrutinises the statement (op. cit., 237), affirming that “Bartók’s emphasis on the local-as-universal implied that his own art music, even when built on local elements of national traditions, was universal in meaning and appeal.” In sum, Bartók’s approach to folk music in his writings betrays a certain influence by those 19th-century ideals of

⁸³ Béla Bartók, ‘A Népzene Jelentőségéről’, *Új Idők*, 1931. In op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 99.

⁸⁴ See Bartók, ‘Népdalkutatás És Nacionalizmus’. Ibid., 89.

“aestheticizing the folk” that had led to the creation of a higher, canonised version of art music, and in a way deepened the divide between folk and art music.

To complete the overview on Bartók’s work, it is worth underlining the concept of folk music that emerges from his essays, and mentioning some of the issues it raises. Bartók viewed the “music of the people” as a constantly changing living organism, and transcriptions as pictures that framed the essence of folk tunes upon single, unrepeatable occasions. This idea resonates in the words of the Romanian composer and ethnomusicologist Constantin Brăiloiu (1893–1958):

The folk melody [...] only exists in reality when it is sung or played, and only lives by virtue of the will of the performer and his intentions. Creation and interpretation are blurred here [...] to an extent that musical practices based on written transmission completely ignore.⁸⁵

A tradition is not an individual artform, but a collective manifestation, primarily related to the lifestyle of the peasants, namely the societal class devoted to agriculture whose “material and moral needs are fulfilled through its own traditions”.⁸⁶ Strictly speaking, in Bartók’s opinion peasant music includes all those melodies that belong to one or more homogenous styles, with equal or very similar characters and structures. According to his view, this body of culture evolves under the agency of a collective instinct shared by members of a homogenous ethnic group untouched by urban culture. While this might be the case for more-or-less isolated human communities around the world, Bartók acknowledges the influence of foreign cultures, especially those coming from neighbouring areas. Their elements infiltrate homogenous groups and are slowly assimilated and transformed according to the dominant values of the receiving culture.

The well-known phenomenon of folk music migration is valued by Bartók for its positive effect: when a melody crosses boundaries and is integrated into another culture, the alterations it undergoes cause new subtypes and variants to originate, thus driving the evolution of the tradition forward. The contact with the otherness is therefore considered to be vital in order to avoid stillness, stagnancy, and extinction:

⁸⁵ See Constantin Brăiloiu, “Esquisse d’une méthode de folklore musical”, in *Problèmes d’ethnomusicologie*, ed. Gilbert Rouget (Genève: Minkoff Reprint, 1973), 13. English translation from French by the author of this thesis.

⁸⁶ Op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 75.

The situation of folk music in eastern Europe may be summed up thus: as a result of uninterrupted reciprocal influence upon the folk music of these peoples there is an immense variety and a wealth of melodies and melodic types. The “racial impurity” finally attained is definitely beneficial.⁸⁷

There is however a fundamental friction between Bartók’s approval of folk music contamination and the emphasis he recurrently places on its supposed purity and authenticity. Echoes of the *noble savage* myth, elaborated by the romantic primitivists, can be detected in Bartók’s identification of folk culture as primitive, unpolluted, pristine: he uses the expression “primitive peasant”, for instance, to indicate “a certain primordial, ideal, unspoilt simplicity”.⁸⁸ He repeatedly stresses the importance of the quest for the original forms of the peasant melodies, the “pure types of Hungarian music” that can allegedly be discovered by means of “scientific demonstration”.⁸⁹ His identification of pure folk music with that of the peasants, namely of the rural cultures that were waning already during his lifetime, excluding any influence or intervention by urban middle-class or other external factors, appears somewhat rigid in its nostalgia for a supposedly homogenous primitive past.

This concept of original character was especially valued in song collection, in the quest for the primal, uncorrupted form of a melody. Whether the pure form of a melody really exists, however, can be debated; furthermore, it can be argued that it may not be possible to find the original version of a melody, if the processes of mutual influence between different cultures are always at play. When recognising these interactions as responsible for a beneficial “racial impurity”, however, Bartók is referring to the contact between geographically and/or culturally *neighbouring* peasant traditions; moreover, he only validates a foreign influence on an established peasant culture if the former is well *assimilated* into the latter. Should this be not the case, his judgement might be more severe: even referring to the “popular-esque Hungarian music” (a genre he considered to be of very little value, being a commercialised, fashionable version of spurious folk music, as mentioned in the previous paragraph 2.1.2), he hoped that it could stay away from the “increasingly oppressive siege of jazz and *schrammel* [popular 19th-century Viennese

⁸⁷ Béla Bartók, ‘Race Purity in Music’, *Tempo*, no. 8 (1944): 132–33, <https://doi.org/10.1017/S0040298200060198>.

⁸⁸ Op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 75.

⁸⁹ See for instance Béla Bartók, ‘Az Összehasonlító Zenefolklore’, *Új Élet*, 1912. In op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 79 and *ibid.*, 83.

‘folk’ music]”, and that the repertoire could stay anchored to forms “as ancient as possible, avoiding contaminations with waltzes, light songs, *jazz* and so on!”⁹⁰

Bartók’s quest for objectivity and purity may be interpreted as a “statement of intent”, which Bruce Haynes associates with authenticity in Historically Informed Performance Practice.⁹¹ Especially as a folk collector, it was crucial for him to present the researched item in its bare essence, stripped of personal interferences, whether conscious or unconscious, that might have accumulated in the notation, the choice of the tune, or in many other aspects. He was at the same time aware that absolute objectivity is not attainable, since all researchers and peasant sources alike are “imperfect humans, easily prey to their emotions [...] The mother tongue and the native land exert a strong influence; but the true researcher must strive to repress it, every time the scientific endeavour requires it.”⁹²

At any rate, the multi-faceted contrast between objectivity and subjectivity, purity and contamination, conservation and transformation, seems to be an inherent and inevitable conflict in the study of musical traditions. Despite the controversies in his writings, Bartók introduced a more objective and scientific methodology in the research of folk music, forcing the resistance and the preconceptions of a large part of his contemporary colleagues to collapse under the evidence that folk music can claim a dignified cultural status and be worthy of enquiry. At least in the fieldwork collections of melodies – and at least in principle – the ethnographic studies performed with Kodály were intended to exclude pre-existing classification parameters based on indirect and aestheticized perceptions of the folk, and to value instead the description of the morphological characters of melodies. Bartók was one of the first authoritative voices in modern music history to suggest equal consideration for the status of folk and art music, displaying the seeds of a forward-thinking mindset which, regardless of the unresolved issues with nationalism and the myth of “pure” music, certainly paved the way for the future generations of folk music researchers and art music composers:

⁹⁰ Ibid., 129.

⁹¹ Haynes, *The End of Early Music*, 10.

⁹² Op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 91.

I am convinced that each of our folk melodies, in the strict sense of the word, is a model of the highest artistic production. In the realm of simple forms, I consider those melodies to be masterpieces, just as a fugue by Bach or a sonata by Mozart in the realm of complex forms.⁹³

2.1.4 Contemporary folk musicianship

During the five decades that followed Bartók's death in 1945, the European folk music scene, its research, and its relationship with Western art music continued to develop. The growing urbanisation and technologization of life, the oscillations of economic prosperity, and the deep changes in moral and customs that accompanied the history of the second half of the 20th century left a visible mark on the evolution of musical traditions. The "homogenous peasant groups" of which Bartók spoke were already fading during his time; most of them disappeared or were assimilated into the post-war society, so that the thread of the traditions they bore was severed or greatly thinned.

When large-scale folk revivals arose from the 1960s and -70s onwards, they had to deal mostly with interrupted traditions that required investigation, reimagination, and recreation. Many cultural lineages of course still survived, but arguably not in the original form advocated by Bartók, as European rural cultures sooner or later came into contact with urban and industrial lifestyles, emptying or transforming villages and their old ways. The scale of cultural exchanges quickly became world-wide, as travelling became increasingly easier and the circulation of information faster and further-reaching. The stage was set for the era of globalisation, which brought distant cultures closer to the Western world and injected the folk music scene with new possibilities and challenges. The research on folklore turned more and more towards native cultures, as indigenous populations became an integral part of anthropological studies: this resulted in the multi-layered complexity of today's folk music. An arguably unprecedented situation emerged in human history, largely due to the revolutionary impact of the internet culture during the first two decades of the 21st century, which made an incalculable amount of information readily available to our computing fingertips.

The early 20th-century idea of folk music as peasant music, synonymous with traditional music, was reinforced by a definition issued in 1954 by the newly founded

⁹³ Béla Bartók, 'Magyar Népzene És Új Magyar Zene', *Zenei Szemle*, 1928. In op. cit. Bartók, ed. Carpitella, *Scritti sulla musica popolare*, 225.

International Folk Music Council, incorporating rural tradition and oral transmission as necessary qualities, and only embracing music that had evolved within an ethnic community uninfluenced by urban art music. This concept quickly became obsolete, as those communities were obviously fading, and the lines of tradition being interrupted; “who are the folk?” (Dundes 1980) became a central question.⁹⁴ Soon, the scope of the definition and study of folk music was enlarged, as ethnomusicologists, for instance, embraced Bartók’s idea of multi-disciplinarity and research contextualisation, based on the emic/etic perspective in fieldwork. As Helen Kõmmus observes (op. cit., 118–19), researchers had proposed a new concept of authenticity already in the 1970s, no longer presupposing the primitive integrity of pure ethnic cultures but focusing on the contextualisation of cultural phenomena into the experience of everyday life, exposed to the multiplicity of the internal and external forces that shape the “real nature of contemporary cultures”. A more complete, holistic approach to traditions became the goal of scholars and musicians, especially after folk music started being formally taught in specific departments of several music institutions.

In her extensive study on the institutionalisation of folk music in Finland, *From ancient to avant-garde to global*, Juniper Hill highlights its manifold consequences in the conceptualisation and actualisation of folk music. Interestingly, she notes how it “transformed folk music into a type of art music”, and “recontextualised folk music, taking it out of its former context and creating a new culture within the institution”. The role of the folk musician was deeply impacted, as institutionalisation “professionalised folk music” and “increased the status and power of folk music and folk musicians”.⁹⁵ The scenery Hill describes in the early 2000s, referring to one of the pioneering folk music departments in the world (the *Kansanmusiikki* department of the Sibelius Academy in Helsinki), shows an entirely new set of dynamics between musicians, musics, and cultural environments than what had existed half a century earlier.

However, the question of authenticity remained. In the late 1990s, the Swiss ethnomusicologist Max Peter Baumann underlined how the discussion was polarised between *authenticists*, advocating original folk traditions although not always aware of

⁹⁴ See Helen Kõmmus, ‘How the Concepts of Folk Music Emerge’, *Etnomusikologian Vuosikirja* 31 (27 November 2019): 117, <https://doi.org/10.23985/evk.82716>.

⁹⁵ Juniper Hill, ‘From Ancient to Avant-Garde to Global: Creative Processes and Institutionalization in Finnish Contemporary Folk Music’ (Los Angeles, University of California, 2005), 24.

their own imagined reconstructions of the past, and *syncretists*, deliberately reviving traditions through modern sensitivity. The latter approach is dominant today, at least in the European Nordic scene; it integrates reconstructed or reimagined traditions with other foreign elements and shifts the focus from “the local to the global village”.⁹⁶ If folk music is conceived as a living tradition, Hill continues, “it must be relevant to people today”, and contemporary folk musicians should “be free to incorporate into their music making all the musical and extra-musical influences that have touched them” (op. cit., 51).

Such an approach may in fact be deemed even more authentic than the purist, conservationist perspective: peasant musicians in the past were not aware that they were actually playing folk music, let alone the purest form of it; rather, they played the music that they presently heard and loved, eventually mixed with other elements they had encountered. The terminology used to describe folk music should therefore be considered more the product of the intellectuals who study the phenomenon than of the folk musicians themselves. Performing folk tunes exactly as notated on sheet music, in folkloristic costumes and overlooking the practices of improvisation, re-imagination, and actualisation that seemed to characterise folk music-making in older and rural times, is seen by many Finnish folk musicians and researchers as less authentic than an informed yet syncretist attitude. Seen in this light, as Hill argues, “continuity and change are not opposites, rather change is continuity, and individual creativity is the means for creating both” (ibid., 55). This is the essential substratum for the foundation of the concept of *nykykansanmusiikki* (contemporary folk music), a term that appeared in the late 1970s which Helen Kõmmus explains as such:

[T]he essence of this Finnish music style is more of a combination of traditional, world and composed music. *Nykykansanmusiikki* is characterised by a desire to break the traditional rules and to find a modern and personal musical expression. (Asplund 2006b: 522–523.) During past decades, *nykykansanmusiikki* has referred specifically to professional music making, characterized by fusion with other styles of music, innovative instrumentation, re-making of traditional tunes, own compositions, and concert forms borrowed from art and popular music practise.⁹⁷

⁹⁶ Max Peter Baumann, ‘Folk Music Revival: Concepts Between Regression and Emancipation’, *The World of Music* 38, no. 3 (1996): 81–82.

⁹⁷ Op. cit., 120–21.

The terminology is nowadays considered too all-inclusive by some exponents of the folk community, but its syncretist principle still informs most of the contemporary folk practices seen in Finland, summarised by Hill as follows:

Finnish contemporary folk musicians believe that the most authentic approach to creating folk music is to attempt to enter into and continue the process of creating music by learning the tradition and using it as a foundation for their own personal creative expressions, incorporating whatever influences have touched their lives. Through this ideal process, they achieve another ideal: transforming folk music into a living tradition relevant to contemporary society; and they avoid their anathema, or “anti-ideal”, the freezing of folk music as a museum piece. When ideals are founded on the process of creation and the personal qualities of a musician, the “pure”/“syncretic” dichotomy disappears, for the so-called “impure” syncretic fusions may be interpreted as being more “pure”, authentic, and legitimate than traditional sounding music by virtue of being created through a “more traditional” process.⁹⁸

“Traditional” and “folk” often seem to be interchangeable terms in common language, although they might highlight different qualities of the living body of knowledge described by Bartók already in the early 1900s. “Living” is in fact often connected to “tradition”, meaning that cultural strands passed on from generation to generation are constantly transformed by a multiplicity of factors. The term folk might emphasise the popular aspect of the music, produced and developed by the people. If “tradition” is mainly used to convey the idea of transmission (from the Latin *tradĕre*), normally restricted to specific historical periods or ethnic-cultural groups, “folk” translates a more open ownership and universal appeal of the music.

Until the 18th century, the word “tradition” was mainly used in spiritual domains, referring to the set of rites and customs associated with the teachings of the Church, passed on through both the cultural exchange (the enactment of rituals) and a literate transmission (sacred texts, the Bible). When, in later periods, the term crossed the boundaries of the religious debate, it retained cultural transmission as its essential characteristic and absorbed new, politically charged connotations: as Gelbart explains about the use of the term in the late 1700s, “tradition was implicated in the modern idea of national identity – in the invocations of shared and preserved culture as the basis of a nation” (op. cit., 155). The association with nationalism and retrograde taints still appears to cause a certain reluctance in today’s intellectual discourse to equate folk with

⁹⁸ Op. cit., 339.

traditional; the terminology might however change depending on the cultural or geographical context of the discussion.

Heikki Laitinen, for instance, founder and ideologue of the Folk Music Department at the Sibelius Academy, thinks that considering folk music as traditional confines it within the limits of a reconstruction of its history and therefore denies its living, creative aspect.⁹⁹ Scottish musician and researcher Lori Watson, in contrast, notes how the adjective traditional is commonly preferred in Scotland because the term folk evokes overtones of amateurism and lesser cultural significance which current musicians are eager to distance themselves from.¹⁰⁰ The same Oxford Music Online definition, quoted by Watson, provides yet another slightly different perspective, taking the questions of origins, diffusion, and transmission all into account:

Traditional music in Scotland includes locally-made music, whether of known authorship or not, and whether extant in written or recorded form or not, which has had a significant life in oral tradition.¹⁰¹

The debate around the meaning of folk and traditional music, with or without their contemporary connotation, informs the *Polska Travels* artistic research, but exceeds its boundaries, as it is more of a subject for a purely musicological analysis. Nevertheless, I wish to clarify that in this thesis I use the term “tradition” in the broad sense of a body of knowledge that is transmitted orally and/or in a literary form, possessing a degree of continuity and homogeneity (adherence to a core set of codified values). I view “folk music” as one possible tradition, and therefore use the expression “folk tradition” or “folk music tradition” instead of “traditional music” to avoid confusion. As argued earlier (see 1.3.2), Baroque music can be considered as a type of musical tradition, since its identity aggregates around a set of stylistic coordinates transmitted by treatises and historical practices. “Communal” traditions might extend even further into the complex variety of particular societal customs, such as the traditional habits of regional or ethnic communities. I do not necessarily consider folk music in its entirety as a communal tradition, since in the current scenario it is also nourished and transformed by agents who might not belong to the established core group.

⁹⁹ Cf. Heikki Laitinen, “Oma perinne vieraana kulttuurina”, in Pirkko Moisala, ed., *Kansanmusiikin Tutkimus: Metodologian Opas*, Sibelius-Akatemian Julkaisuja 4 (Helsinki: VAPK-kustannus, 1991), 59–85.

¹⁰⁰ Cf. Lori Watson, ‘The New Traditional School in Scotland: Innovation, beyond-Tune Composition and a Traditional Musician’s Creative Practice’ (University of St. Andrews, 2012), 36.

¹⁰¹ *Ibid.*, 36.

The boundaries of these categories are indeed bound to be blurred; similarly, the value-loaded history of the folk/art dichotomy demonstrates how “patent, ‘objective’ definitions [...] are doomed to inconsistency, tautology, and ultimately self-contradiction because folk music and art music are not timeless, objective truths, but very human constructions” (Gelbart, op. cit., 4). Embracing the limitations of these terms, conscious of the historical and cultural processes that led to their conceptualisation, I place my standpoint as an artistic researcher in the field of folk music traditions close to but not identified with the “contemporary folk musicianship” described with regard to the Finnish and Nordic contexts. My artistic work as a whole transcends this framing, since it also draws from a background in early, classical, and contemporary Western art music: the adjective “folk” might therefore be restrictive if applied to my doctoral project *in toto*. A general – hopefully not too generic – definition of “contemporary music” might therefore be the most suitable for my work, in the light of the complex and charged debate predating the folk/traditional dialectic, namely the folk/art music problem. As explained, the process leading to the use of folk and art in music is extremely ramified and impossible to summarise in a few paragraphs. The overall idea to convey here is that these categories reflect a set of specific cultural instances from the times when they were formed, and are now exposed to the influence of our culturally fluid modern society.

The question of the distinction between folk and art music is therefore *vexata* inasmuch it does not take into account the variety of factors and biases it reveals. It is perhaps an illustrative tool, useful in orientating oneself amidst the multiplicity of musical products; it should however never escape the filter of historiographic awareness. If used as an absolute, it will cease to be a mere representation of the reality it tries to map, and it will consequently confuse reality with its model. Music eludes categorisation as much as cultures defy national borders: they do not deal with discrete, separate sets, but rather with a constant flow of reality.

2.2 A history of travels

This section describes the origins and early diffusion of the tunes nowadays known as polskas through a summary of the research of several scholars from Poland, Sweden, Norway, and Finland, using two fundamental publications as primary references. Magnus Gustafsson's *Polskans Historia*¹⁰² is, to this date, arguably one of the most comprehensive studies on the subject; *The Polish Dance in Scandinavia and Poland*¹⁰³ is an influential collection of articles in ethnomusicology by eminent scholars from Poland, Sweden, Norway, Finland, and Denmark, edited by Märta Ramsten.

2.2.1 Polska

The origins of the polska can be traced back to the late 16th and 17th centuries, when a growing taste for musical practices associated with a supposed Polish musical style spread across the areas corresponding to parts of modern Poland, Germany, and Austria. Polish folklore (real, perceived, or idealised, in accordance with the mentality of the time) provided inspiration for many musicians and composers in central Europe, where dance and musical practices were developed into the distinctive traits of the polska musical ancestors. "Polish dance" did not simply – or necessarily – refer to actual folk dances from Poland, but became associated with the "Polish way", a fashion of performing music and dance that quickly spread through several social and cultural strata.¹⁰⁴

One of these practices was a way of composing dance tunes sets known as the "Polish proportion". A *proportio* consists of morphing a melody by altering its rhythmic values so as to obtain an analogous tune set in a different time signature: the two tunes played consecutively form a *ballet-proportio* suite, generally resulting in a duple-time dance (usually a medium or slow paced walking dance), followed by its corresponding after-dance in triple time.¹⁰⁵ During late Renaissance, especially in the Polish Golden Age (ca. 1470–1570), the *Polnischer Art* of realising the proportion became very fashionable;

¹⁰² Magnus Gustafsson, 'Polskans historia: en studie i melodityper och motivformer med utgångspunkt i Petter Dufvas notbok' (Lund, Institutionen för kulturvetenskaper i Lunds universitet, 2016). English translations from Swedish texts in the quotes from this source are by the author of this thesis.

¹⁰³ Märta Ramsten, ed., *The Polish Dance in Scandinavia and Poland: Ethnomusicological Studies*, Skrifter / Svenskt Visarkiv 17 (Hedemora: Gidlund, 2003).

¹⁰⁴ "Nach Art der Pohlen" ("according to the Polish manner") and other similar German expressions, appear in collections such as Heinrich Albert's, *Ander Theil der Arien oder Melodeyn*, Königsberg 1640, as well Petter Dufva's *Notbok* dating two hundred years later, 1807.

¹⁰⁵ Cf. Magnus Gustafsson, op. cit., 266: "The first known source for the dance and after-dance succession is an Italian manuscript from the 14th century, where two dances mentioned as *Lamento di Tristano* and *La Manfredina* are followed by the after-dance *La Rotta*."

as opposed to the German method, which shortened the values at the end, the Polish version concentrated the rhythm at the beginning of the measure, thus producing a sort of “rhythmic descendality”, in the formulation of the Polish researcher Eva Dahlig-Turek.¹⁰⁶

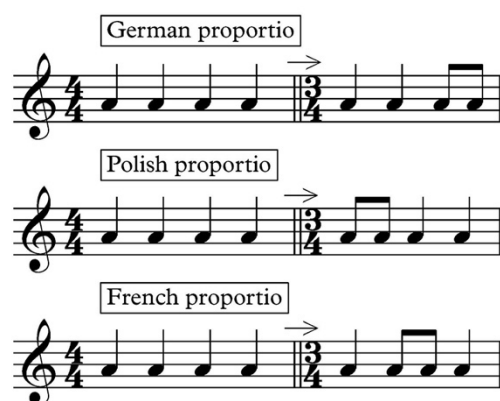


Figure 2: Proportions

In Figure 2,¹⁰⁷ the first pattern in duple time is transformed in triple time according to the German and Polish proportions respectively; the third type (the French manner) is added by some scholars to the list of proportions.¹⁰⁸ The Polish *proportio* acquired the name of “Polish rhythm” and became a recognisable feature in many of the later baroque *polonaises*, notably those written by composers such as Georg Philipp Telemann and Johann Sebastian Bach.

This branch of the polska development featured pieces with a majestic, noble, and somewhat grave character. Chopin’s Polonaises can be considered as a romantic, aestheticized evolution of such ancestry. Theorists such as the Swedish musician and intellectual Harald Vallerius (1646–1716) associated the Polish proportion with the “educated” people (*proportio peritorum*), and the German proportion with the “common” people (*proportion plebeiorum*): this reinforces the idea that the Polish rhythms on which the polonaise and polska are based were more likely the product of cultivated circles than of peasant musical life.¹⁰⁹

Another tune type played an important role in the history of the polska, though its role is still disputed and studied. During the 16th and 17th century it was not infrequent to conclude the *proportio* set with a third melody in triple and usually fast time: in some sources it appears under the title of *serra*.¹¹⁰ Some scholars have suggested parallels

¹⁰⁶ Ewa Dahlig-Turek, “On the history of polska”, in Ramsten, *The Polish Dance in Scandinavia and Poland*, 17. In another article, the same author quotes German composer Valentinus Hausmann’s statement in his preface to the tablature music collection *Venusgarten* (1602), according to which “experienced musicians would be able to play *Proportio* either in the Polish manner (‘nach Art der Pohlen’), or in the usual German way.” The practice seems therefore to have originated and spread in cultivated music circles. See Ewa Dahlig, ‘On Polish Folkdances and the Finnish Polska’, *Etnomusicologian Vuosikirja* 12 (2000): 149.

¹⁰⁷ All transcriptions and score excerpts in the figures of this thesis are by the author unless otherwise stated.

¹⁰⁸ Cf. Gustafsson, ‘Polskans historia’, 280.

¹⁰⁹ Cf. Harald Vallerius, *Disputatio musica de tactu*, 1698, 31.

¹¹⁰ In the liner notes of the above-mentioned second LP by the Ensemble Convivium, Anders Rosén observes that renaissance Polish people might have associated the foreign name of *sarabande* with something that sounded similar in their own language: *sera i chleba*,

between serras from old sources and Polish folk tunes such as the *mazurek*, which displays a similar lively character and is based on a rhythmic pattern that reminds of the Polish rhythms described above.¹¹¹ When dance suites based on proportions began to go out of fashion, their single components started being collected and notated separately. The walking dance tune, the proportion tune, and the serra started an independent development, which eventually resulted in the last two originating what is nowadays called *polska*.¹¹²

Close cultural, political, and trade exchanges connected central European kingdoms in the late Renaissance, including those which are more relevant in this research, namely German and Polish territories. The musical practices that contributed to the birth and diffusion of the *polska*, although based on elements of actual or supposed Polish origins, were largely developed into German products, which is proved by the abundance of Polish references in the work of early and late baroque German composers. It can thus be affirmed that the *polska*, a tune type which is nowadays one of the emblematic features of Nordic folk music, in fact originated outside the Nordic countries; even its current name (which simply means “Polish” in Swedish) refers to a national connotation that is not as strict as one would think, given the loose connections of the *polska* with actual Polish folk music.

The possible route which the Polish dances that later developed into the *polska* took in their migration towards the north is the object of current study and debate. An accredited theory¹¹³ affirms that they were carried by travellers and musicians from Germany and Poland into Sweden around the end of the 16th century, when a single

which literally means “cheese and bread” (see *Convivium Musicum, Opp Med Snälla Snabba Fötter! – Polskans Historia II*). Given that at the time a sarabande was a quick dance, serra might have come to define the third, lively triple time tune in the Polish dance sets collected in old books. Its unproblematised translation into German (*Käs und brot*) and Swedish (*Öst och bröd*) did survive in later tune denominations.

¹¹¹ According to scholars such as Karol Hławicka, Mazurka rhythms, derived from a particular accentuation of the Polish language, are in fact at the basis of the *polska* rhythm; the rhythmic accumulation at the beginning of the measure can be traced back to Mazurka rhythms. In this view, the combination of the folk element and the *proportio* practice might lie at the origin of the rhythmic core of the *polska*. Similarities between faster, livelier serra melodies and mazurkas on one side, and slower, more solemn polonaises and *proportio* melodies on the other side, might however suggest that Polish folk melodies and cultivated compositional practices developed into two different branches of Polish dances, namely the ones that are more known as folk *polskas* and those which are reminiscent of the polonaises written by composers such as Telemann and are sometimes defined as “German polonaises”. Cf. Ewa Dahlig-Turek, “On the history of *polska*”, in Ramsten, op. cit., 11ff.

¹¹² Another line of research suggests, however, that the walking tunes also ought to be considered forerunners of modern *polskas*, at least of those which survived until now in their duple-time form: hints of this old lineage might be recognised, for instance, in the Danish *totakt pols* tradition, or even in that of the *sønderhoning* in the island of Fanø. See for instance Henrik Koudal, “Polsk and Polonaise in Denmark 1600–1860”, in Ramsten, op. cit., 27, and Magnus Gustafsson, “Transformation of Melodies”, *ibid.*, 86ff.

¹¹³ Cf. for instance Gustafsson, ‘Polskans historia’, 283–84.

Crown ruled both the Polish-Lithuanian Commonwealth and the Swedish kingdom from 1592 to 1599.¹¹⁴ However, it has also been noted that Swedish-Polish nobility was present in Finland already in the 1560s: when the Polish princess Katarina Jagellonica married the Swedish duke of Finland John III in 1562, they settled in the Finnish capital of Turku. It is plausible that Katarina brought the latest fashions in Polish culture (and music) with her to their new country; whether this included tunes that could be related to the *polska* is still uncertain. At any rate, opinions converge in identifying the 17th century as the period when the *polska* ancestors began circulating at Nordic latitudes. A long process of metamorphosis slowly transformed them from baroque polonaises, “Polish ballets”, or other tunes whose titles and/or content showed some reference to Poland, into what local musicians started calling *polska* in Sweden and Finland, *pols* in Denmark and Norway, and also *springdans*, *springer*, and *springar* in Sweden and Norway.

The *polska* family is populated by a remarkable variety of tunes that share common features but also differ to various degrees. They descend from a very old lineage whose origins are not entirely clear yet; their diffusion is quite unique in European folk music history for its behaviour of crossing the boundaries of geographical areas as well as musical, social and cultural strata. Whether courtly entertainment or peasant dance, the Polish dance was throughout the 17th and well into the 18th century one of the most popular tune types in Europe.

2.2.2 Polska and springar

The term *springar* nowadays commonly refers to what can be considered the Norwegian variant of the *polska*; this assumption however oversimplifies the problems of terminology inherent to any study of aural traditions. The same category of *polska* contains a multiplicity of sub-groups whose differences may sometimes be remarkable; even within a single country, if we compare a typical southern Swedish [*slängpolska*](#)¹¹⁵ with equal beats and regular rhythmic figures to *polskas* with an “asymmetrical metre” (characterised by unequal beats and rhythmic irregularities, as explained in chapter 4)

¹¹⁴ Sigismund III Wasa, king of the Polish-Lithuanian Commonwealth from 1587 to 1632, was proclaimed king of Sweden in 1592 until his deposition in 1599. A century later, another monarch indirectly contributed to the propagation of Polish dances along the Polish-German axis: the kingdom of Augustus II the Strong united the Polish Crown with the Archduchy of Lithuania and the Saxon Electorate. The legendary *Dresdner Hofkapelle* was created in that period, hosting great musicians such as Georg Philipp Telemann, who had also spent many years in the service of Polish courts.

¹¹⁵ See Kaare K. Johnsen, *Pelle Björnert & Johan Hedin - Polska Från Östra Ryd (Live, 2006)*, 2009, <https://www.youtube.com/watch?v=Tbu0J0wyQ9s>.

such as a [kort-etta polska](#)¹¹⁶ from Värmland or a [Finnskog pols](#),¹¹⁷ we will notice of how tunes belonging to the same family can sound very different. In their essence, they all share the same genealogical tree rooted in late renaissance and early baroque central European music, which over the course of four centuries extended its branches towards Sweden, Finland, and Norway. As suggested above, the developmental history of the polska finds hardly any equal in the European folk scene in terms of length, variety, and multiplicity of socio-cultural contributing factors: this peculiar transformation process produced the kaleidoscopic biodiversity of melodies that makes the modern polska musical ecosystem so intriguing.

Polska, pols, springar, and other terms refer to music that Märta Ramsten groups under “Polish dances”:

Thousands and thousands of Polish dances – polska, pols, springar, etc. – have been notated, recorded and published by folk music collectors in Sweden, Norway and Finland during the 19th and 20th centuries.¹¹⁸

Sources dating even earlier, such as the Swedish Dübensamlingen (ca. 1670), contain Polish dances; Figure 3 displays a tune from the collection listed as *Springer Dance*.¹¹⁹



Figure 3: Dübensamlingen, Springer Dance

¹¹⁶ See Magnus Thörnblad, *Gubben Kihlstedt Polska Värmland*, 2016, <https://www.youtube.com/watch?v=ZOqozfZfpSE>.

¹¹⁷ In VA, *Puken i Kjerketårnet* (Nordic Sound, 1998).

¹¹⁸ Ramsten, *The Polish Dance in Scandinavia and Poland*, 7.

¹¹⁹ 'Scanned Image from the Düben Database', accessed 22 January 2022, https://www2.musik.uu.se/duben/displayFacsimile.php?Select_Path=vmhs018,011_p01a_01r.jpg&dnr=2488&pnr=01.

Gustafsson further explains (op. cit., 77):

Norwegian and Swedish (to some extent Finnish and Danish) springar, pols and polska forms [are] clearly related and growing from the same body. [...] The Norwegian terms *springar* and *springleik* have their counterparts in certain areas in Sweden in the form of *springare*, *springlek* and *springdans* and the term pols occurs in both Sweden and Denmark.¹²⁰

Norwegian sources do not mention Polish dances until the 1750s, even if it is widely agreed that they arrived in Norway around 1600. Literary sources from the late 18th century report performances of wedding dances defined as “springe dands” (Bassøe, ca. 1790), “Polish dances” (Eidsberg, ca. 1790), “true Polish dances” (Schøning, ca. 1770), and “Polish dance with walking and springdans” (Hammer, late 1700s).¹²¹

An account of a Norwegian wedding in Aurskog from around 1850 confirms the survival of the old polska suite bipartite form (walking dance in duple time followed by an after-dance in triple time), in which the “walking couple first walked around the floor, just like a kind of Polonaise, followed by a spring-dance.”¹²² Bjørn Aksdal (op. cit., 56–58) explains that in Norway the many duple-time pre-dances were transformed into wedding marches and *gangar*¹²³ melodies, whereas some triple-time after-dances evolved separately as *pols* tunes starting from the end of the 17th century. The diffusion of *polonaise* melodies in Norway was however much more limited than, for example, in Sweden or Finland. Aksdal explains:

The polonaise tunes most likely represent a repertory which originated from the popular Polish dance, but these tunes were mainly played to accompany the fashionable polonaise dance. As opposed to Sweden in particular, very little of this repertoire seems to have been picked up by local Norwegian fiddlers. [...] Only a very limited number of polonaise melodies in the notebooks have a more popular character which brings them closer to the pols tunes, or have traditionally accompanied the springar or pols dance. [...] Even if the initial difference between the two dance terms “pols” and “polonese” is of a linguistic character only, in the Norwegian notebook material these terms also reflect a real socio-cultural and musical distinction.¹²⁴

Regarding names and classification, he observes:

¹²⁰ Op. cit., 77.

¹²¹ See Bjørn Aksdal, “Polish dance with walking and jumping dance”, in Ramsten, op.cit., 53–55.

¹²² Scene described by Anders Heyerdahl (ibid., 55). The composite “Polish” wedding dance suite was still practiced well into the 20th century, and very often the after-dance was a triple-time variation of the walking dance in duple time, similar to the 17th-century *proportio* practice.

¹²³ See 3.4.4 for a description of the *gangar*.

¹²⁴ Op. cit., 68.

It is also relevant that the term “springdans” seems to have been used during the 19th century as a kind of national designation of the traditional dances in triple time, and this name was gradually also used more and more locally.¹²⁵

Norwegian anthropologist and ethnomusicologist Jan Petter Blom (1927–2021) summarises the terminology issues as such:

In easternmost Norway the terms pols, polsk, polskdans, springdans, rundom and gamalt are local names representing dances that are more or less similar or different depending on the level of description. The term *springleik* is used in the Gudbrandsdalen region including Folldal and Alvdal, and the generic term springar is used in the area to the southwest and west.¹²⁶

Aksdal suggests that “there are reasons to believe that the limits between the two forms were less absolute in older times”,¹²⁷ implying that the terms polska and springar are much more interchangeable than what is commonly thought. As the word also suggests in English, a “spring(ing)-dance” might have involved jump-like movements, and therefore could be translated into a very general category; this may well still be the case today, even after the historical progression, the collection, and the use of a particular tune type have consolidated more specific characteristics around it.

As mentioned in the previous section, during the first decades of the 1800s ideologies around national music were formulated in Europe; still in the 1900s, researchers in the northern countries tended to look for – or *construct* – differences between Swedish and Norwegian folk music, an approach that has been criticised in more up-to-date ethnomusicological research. Gustafsson (op. cit., 78) quotes, for example, Norwegian researcher Per-Åsmund Omholt, who is persuaded that it would have been more useful if they “had focused more on differences within the material, such as the ones between different types of tunes, instead of looking for a common “Norwegian tone”; along similar lines, for Swedish Gunnar Ternhag “fiddle traditions in Sweden and Norway are interwoven, musical similarities can be found on both sides of the borders.” Blom advises researchers to treat Sweden and Norway as a single unit in the comparative folk music studies, supported by Swedish scholar Sigurd Erixon’s views on the issue of Scandinavian national borders and cultural identities:

¹²⁵ Ibid., 59.

¹²⁶ Jan Petter Blom, “Springar, Pols and Polska Dances of the Scandinavian Peninsula”, in Ramsten, *The Polish Dance in Scandinavia and Poland*, 138.

¹²⁷ See the accompanying booklet to the audiocassette *Polskan i Norden* (Stockholm: Svea Fonogram, 1989).

Both halves of the peninsula are geographically and historically much too interwoven to be historically researched independently of each other.¹²⁸

A good example of this interconnectedness is the phenomenon of dairy farming cattle transhumance, which used to follow routes reaching areas from the southwest to the northeast of Norway over the border to Dalarna, Jämtland, and Uppland in Sweden. Much folk music is traditionally attached to this activity (e.g., the Swedish *fäbodmusik*).

It is therefore hardly possible to distinguish between springar and polska in absolute terms: every definition of the former type as something typically Norwegian needs to be contextualised both in geographical and temporal terms. Nevertheless, even if the two tune types share common history and features, Norwegian springars do display elements that make their category somewhat homogenous. Swedish researcher Mats Johansson suggests a list of characteristics, and includes the Norwegian pols in the same group:

1. The melody constitutes the basic groove-forming element.
2. The tempo is perceived as constant and the unfolding of rhythmic events corresponds to a triple-time dance meter.
3. The beat duration ratio is asymmetrical: all three beats within the measure have different lengths.
4. The rhythmic framework (the meter/groove) is highly flexible: measures and beats may vary considerably in length from one part of a performance to the next without compromising the experience of flow, tempo and groove.¹²⁹

Points number 3 and 4 will be better articulated in the analysis of the second quartet movement, *Telespringar*, presented in chapter 4.

2.2.3 Pols, springar and Norwegian *bygdedans*

Just as polska refers to Polish dances in the Swedish language, the Norwegian equivalent is the word pols¹³⁰ (sometimes *polsdans* or *polsk*). However, nowadays a pols may sometimes be considered as something different than a springar, regardless of the fact that they both belong to the Polish category and share some common features. While in

¹²⁸ Op. cit., 117.

¹²⁹ Mats Johansson, 'Rhythm into Style: Studying Asymmetrical Grooves in Norwegian Folk Music' (Rauland, University College Southeast Norway, 2010), 1.

¹³⁰ Interestingly enough, in old Norwegian tune collections the word pols only refers to dances in triple time, whereas the same term in Denmark largely refers to duple time melodies. The common matrix of Polish dances in the sense of tunes belonging to a composite suite in the Polish fashion is reflected in a common name for different dances.

Sweden the term *polska* has, through several centuries until this day, basically continued to designate the folk tune type that is nowadays played and danced, in Norway it is thought that the Polish-Swedish stream met with supposedly pre-existing layers of music: this older corpus might have been the basis for the formation of the dances commonly known as “village dances” or *bygdedans*.¹³¹ In the context of modern Norwegian folk dancing and playing, a distinction is drawn between *gammeldans* and *bygdedans*, the latter being a “category of folk dances which, in popular perception, constitute the core of indigenous or national dances of Norway” as Blom defines it in his introduction to Volume VII of the *Hardingfeleslåtter* tune collection.¹³² While *gammeldans* refers to figure and couple dances mostly from the 19th century, the older village dances are divided into two main types, listed by Blom as such:

- a) dances characterized by a fairly slow, heavy and elastic gait (2/4 or 6/8 meter) constituting three kinds: *gangar*, *rull* and *halling/lausdans*;
- b) dances termed *springar* (3/4) which are characterized by (1) light semi-running steps or (2) uneven (“limping”) three-beat steps.¹³³

The kinship with older layers and the inclusion in the *bygdedans* group may therefore be seen as one element that differentiates a *springar* from a *pols*. Among performers there is, however, a certain shared assumption that the instrument on which these tunes are normally played is also a determining factor in the tune categorisation: on a general level, a *springar* belongs to the repertoire for *hardingfele*, whereas a *pols* belongs to that of the ordinary fiddle – albeit with many exceptions.

The oldest known Hardanger fiddle dates to 1651 (see 5.2.5), which suggests that the making and playing of the instrument was already flourishing in the 17th century. Its resonance strings, flat bridge, smaller dimensions, and similarities to families of stringed instruments older than the violin, shaped stylistic features that idiomatically influenced *hardingfele* music, such as drone-playing, short motifs, a marked tendency to

¹³¹ Gustafsson (op. cit., 78) quotes Asbjørn Hernes’s study from 1952: “Hernes believes that these rudimentary ‘renaissance dances’ later developed into what in Norway is called ‘rural dances’, i.e., mainly *gangar*, *springar* and *pols*.” Egil Bakka (quoted by Gustafsson in *ibid.*, 76) adds that “it has been common to see the Norwegian village dances as a family with roots especially in folk German renaissance dance. But this is not something we can easily and directly demonstrate, there are more hypotheses that are based on two factors in particular: the idea of Renaissance as a development and proliferation period for couple dance forms, and the striking similarity many researchers have demonstrated between the Norwegian rural dances and folk dance forms in Bavaria and Austria.”

¹³² Jan-Petter Blom, ‘The Dancing Fiddle. On the Expression of Rhythm in *Hardingfele Slåtter*’, in *Norsk Folkemusikk*, vol. VII (Oslo: Universitetsforlag, 1981), 306.

¹³³ *Ibid.*, 306.

repetitiveness and variations, and phrasal irregularities.¹³⁴ The springars normally played on the Hardanger fiddle and those played on the normal *fele* seem to differ, especially in their melodic construction:

We normally speak of the Hardanger fiddle-springar on one side and the normal fiddle-springar or pols on the other. The *hardingfelespringar* is built on short motifs, often two bars only, and these motifs are repeated and varied in a very free fashion. The *felespringar* instead is based on longer periods or phrases, often eight bars, usually repeated according to fixed principles. In other words, we can establish a general distinction between bygdedans played on the hardingfele and on regular fiddle, despite the fact that the form name may be the same. There are of course many exceptions to this rule: the felespringar structure of many springar tunes in hardingfele districts, as well as springar and pols tunes with varied and repeated two-bar motifs in some ordinary fiddle districts.¹³⁵

Gustafsson however reinforces the idea of terminological blurriness:

Aksdal avoids mentioning that the usual *felespringar* and pols are actually also mainly based on two-bar motifs, which to an even greater extent strengthens the image of kinship and unclear boundaries.¹³⁶

A certain margin of error is therefore to be considered as an inherent aspect of folk tune classification. In many cases, the same tune is called springar in certain places and pols in others, as Aksdal explains:

Note that the same tune could be called “springar” in western Norway, “pols” or “springelek” in central Norway, and “rundo” in some places in eastern Norway. These local names refer both to the dance types performed to the tune as well as to the traditional names of tunes with a specific rhythm used by fiddlers in a certain district.¹³⁷

Aksdal ascribes the distinctions in the musical dialects between Norwegian districts more to stylistic features than to differences in the repertoire, owing to the fact that travelling fiddlers spread the tunes in different areas or periods of time, resulting in an assimilation of the same tunes into local repertoires under different names. Given the complexity of the topic, in the scope of the present analysis the term springar is associated with tunes that are nowadays normally played on the Hardanger fiddle in specific Norwegian

¹³⁴ Cf. Elizabeth Gaver, ‘The (Re)Construction of Music for Bowed Stringed Instruments in Norway in the Middle Ages’ (University of Oslo, 2007). The author advances parallels between medieval music and the older layers of the Hardanger fiddle repertoire.

¹³⁵ Bjørn Aksdal, op. cit. *Polkan i Norden* quoted in Gustafsson, *Polkans Historia*, 69.

¹³⁶ Op. cit., 69–70.

¹³⁷ Bjørn Aksdal et al., *Glossing over Rhythmic Style and Musical Identity: The Case of Polish Dance Rhythms and Western Notation* (Stockholm: Svensk Visarkiv, 2005), 16.

districts, widely identified with specific characteristics which will be described in the respective chapters.

2.2.4 Springar dialects

Within the family of the Norwegian springar, several local variants can be identified. The diversification mainly depends on rhythmic aspects, or on the motivic and phrasal construction of the melody. The sheer geographic morphology of the Norwegian territory, where narrow valleys, fjords, and mountains make communication challenging, accounts for the natural tendency of local specificities such as language and music to be preserved rather intact throughout history. The proximity of Norwegian local idioms to folk music traditions is revealed by the terminology used by some scholars who refer to the springar variants as “dialects”. Blom applies this idea to the description of the different types of springar:

The present comprehensive collection of hardingfeleslåttar represents an attempt to display the general idiomatic features of the genre by the use of certain modifications in the standard system of notation. However, the specific style of playing, especially its dialect features, as well as certain common expressive means that make the music “live” are not directly revealed through the scores. [...] The various dance dialects are distinguished mainly in terms of rhythm and style. Dialect features in general tend to reinforce popular notions about cultural differences between neighbouring communities and function as markers of local identity.¹³⁸

A rhythmic type of analysis suggested by Gustafsson (op. cit., 347) may help in navigating the thick forest of Norwegian springar varieties. The distribution of the beats within a rhythmic cycle (what may be called a bar, or measure, in most instances) is perhaps the most salient characteristic of springar types, closely related to the dance movements to which the tune is attached. For example, a triple-time bar can be divided into three beats of equal or different lengths; in the latter case, since the overall length of the bar remains ideally intact, a contraction of one of the beats generally produces a stretching of another beat, similar to what happens in Swedish polskas with a short first beat and a long second beat, or with a long first beat and a short third beat (see the reference tunes at the beginning of 4.2). The first and second beat are generally inversely proportional in terms of asymmetry distribution, whereas the third occupies approximately one third of the

¹³⁸ Blom, ‘The Dancing Fiddle. On the Expression of Rhythm in Hardingfele Slåttar’, 305–6.

measure. The amount of applied asymmetry varies not only between local dialects but also from fiddler to fiddler, and even from performance to performance of the same fiddler. The very high level of flexibility is a distinctive trait of these Norwegian tunes; it is applied however in such a way that it stays within the accepted boundaries of a specific springar metre. The reference to an external rhythmic grid, although widely acknowledged, is poignantly questioned by Mats Johansson, as quoted by Gustafsson:

Mats Johansson (2009) also points out that the rhythmic asymmetry in a Norwegian context may relate to a more performative perspective, namely that it can widely vary from performance to performance by an individual fiddler: "The rhythmic framework (the meter/groove) is highly flexible: measures and beats may vary considerably from one part of a performance to the next without compromising the experience of flow, tempo and groove".¹³⁹

Johansson's reflections, and their consequences, will be presented and discussed in more detail in chapter 4; for the time being, it will be sufficient to reiterate the idea that, in the words of Magnus Gustafsson (*ibid.*, 79), "the relationship between different tempo variations within a bar is not an independent musical parameter with a separate system. Instead, 'timing' is closely integrated with other aspects of the musical material and thereby becomes part of a larger whole, which in turn is shaped based on criteria such as completeness and well-formedness." The rhythmic analysis advanced by Gustafsson explains that

in Norway a typology with a focus on differences in rhythm and asymmetry has for a long time been crucial for the definition and systematization of different local and regional tune traditions. For example, in Telemark, Vestfold and Numedal, the one [first beat of the bar, Ed.] is perceived as the longest and the three as the shortest. In Hallingdal, Valdres, Gudbrandsdalen (with a small exception for Skjåk), as well as in parts of Østerdalen and Nordmøre, the one has been defined as the shortest and the two as longest.¹⁴⁰

In order to simplify the description in very general terms, Aksdal's division into two springar groups, as quoted by Gustafsson, might be taken as reference:

1. Tunes where the three beats have different lengths (metric asymmetry)
2. Tunes with three equally long beats (symmetrical metre)¹⁴¹

¹³⁹ *Op. cit.*, 347.

¹⁴⁰ *Ibid.*, 347.

¹⁴¹ *Ibid.*, 70.

Stringar is based on three types of springar ascribable to either of these groups: the first movement *Udelt takt* deals with tunes from the symmetrical group, whereas the second and third movements feature asymmetrical springar types from the Telemark and Valdres regions, respectively.

3 *Stringar I: Udelt takt*

The concept of metre is of central relevance to the analysis of *Udelt takt*, the first movement of the string quartet *Stringar*: a brief explanation is provided here to clarify its meaning and usage in the remainder of the thesis. Justin London's entry in the *New Grove Dictionary of Music and Musicians* defines metre as

the temporal hierarchy of subdivisions, beats and bars that is maintained by performers and inferred by listeners which functions as a dynamic temporal framework for the production and comprehension of musical durations. In this sense, metre is more an aspect of the behaviour of performers and listeners than an aspect of the music itself.¹⁴²

This definition firstly underlines the hierarchical aspect of metrical structures, namely the alternation of accented and unaccented units derived from poetic metre, where patterns of stressed and unstressed syllables originate several types of poetic feet. Musical metre therefore implies "a pattern composed of strong and weak impulses in some kind of regular alternation".¹⁴³

Secondly, London highlights the importance of a two-way performative-inferential process between performer and listener, causing the metre itself to emerge. A recent line of music analysts (including those whose work is cited in chapter 4 in the research overview on asymmetrical polskas and springars) has proposed and developed a similar view, based on the observations of, among others Lerdahl & Jackendoff (1983), Rothstein (1989), Schachter (1999), and Krebs (1999). For Schachter, the intelligibility of durational patterns is necessary for the listener to "compare one span of time with another and thus intuit the relationships among the various durations that make up the pattern".¹⁴⁴ Rothstein stresses the kinetic quality of metrical cycles, consisting of "a moving away from and moving toward a series of goal points (that is, downbeats)."¹⁴⁵ A view of metre as the complex coexistence of several layers is advanced by Krebs, derived from Lerdahl & Jackendoff. The latter clarify that the idea of metre as an alternation of

¹⁴² Justin London, 'Metre', in *Dictionary of Music and Musicians: The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (Oxford et al.: Oxford University Press, 2001), 16:531.

¹⁴³ Carl Schachter, *Unfoldings: Essays in Schenkerian Theory and Analysis*, ed. Joseph Nathan Straus (New York: Oxford University Press, 1999), 76.

¹⁴⁴ *Ibid.*, 80.

¹⁴⁵ William Nathan Rothstein, *Phrase Rhythm in Tonal Music* (New York: London: Schirmer Books; Collier Macmillan Publishers, 1989), 43. Rothstein refers this conception of metre to Victor Zuckerkandl, *The Sense of Music* (Princeton, NJ: Princeton University Press, 1971), 98–119. See also Victor Zuckerkandl, *Sound and Symbol*, Bollingen Series 44 (Princeton, NJ: Princeton University Press, 1969), 151–200.

strong and weak beats implies a metrical hierarchy of at least two levels of beats.¹⁴⁶ Krebs consequently distinguishes four “layers of motion” whose interaction determines the metre of a piece:

- Pulse layer: the most quickly moving pervasive series of pulses in a given work or section
- [Micropulse layer:] more quickly moving layers [that] may intermittently be woven into the metrical tapestry of a work as coloristic embellishments.
- Primary metrical layer: the most prominent metrical layer in a work, generally (but not always) the layer designated by the upper integer of the time signature and rendered visually apparent by the bar lines.
- Interpretive layer: a layer of motion that moves more slowly than the pulse layer and allows the listener to “interpret” the raw data of the pulse layer by organizing its pulses into larger units.¹⁴⁷

When an interpretive layer conflicts with one or more metrical layers, it is defined by Krebs as “antimetrical layer”: two common cases of this friction are the “displacement dissonance” (between nonaligned layers of motion bearing the same cardinality, namely the number of units), or the “metrical dissonance” (between nonaligned layers of motion with a different cardinality).¹⁴⁸ Opposed to the latter, the “metrical consonance” is a “state of maximal alignment of layers of motion”, where all pulses in the slow-moving interpretive layers align with the faster layers of the metre and its subdivisions.¹⁴⁹ In sum, metre is for Krebs the resulting union of all active layers of motion within a piece.

Based on the above-mentioned principles, metre therefore appears to be a very complex multi-dimensional phenomenon, which is still being debated and studied by theorists and researchers; a discussion is ongoing, for instance, about whether metre and rhythm are to be considered as separate or intertwined categories. As reported by London,¹⁵⁰ most scholars nowadays tend to strongly differentiate the domains of rhythm and metre. If rhythm signifies the general “variety of possible patterns of musical duration, both regular and irregular”, it is possible that, while all music is rhythmic at

¹⁴⁶ Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge, Mass. London: the MIT press, 1983), 19.

¹⁴⁷ Harald Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* (New York: Oxford University Press, 1999), 22. Ibid., 253–55.

¹⁴⁸ Cf. also Justin London, ‘Rhythm’, in *Dictionary of Music and Musicians: The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (Oxford et al.: Oxford University Press, 2001), 21:284. London similarly recognises the occurrence of “metric dissonance [...] when secondary accents and/or group lengths undermine the established metre to the point that a secondary metric framework may emerge”.

¹⁴⁹ Krebs, op. cit., 253–54.

¹⁵⁰ London, op. cit., 21:278.

some level, not all music displays the elements of rhythmic periodicity that characterise the metre, and therefore not all music is metrical: “irregular rhythms can occur in the context of a regular metre (e.g. syncopated figures and asymmetrical phrase structures), and not all metres require regular or even patterns of duration (e.g. Bartók’s ‘Bulgarian’ rhythms)”, making metre and rhythms two different entities. Nordic researchers such as Sven Ahlbäck (1995) differentiate between “periodic time” (metre) and “gestural time” (rhythm), as described in 4.2.3.

Even if the discussion around metre is indeed problematic for the lack of consensus regarding the fundamental issues of its nature and behaviour in relation to all other rhythmic components of a piece (as Schachter admits in *op. cit.*, 79), in this thesis I focus on metre in the diffused sense of the *periodical aspect* of rhythm, based on the characteristic of beat hierarchy and performative-inferential process summarised by London. I acknowledge the more holistic and psychological take on the phenomenon proposed by Lerdahl & Jackendoff, Rothstein, Schachter, Krebs, and borrow from the latter the idea of metre as a multi-layered metrical structure; his ideas of metrical dissonance, metrical displacement, and of grouping dissonance were intuitively used as compositional techniques in *Udelt takt*.

Concerning terminology, since the dominant metre of a piece is generally expressed by the time signature at the beginning (or wherever the metre changes), I use metre and time signature as interchangeable terms, when referring to metrical structures within the length of one bar; larger bar groupings, or “hypermeasures”, originate higher levels of metrical structures normally termed “hypermetres”, as briefly mentioned in later pages. Regarding the categories derived from rhythm and metre, a distinction between polyrhythm and polymetre should be made based on the different meanings associated with these concepts. Polyrhythms are intended as the simultaneous presence of two different rhythmic layers which are not multiples or factors of each other: whole-notes and half-notes played at the same time, for instance, do not produce a polyrhythm, as opposed to half-notes against half-note triplets. Whenever the polyrhythmic layers are metrical streams, and therefore the misalignment of their respective metrical periodicity produces metrical tension or dissonance, a polymetre arises. A polymetre can therefore be considered as a polyrhythm with a specific metrical character. Recent studies on the perception of these phenomena have however suggested that, in the presence of a polyrhythm or polymetre, it is not possible to hear the two (or more) individual layers at

once, but rather one recognises a dominant layer to which the others must be related, or alternatively “construct a composite metre to accommodate both rhythmic streams”.¹⁵¹

I also distinguish the term polymetre from polypulse, since pulse refers to “regular articulations in the flow of time”,¹⁵² unrelated to their hierarchical structure or alternation between strong and weak beats. Pulses, or beats, form the succession of smaller recurring units that is necessary to perceive in order to recognise the metre on the higher layers of rhythmic organisation. A polypulse will therefore emerge whenever two or more different successions of beats are juxtaposed, not necessarily originating a proper polymetre.

Another metre-related concept used in *Udelt takt* concludes the terminological clarification, namely that of metric modulation. This technique allows to shift from one metre to another using a common metrical unit as a transitional point, similar to what is achieved in harmonic modulation by common chords between two keys. Metric modulation resonates with medieval practices of proportional time signature change, briefly explained in 3.2.1 regarding mensural music; its systematic use in modern times was introduced by composer Elliott Carter (1908–2012) in *Canaries*¹⁵³ for percussion (1949).

3.1 Undivided beat

Springars with an “undivided beat” (*udelt takt*) are mentioned in a theory laid out by folk music researchers in the attempt to trace the origins of the modern day springar with three even beats. Bjørn Aksdal writes in 1993:

Judging from all evidence, the western Norwegian springar has developed in triple-time rhythm from the older springar in undivided beat. This kind of springar was eventually spread into areas of eastern Norway and successively to other districts. However, later on a wave of dance tunes arrived in Norway from Poland via the Baltics, Denmark and especially Sweden, bringing along new melodies. This impetus first reached the eastern parts of the country, where it gained a solid foothold. Even more influences were later brought by further foreign waves.¹⁵⁴

¹⁵¹ London, op. cit., 21:284.

¹⁵² Justin London, ‘Pulse’, in *Dictionary of Music and Musicians: The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (Oxford et al.: Oxford University Press, 2001), 20:599.

¹⁵³ See Erinmnn, *Eight Pieces for Four Timpani - Elliott Carter*, 2020, <https://www.youtube.com/watch?v=vEP6ZGHVK5g>.

¹⁵⁴ Bjørn Aksdal, “Dansemusikken” in Bjørn Aksdal, ed., *Fanitullen: innføring i norsk og samisk folkemusikk* (Oslo: Universitetsforlag, 1993), 133. English translation from Norwegian by the author of this thesis.

As explained above, springars can be divided into two general groups, according to the symmetry or asymmetry of their metre. Quoting Aksdal, Gustafsson explains the concept of undivided tunes:

Aksdal affirms that both of these types came to Norway from abroad. He additionally describes an older form of tune with “undivided rhythm”, where the musical beat is more relevant than the metrical (not 1,2 - 1,2 or 1,2,3 - 1,2,3, but 1,1,1,1...). Remnants of this type have survived in certain areas of western Norway up to our days. [...] Aksdal [...] lays out a developmental-historical perspective by suggesting the hypothesis that “springar and pols rhythms developed from the undivided beat type, through a foreign influence”. If I am to interpret Aksdal correctly, he means that in the Norwegian tradition there lived an older layer of couple dance music from times before polska forms were spread to Scandinavia.¹⁵⁵

The undivided attribute of the rhythm means that the beat is the building unit of the rhythmic structure: in modern art music notation, this should be associated with a 1/4-metre, or, as a more practical option, grouped in a series of measures of any length (provided they have the same denominator) where all beats have equal importance and consequently there is no beat hierarchy. A fitting image would be that of a hopping dancer who proceeds with bouncing, hopping steps of the same weight and importance. This very much resembles the basic step of the *Vestlandspringar*, a dance that is typical of western Norway, where the bulk of the *udelt takt* springars supposedly comes from.¹⁵⁶ This uncomplicated dance-musical gesture supposedly predated the arrival of Polish tunes to Norwegian shores and, combined with the new waves of music imported from abroad, originated the symmetrical 3-beat springar types that are known today. Gustafsson summarises this theory, mentioning its most prominent advocates:

In *Variasjon, dialekt og alder i springar og pols* (1992), Egil Bakka, together with Bjørn Aksdal and Erling Flem proposes a chronology of development where the “undivided rhythm” in dance and music in the southwest is ranked as the oldest form, while the three-part symmetrical rhythm of springar and pols forms in, among others, Trøndelag represents a more recent layer. [...] In *Norsk Dansetradisjoner* (1978) Bakka also speculates on an early development where “undivided rhythms” are perceived as the original material and suggests that not only the “undivided springar”, but also the halling and gangar have their historical roots in it. He further argues that

¹⁵⁵ Gustafsson, ‘Polskans historia’, 70.

¹⁵⁶ In the early 1970s the Norwegian State Television NRK broadcast a series of short documentaries on the main folk dance types, entitled *Spela spelmann, lat fela låte*, displaying live hardingfele music, dance, and interviews with the performers (in Norwegian). See ‘Dansar frå Vestlandet’, *Spela spelmann, lat fela låte* (NRK1, 1971), <https://tv.nrk.no/serie/spela-spelmann-lat-fela-laata/1971/FOLA71000271/avspiller>. The simple and lightly hopping steps of the female dancer at the beginning of the movie are very indicative of the non-hierarchical, undivided character of the music.

the dance to this “undivided beat” was performed both walking and running, which of course in my opinion relates to the two-part form of the early European couple dances.¹⁵⁷

Blom describes Vestland dances pointing out this important quality as shared by the music and the dance:

The springar dances of southwestern Norway are distinctly different from the rest within the corpus, all of which have compound rhythms. The southwestern traditions do not display rhythmic periodicity and should therefore be classified as dances based on simple rhythms. Like the gangar and the halling, the dance beats have even lengths and do not differentiate systematically with reference to weights or accents. This applies equally both for the music and the swinging bodies of the dancers, and the steps do not form regular patterns based on three-beat sequences.¹⁵⁸

The absence of such patterns in these dances allows the construction of phrases that can be formed by odd and irregular numbers of units (segments of 3, 4, 5, or 7 beats for example) without altering a periodicity of the dance that simply does not exist. This feature is of crucial importance in the first movement of *Stringar*, and resembles techniques found in other musical folk traditions and genres.

The blending process of external influences and local elements which might have taken place in southwestern Norway is well portrayed by Omholt in his study on regional variations in Norwegian music:

Concerning the historical aspect, I argue that the traditions in the southwest may be the results of impulses imported during the 16th century. Dance, music, and possibly early fiddle instruments may have spread to Norway through a strong contact with German speaking areas on the continent; this view is shared by dance researchers as well. According to my studies, the gangar can be seen as the archetypal form in this tradition. I describe a process of transformation in eastern Norway where pols melodies turned towards the typical formal patterns of southwest gangar. The eastern impulse is probably slightly younger than the southwestern and has spread among different social layers, while the early southwest tradition probably spread among people from lower strata.¹⁵⁹

¹⁵⁷ Op. cit., 76.

¹⁵⁸ Op. cit. in Ramsten, *The Polish Dance in Scandinavia and Poland*, 126.

¹⁵⁹ Per Åsmund Omholt, 'Regional og typologisk variasjon i norsk slåttemusikk: en kvantitativ tilnærming med et historisk perspektiv' (Bergen, Universitetet i Bergen, 2009), 306. English translation from Norwegian by the author of this thesis.

Figure 4, adopted from Aksdal's quoted chapter in *The Polish dance in Scandinavia and Poland* (2003, 72), sketches the distribution of dance



Figure 4: Aksdal, Dance distribution

types in Norway. Egil Bakka, quoted by Gustafsson (op. cit., 75), interprets this diffusion from a historical perspective by explaining that the southwestern part of the country might have been an area where older layers of music were exposed to younger and external influences. Bakka's hypothesis of a "southwestern area of relics" resonates with the work of other researchers such as the aforementioned Blom (2003) and Omholt (2009), converging on an idea of Vestland as a crossroads of musical strands coming from different geographical and temporal frames, whose interaction laid the foundation of what would become the springar in undivided beat and later forms of triple-time springars with even beats. Once more quoted by Gustafsson (op. cit. 70–71), Aksdal summarises the concept and observes that, judging from the existing evidence, the western Norwegian springar has developed in triple-time rhythm from the older springar in undivided rhythm.

Adding to the number of tunes that feature even beats irregularly grouped in phrases of different lengths, the *slåttar med taktbrudd* ("tunes with broken beat", of which this [polsdans](#)¹⁶⁰ from Drevja is an example) are quoted by Gustafsson (op. cit., 70) and described by the Norwegian folk music research team of Bakka, Aksdal and Flem as springar or pols melodies that, despite their triple-time metre, display bars in 2/4 or 4/4. These instances occur generally at the end of a phrase, for example at the middle or final repeat of symmetrical tunes; the addition of a fourth or fifth beat, for example, does not affect the dance, which continues as before. According to Aksdal,¹⁶¹ the phenomenon might have originated from improvisations by the fiddlers. Adding extra beats does not

¹⁶⁰ In VA, *Lyst Heile Natta* (Ta:lik – TA91CD, 2011).

¹⁶¹ See Aksdal et al., *Glossing over Rhythmic Style and Musical Identity*, 18.

affect the dancers, who continue as before, similarly to other medium-paced, even-beat dance types such as the Swedish [slängpolska](#)¹⁶² and the Danish [sønderhoning](#),¹⁶³ where the dancers may enter at any beat in the measure, since all beats are of equal importance – even if they are mostly organised in longer and more periodical units than the udelt springar.

Before proceeding further, it might be useful to provide examples of relevant springar tunes from the Norwegian folk tradition; section 3.4 will deal with some of these reference tunes more in detail. Table 1 lists pieces that qualify as springar in undivided beat.

Performer	Title	Album
Geitungen	“Springar (alternative)”	<i>Bra Kast!</i> (Heilo – HCD7204, 2005)
	“Springar”	
	“Springar etter Ivar Fuglestad”	<i>Langt ute</i> (Heilo – HCD7255, 2009)
Sigmund Eikås	“Iølstring (springar i udelt takt)”	<i>Spel til dans</i> (Grappa Musikkforlag, 1994)
	<i>Springar etter Ola Mosafinn</i> (Audio ex. 1)	Private recording (Sunnfjord, 2015)
Arne Sølvberg	<i>Gammal springar</i> (Audio ex. 2)	Private recording (Stryn, 2016)

Table 1: Springars in undivided beat (single beat)

Audio ex. 1: Eikås, *Springar etter Ola Mosafinn*

Audio ex. 2: Sølvberg, *Gammal springar*

The tunes in Table 2 retain the 1,1,1,... rhythmic feel, but are more organised according to multiple-beat patterning.

Performer	Title	Album
Sigrid Moldestad	“Springar etter Samuline Seljeset og Olin Nygård”	<i>Taus – Felefortellingar</i> (Heilo – HCD7223, 2007)
Geitungen	“Tveitaslått”	<i>Bra Kast!</i> (Heilo – HCD7204, 2005)

Table 2: Springars in undivided beat (multiple beat)

Finally, the springars in Table 3 are related to the udelt takt type but show a clear 3-beat even metrical structure.

¹⁶² See Anton Schneider, Petra Eriksson, Håkan Vejvi, Emilia Amper, 2008, <https://www.youtube.com/watch?v=LL1GKEsKelQ>.

¹⁶³ See oleviolin, *Sønderhoning*, 2011, <https://www.youtube.com/watch?v=AB6i5YzDeSc>.

Performer	Title	Album
Gro Marie Svidal	“Gjelsviken”	<i>Eilov</i> (Lærdal Musikkproduksjon – LMP116, 2016)
Håkon Høgemo, Tom Karlsrud	“Springar etter Sjur Eldegard”	<i>Samdrag</i> (Lærdal Musikkproduksjon – LMP216, 2016)
Synnøve Bjørset	“Solundspringar”	<i>Slåttar</i> (Ta:lik – TA77CD, 2009)
	“Bestefarslåttan”	<i>Ram</i> (NORCD – NORCD0140, 2001)
Berit Opheim Versto	“Springar etter Anna Skeie”	<i>Slåttar på tunga</i> (2L – 2L46, 2008)

Table 3: 3-beat springars

In addition to drawing inspiration mostly from the tune type in Table 1, the first movement of the *Stringar* quartet also uses a hybrid form of springar: in the tunes listed in Table 4, the metre seems to sway between the 3/4 time signature of an even-beat springar and the 6/8 duple-time feel of a gangar.

Performer	Title	Album
Gro Marie Svidal	“Udelt springar”	<i>Jølster 2012</i> (Ta:lik – TA104CD, 2012)
Erlend Apneseth	“Springar etter Ole Viken”	<i>Blikkspor</i> (Heilo – HCD 7283, 2013)

Table 4: Hybrid springars

The next two sections 3.2 and 3.3 will deal with musical genres (progressive metal and south Indian music) which, though apparently unrelated to Norwegian springar and undivided beats, share with them some common characteristics that laid the foundations of *Udelt takt*.

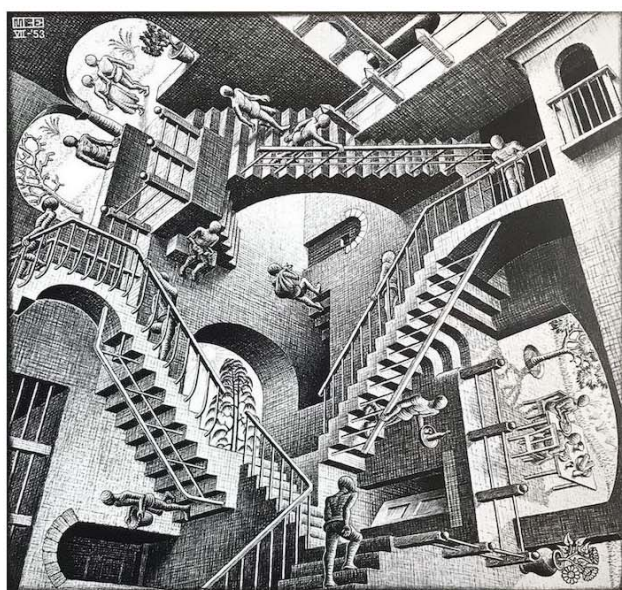
3.2 Progressive metal

3.2.1 Oddities

An average listener of Western art music might be mainly accustomed to duple or triple metres and relatively simple rhythmic patterns. Despite – or perhaps because of – this, one of the aspects I have always appreciated in music is the element of surprise, intended as unexpected departure from an expected norm. It could arise from irregularities, unusual turns, or clever expedients to deviate from normality and make the music special, unique; or from complex, multi-layered music that required more than one listening to realise what it was that had captured my attention in the first place. A sense of adventure and unpredictability is what keeps music alive and meaningful to me. This also applies to other forms such as the visual arts: ever since I was exposed to paintings and sculptures, I have shown more inclination towards, for example, the unrealistic proportions and

fantastic shapes and colours of medieval art realised before linear perspective became fully acquired, or pre-modern works that give a somehow odd idea of reality.

In later periods, the esotericism of the great *fin de siècle* symbolists and the dismantling of conventional lines, shapes, and representations in 20th-century art (notably abstractionism) captured my attention. The work on the human figure by painters such as Pablo Picasso and Egon Schiele has always had a deep, visceral impact on me. On the other hand, the apparently crystalline yet deceptive surrealism of, among others, Maurits Cornelis Escher showed me how illusion and rationality can be used as a means to reach recesses of knowledge that lie beyond the commonplace divide between “brains” and “guts”. To most viewers, Escher’s works are particularly striking in that they *seem* perfectly realistic, but upon a closer look they subvert the rules of commonly perceived reality; the concept of optical illusion applied to music is another key element of *Udelt takt*. Figure 5 presents two of Escher’s drawings.¹⁶⁴



Relativity (1953)



Waterfall (1961)

Figure 5: Escher, *Relativity* and *Waterfall*

Renaissance and early baroque music, to which I have been exposed due to my H.I.P.P. activity as a string player, seem to speak a similar language to what has been described

¹⁶⁴ Images retrieved at 'File:Escher's Relativity.Jpg', in *Wikipedia*, 15 August 2020, https://en.wikipedia.org/w/index.php?title=File:Escher%27s_Relativity.jpg&oldid=973196642; 'File:Escher Waterfall.Jpg', in *Wikipedia*, 29 May 2021, https://en.wikipedia.org/w/index.php?title=File:Escher_Waterfall.jpg&oldid=1025758278.

so far regarding the element of surprise, in that they translate the unexpectedness into dramatic turns of harmony, melody, and form. The [Sonata Seconda](#) (1641)¹⁶⁵ for solo violin and basso continuo by Giovanni Battista Fontana (1589–1630) gives an idea of how theatrically the affect could be varied according to 17th-century rhetoric. The melodic line is alternately lyrical, static, leaping, and exuberantly darting in all directions, yet it finally always aligns with the resting points provided by the accompaniment at the downbeats. The element of surprise here is summoned by the fast succession of affects, a short-temperedness which was not at all uncommon in 17th-century sonatas. Fontana's second sonata contains some of the most virtuosic and extravagant *passaggi* in the early baroque Italian violin literature: the excerpt in Figure 6 shows how the violin launches quite suddenly into a passage of 24 very fast notes (a 24-tuplet, in modern terminology) in a time signature of 2/2, immediately receding into the placid lyricism of the next two bars.¹⁶⁶ Listen to the excerpt [here](#).

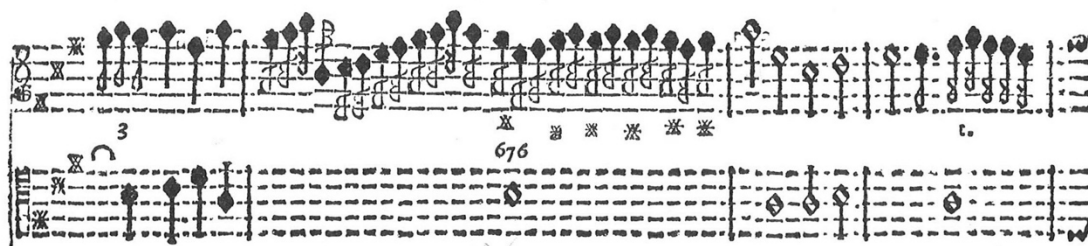


Figure 6: Fontana, Sonata Seconda

This excerpt displays a use of the barline that sometimes corresponds with the modern concept of bar or measure, while in other cases encloses more than one bar (all barlines in the example separate 2/2 units, except the second and third barlines that group two 2/2 units together).

Earlier pieces, especially in renaissance vocal literature, were still attached to the idea of the horizontal independence of the individual lines, only aligning at nodal points. The treatment of rhythm was freer from barline patterning than in later baroque works, where the rise of monody and the development of the *basso continuo* practice increased

¹⁶⁵ In Enrico Onofri, Lorenzo Ghielmi, and Margret Köll, *Anno 1630* (Winter & Winter – 910091-2, 2003).

¹⁶⁶ Image retrieved at <https://s9.imslp.org/files/imglnks/usimg/8/83/IMSLP404295-PMLP71831-Fontan.pdf>. 9. For reference, see '18 Sonatas in 1, 2, 3 Parts (Fontana, Giovanni Battista) - IMSLP: Free Sheet Music PDF Download', accessed 3 February 2022, [https://imslp.org/wiki/18_Sonatas_in_1%2C_2%2C_3_Parts_\(Fontana%2C_Giovanni_Battista\)](https://imslp.org/wiki/18_Sonatas_in_1%2C_2%2C_3_Parts_(Fontana%2C_Giovanni_Battista)).

the importance of the vertical dimension, and therefore rhythms responded to a stricter order of alignment rules.¹⁶⁷ This is evident in genres inspired by vernacular material such as the 16th-century *frottola*. The beginning of the onomatopoeic *Lirum Bililurum* by Rossino Mantovano (fl. 1505–1511), shows a C time signature, realised by the drone-like bass (mimicking the “sonar da piva in fachinesco”, or “bagpipe playing in Bergamasque dialect”), against which the three upper voices move in a triple-time feel that aligns with the duple time in the bass only towards the first cadence.¹⁶⁸ Figure 7 displays the opening phrase of the piece, which can be listened to [here](#).¹⁶⁹

(Transposed and transcribed by Dwight Jilek©2012)

Figure 7: Mantovano, *Lirum bililurum*

In *Scaramella fa la galla*, a well-known setting by Loyset Compère (1445–1518) of the adventures of the popular character Scaramella, a soldier often depicted in buffoonish

¹⁶⁷ See David Hiley, ‘Bar’, in *Dictionary of Music and Musicians: The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (Oxford et al.: Oxford University Press, 2001), 2:681–82. “The earliest repertoire to employ bar-lines at regular metric intervals – keyboard and lute (vihuela) music – were written in Tablature. [...] Bar-lines are found, for example, in the Faenza Codex (written 1400–1420), Conrad Paumann’s *Fundamentum organisandi* (1452) and the Buxheim Organbook (written 1450–1470). In England bars of irregular length are found in keyboard sources as late as the Fitzwilliam Virginal Book (written 1609–1619). Polyphonic vocal music of the Renaissance was not notated in bars, except when set out in keyboard Partitura at the end of the 16th century. [...] Solo parts and partbooks did not use bars until the beginning of the 17th century.”

¹⁶⁸ Images retrieved at https://s9.imslp.org/files/imglnks/usimg/3/35/IMSLP306265-PMLP495480-frottole_2.pdf, xxxii (for reference see ‘Frottole, Libro 2 (Petrucci, Ottaviano) - IMSLP: Free Sheet Music PDF Download’, accessed 3 February 2022, [https://imslp.org/wiki/Frottole%2C_Libro_2_\(Petrucci%2C_Ottaviano\)](https://imslp.org/wiki/Frottole%2C_Libro_2_(Petrucci%2C_Ottaviano)).) and ‘File:Mantovano-Lir.Pdf - ChoralWiki’, accessed 22 January 2022, <https://www.cpd.org/wiki/index.php/File:Mantovano-lir.pdf>.

¹⁶⁹ In *The King’s Singers and The Consorte of Musicke, Madrigal History Tour* (EMI Classics – 724358571424, 2004).

terms, the beginning (Figure 8)¹⁷⁰ displays no barlines, a duple time (cut-time) signature, and a triple-time melody in almost canonical imitation – except for the tenor, which doubles the values. Listen to the excerpt [here](#).¹⁷¹

Scaramella fa la galla
Basevi, f. 16v-17r

Edited by Clemens Goldberg Compere

Sca - ra - mel - la fa la gal - le

Sca - ra - mel - la fa la gal -

Figure 8: Compère, *Scaramella fa la galla*

These examples show how overriding the metrical unit, intended as the periodic repetition of a cycle of beat units, was a common practice in eras of music history when the time signature (*tempus*) simply described the general relation between the main rhythmic pulsation (*tactus*) and its subdivision in rhythmic figures, without implying a rigid partition of the music into bars.

The term *tactus* (from the Latin *tangere*, “to touch”) is the origin of the etymology of *battuta* or *takt* (Italian and German for “measure”). In use between the 15th and the 18th century, it indicated the upward and downward hand beating movement used to measure musical time, the downbeat (*battere*, in Italian) being the place where the counting started. The concept of *tactus* originated from practical needs, and its meaning varied through history; for the sake of accuracy, it should not be identified with the

¹⁷⁰ Image retrieved at https://s9.imslp.org/files/imglnks/usimg/5/5e/IMSLP663839-PMLP421839-16v-17r_Scaramella_fa_la_galla_originalclefs.pdf. For reference, see ‘Scaramella Fa La Galla (Compère, Loyset) - IMSLP: Free Sheet Music PDF Download’, accessed 3 February 2022, [https://imslp.org/wiki/Scaramella_fa_la_galla_\(Comp%C3%A8re,_Loyset\)](https://imslp.org/wiki/Scaramella_fa_la_galla_(Comp%C3%A8re,_Loyset)).

¹⁷¹ In Hilliard Ensemble, *Josquin – Motets and Chansons* (Virgin – CDM613022, 1996).

modern concept of time signature: tactus is a unit of time measured by hand movement, whereas time signature defines durational relations between the main unit and its subdivisions present in the piece. Modern time signatures have their ancestors in the late 13th century, when the mensural notation was introduced as way of communicating how long and short notes were to be put in relation to one another, allowing single musical lines to develop freely yet relying on each other in order for the polyphonic texture to work.¹⁷²

Mensural notation made it possible for each voice in a polyphonic piece to have a different time signature, or “mensuration”, creating early examples of polymetrical music and filling theoretical books with an overwhelming number of signs and conventional markings to define all the conceivable mathematical proportions between the different parts in the same piece. The complexity of this practice reached its culmination in the 14th century with the *Ars Nova* and *Ars Subtilior* styles. A thorough study on the medieval origins of intricate metrical phenomena exceeds the boundaries of the present paragraph; listening to pieces such as Zacara da Teramo’s (ca. 1350/60–1413/16) “[Sumite, karissimi](#)”¹⁷³ and Johannes Ciconia’s (ca. 1370–1412) canon “[Ray au soleil](#)”¹⁷⁴ will suffice to demonstrate the level of difficulty embedded in the music from that time. In the late Middle Ages, the influence of the Pythagorean tradition, which associated music and mathematics, was still strong: it is therefore unsurprising that the two most prominent *Ars Nova* composers, Philippe de Vitry (1291–1361) and Johannes de Muris (ca. 1300–1350), were both musicians and mathematicians.

Another example of parallelism between older and later practices is the renaissance organisation of rhythmic structures overstepping actual or ideal barlines, which reminds one of the modern idea of hypermeasure, an important aspect of the architecture in *Udelt takt*. Defined by Edward Toner Cone as a “metrical unit of greater length than a notated measure”,¹⁷⁵ the term refers to larger-scale structures opposed to underlying smaller-scale grids. Carl Schachter explains hypermeasures as “suprameasure

¹⁷² For an informative video introduction to mensural music, see Early Music Sources, *Mensural Notation - the Basics*, 2020, <https://www.youtube.com/watch?v=G1F2FSLakVA>.

¹⁷³ In Orlando Consort, *The Saracen and the Dove* (Archiv Produktion – 459620-2, 1999).

¹⁷⁴ See Jordan Alexander Key, *Johannes Ciconia: Prolation Canon, 'Le Ray Au Soley'*, 2016, <https://www.youtube.com/watch?v=YrOEuwYy3M>.

¹⁷⁵ See Edward T. Cone, *Musical Form and Musical Performance* (New York, NY: Norton, 1968), 79. Quoted in Krebs, op. cit., p. 261, where the author also suggests that the term originated the concept of hypermetre.

units that are perceived *as if* they were measures, because they exhibit a regular alternation of strong and weak ‘beats’ analogous to that of single [...] measures”.¹⁷⁶

Uneven or irregular groupings at the phrase level can be detected in polska tunes as well: an interesting aspect that caught my attention during the research on the early ancestors of the polska was the beat or bar grouping in the phrasal construction of many of the Polish dances notated in baroque collections. Contrary to the 4- or 8-bar hypermeasure unit, which seems to be the normative structure not only in 18th-century art music but also in tune collections, especially from the 1750s onwards, older specimens reveal more irregular tendencies. Swedish and Finnish tunebooks from the 17th and 18th century contain melodies that do not follow the 2+2 or 4+4 bars model, but instead display irregular groupings of 2- and 3-bar motifs. A serra melody from Anders Törne’s collection (ca. 1690), presented in Figure 9 in Eva Hov’s transcription from the original tablature, features a 2+3 phrase in the A part and a 2+2+3 phrase in the B part.¹⁷⁷

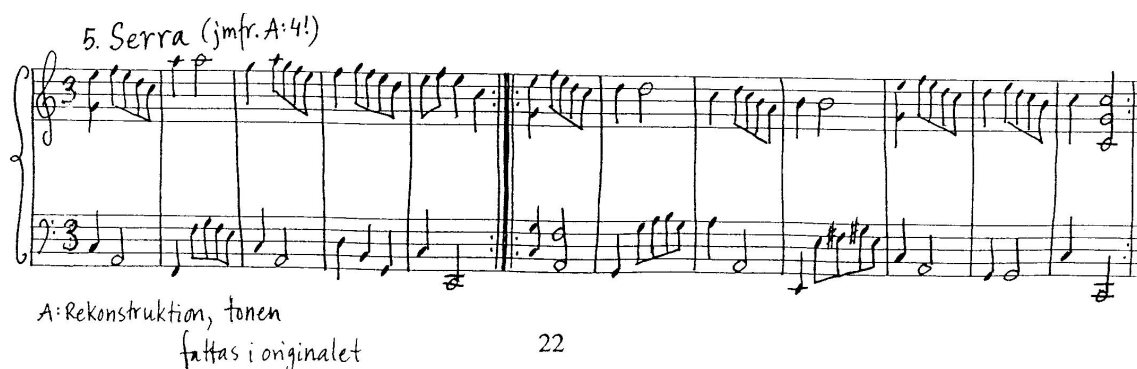


Figure 9: Törn, Serra

In Polonesse 37 from Pehr Andersson’s tune collection (1731), the A part is a 3+2 phrase: even if measure 3 is a literal repetition of measure 2, and therefore the first grouping might be considered as a 2-bar unit with a 1-bar expansion, the rhythmic emphasis of the music seems to provoke the perception of three downbeats instead of two. The more regular B part repeats 2-bar units five times for a total of 10 bars (Figure 10).¹⁷⁸

¹⁷⁶ Schachter, *Unfoldings*, 8.

¹⁷⁷ See Eva Hov, ‘Om notsamlingen efter Anders Törne, Stora Tuna, från 1690-talet’ (Universitetet i Trondheim, 1994), 22. Used by kind permission of the author.

¹⁷⁸ ‘Ma 1:013 - Ur Svenskt Visarkivs Katalog Över Folkmusikkommissionens Notsamling Och Musikmuseets Spelmansböcker’, accessed 22 January 2022, <https://katalog.visarkiv.se/lib/views/fmk/ShowRecord.aspx?id=1431381>.



Figure 10: Andersson, Pollonesse

Erik Ulrik Spoof's tune collection from Finland (1796) presents a melody that is likely to be older, as its modal and rhythmic traits reveal (Figure 11).¹⁷⁹

Polonesse "Läksin minä kesäyönä käymään" [E.U. Spoof Nuottikirja (1796), n. 2]



Figure 11: Spoof, Pollonnesse 2

The phrase structure here is 3+3 and 2+2+3. The above tunes were used, among many others, for the composition of the two orchestral overtures in baroque style featured in my first two doctoral concerts.¹⁸⁰

A second and perhaps more popular example of asymmetrical structures comes from the central-eastern European folk traditions, particularly Bulgarian and Macedonian, which make abundant use of uneven metres such as 5/8, 7/8, 11/8, 13/8 or 3+3+2/8, 2+2+2+3/8, etc. The use of irregular time signatures here is however *regular*, since the pieces keep the same time signature for their entire duration. In this [horo](#)¹⁸¹ from western Bulgaria the time signature is 12/8, divided into 3+2+2+2+3. Structures in five beats are featured in the Finnish *runolaulu*, the rune-singing oral tradition which in the 19th century provided Elias Lönnröt the basis for the construction of the *Kalevala* epic

¹⁷⁹ See Eero Nallinmaa, 'Erik Ulrik Spoofin nuottikirja' (Tampere [Tekijä], 1969), 129.

¹⁸⁰ [A Finnish suite](#) and *A Swedish suite*, both for string orchestra.

¹⁸¹ See Bulg Folk, ПЕТРУШИНО ХОРО - WEST BULGARIA, 2012, https://www.youtube.com/watch?v=5byq5RAU-_w.

poem.¹⁸² This element that has been captured by Jean Sibelius in his symphonic poem *Kullervo*¹⁸³ for soloists, male choir, and orchestra.

There is hardly any trace of irregular (also called complex) time signatures in Western art music before the 19th century, and it is not until the early 20th century that their use becomes widespread among composers, perhaps under the influence of a rediscovery of folk music on one hand and the need to renew the rhythmic side of the musical language on the other. Two relevant examples are Béla Bartók and Igor Stravinsky. The former largely imbued his output with Hungarian, Romanian, and Balkan folklore, especially in his collection of the 153 progressive piano pieces called



Figure 12: Bartók, Mikrokosmos 148

Mikrokosmos, written between 1926 and 1939. The analysis of the folk traditions addressed by the composer falls outside the scope of the present discussion; in order to provide an example, however, an excerpt from the sixth *Mikrokosmos* volume (the [Bulgarian dance n. 148](#),¹⁸⁴ interpreted here by Bartók himself), is presented in figure 12.¹⁸⁵ Iconic and revolutionary,

possibly in any of the rhythmic aspects mentioned so far, Stravinsky's *Rite of Spring* (1913) displays several passages where rather frantic metre changes take place: the

¹⁸² Cf. Anni Kiriloff, "Kantele", in VA, *The Kalevala Heritage – Archive Recordings of Ancient Finnish Songs* (Ondine – ODE849-2, 1995). Also "Hijien Hirvi", in Outi Pulkkinen, *Lemminkäinen* (Jumi-Tuotanto – JUMI008, 2016). For a reference regarding Finnish rune-singing and the compilation of the *Kalevala* by Elias Lönnröt, see 'Rune-Singing, the Musical Vernacular', FMQ, accessed 9 February 2022, <https://fmq.fi/articles/rune-singing-the-musical-vernacular>.

¹⁸³ See musicanth, *Jean Sibelius - Kullervo, Op. 7 (4/7)*, 2010, <https://www.youtube.com/watch?v=F0nWHCeus9E>.

¹⁸⁴ See pianopera, *Bartók Plays Bartók Six Dances in Bulgarian Rhythm (from 'Mikrokosmos')*, 2012, https://www.youtube.com/watch?v=Cj306a_qTPk.

¹⁸⁵ Béla Bartók, *Mikrokosmos 6* (London: Boosey & Hawkes, 1987), 43.

beginning of *The Chosen One*¹⁸⁶ is announced by 11 obsessively equal chords, subsequently engaging in a rapid succession of measures of 5, 9, 7/8 (Figure 13).¹⁸⁷

Figure 13: Stravinsky, *The Chosen One*

The use of uneven metres may produce similar results as the renaissance and early baroque adherence to textual rather than musical metre, often creating groupings of irregular length, as is also the case in the examples by Mantovano and Compère quoted above. Stravinsky found the closeness of musical and textual rhythm, especially in the context of sacred motets, particularly fascinating, as in Monteverdi's *Laudate Pueri*,¹⁸⁸ where the enunciation of the cantus firmus presents groupings of 5, 3, and 4 rhythmic units (quarter-notes in the video score):

I know of no music before or since [...] which so felicitously exploits accentual and metrical variation and irregularity, and no more subtle rhythmic construction of any kind than that which is set in motion at the beginning of the 'Laudate Pueri,' if, that is, the music is sung according to the verbal accents instead of [...] the editor's bar-lines.¹⁸⁹

In the article 'The so-called Bulgarian rhythm',¹⁹⁰ Bartók affirms that examples of irregular metres are hardly ever found in European cultivated music before the 20th

¹⁸⁶ See Boosey & Hawkes, *Stravinsky - The Rite of Spring (Official Score Video w/ Live Chat Commentary)*, 2020, <https://www.youtube.com/watch?v=0XyTWt82XQM>.

¹⁸⁷ Images retrieved at <https://s9.imslp.org/files/imglnks/usimg/e/ed/IMSLP524703-PMLP179425-PMLUS00762-piano4hands.pdf>, 49–50. For reference, see 'The Rite of Spring, K015 (Stravinsky, Igor) - IMSLP: Free Sheet Music PDF Download', accessed 3 February 2022, [https://imslp.org/wiki/The_Rite_of_Spring_K015_\(Stravinsky,_Igor\)](https://imslp.org/wiki/The_Rite_of_Spring_K015_(Stravinsky,_Igor)).

¹⁸⁸ See PrincepsMusicae, *Monteverdi - Vespri Della Beata Vergine - Laudate Pueri (Score)*, 2012, <https://www.youtube.com/watch?v=QavYxLwI5FU>.

¹⁸⁹ Igor Stravinsky, *Themes and Conclusions* (Berkeley: University of California Press, 1982), 120.

¹⁹⁰ Béla Bartók, 'Az Úgynevezett Bolgár Ritmus', *Énekszó*, 1938.

century, with the exceptions of Chopin's [Larghetto](#)¹⁹¹ in 5/4, from his piano Sonata n. 1 (1827–28), which in Bartók's opinion is reminiscent of Polish folk music, and the [Allegro con grazia](#)¹⁹² from Tchaikovsky's symphony nr. 6 (1893), also in 5/4. Wagner is also fleetingly mentioned for the occasional use of 5/4 bars in the third act of his *Tristan und Isolde* (1859). Bartók argues that the increasing popularity of odd metres was largely due to the interest in eastern European folk music, especially from Bulgaria, Hungary, Slovakia, and Romania, which abounds in "asymmetrical measures". In 1913, Bulgarian musicology confronted the phenomenon of fast melodies in 5/16, 7/16, 8/16 through a study by Dobri Hristov (1875–1941) for the Bulgarian Academy of Sciences.¹⁹³

For the sake of the discussion on metrical asymmetries, which informs a large part of the present thesis, it is interesting to note that Bartók seems to wonder, as many modern Swedish and Norwegian folk music researchers do, whether "these types of Bulgarian rhythms developed from normative rhythmic species, and in that case from which psychological processes". The question whether such rhythms are a deviation from a symmetrical norm or are to be inherently conceived as asymmetrical, will be treated in relation to Norwegian springars in chapter 4. As Stravinsky had suggested regarding word accentuation, Bartók's impression is that the "expansion of certain note values is a projection of a dynamic accent in time". Applied to the context of Swedish and Norwegian asymmetrical tunes, this theory could explain the expansion of a beat in connection to a broad dance gesture such as a leap or a heavy step. A similar fascination for unusual rhythmic sequences has been the main reason behind my preferences in other genres, including one that exerted a deep influence in my music-making: the progressive branch of heavy metal.

¹⁹¹ See olla-vogala, *Frédéric Chopin - Piano Sonata No. 1*, 2015, <https://www.youtube.com/watch?v=vL-NDDI4BfE>.

¹⁹² See symphony7526, *Tchaikovsky: Symphony No. 6 in B Minor, Op. 74 'Pathétique' (with Score)*, 2020, <https://www.youtube.com/watch?v=jqq31QZU7sg>.

¹⁹³ See Bartók, *Scritti sulla musica popolare*, 200.

3.2.2 A progressive metal progression

Rhythmic oddities have been used in non-mainstream rock music since at least the late 1960s, when what is commonly termed “progressive” rock evolved out of psychedelic rock and increasingly incorporated elements coming from other genres such as folk, jazz, or art music. Common factors used to label a song as progressive were, for instance, a higher degree of compositional complexity, instrumental virtuosity, and a certain poetic or philosophical refinement of the lyrics. The origins of prog-rock are generally associated with bands such as King Crimson, Yes, Gentle Giant, Genesis, and Van den Graaf Generator (UK), Rush (Canada), Dixie Dregs and Kansas (USA), Le Orme, PFM, and Area (Italy), and many more. The fusion of several elements abounds in the progressive scene notably during the 1970s, when exotic elements and Indian music were being popularised in the West.



Figure 14: Zappa, *The Black Page*

Elements of contemporary art music were introduced by Frank Zappa (1940–1993) in his work with the band The Mothers of Invention. One of the most deliberate and provocative attempts at using avant-garde elements in rock music is [The Black Page](#).¹⁹⁴ This piece features complex rhythmic figures such as the nested triplets in the third and fourth staff of the excerpt (Figure 14);¹⁹⁵ it was widely known to be extremely difficult to play.

Around the mid-1980s, when the extravagance of prog-rock met the aggressive, guitar-driven sound of the rising genre of heavy metal, progressive metal was born as an outgrowth in the production of groups such as Queensrÿche, Fates Warning and Majesty (USA). The latter soon evolved into what can arguably be considered the most influential

¹⁹⁴ Animatronicity, *The Black Page #1* // Frank Zappa (Sheet Music + Audio), 2017, https://www.youtube.com/watch?v=CyH8A_XPxEM.

¹⁹⁵ Score excerpt from Frank Zappa, *The Black Page* (Munchkin Music, 1977).

progressive metal band in the 1990s: Dream Theater. Their second album, *Images and Words*,¹⁹⁶ quickly became a reference point for the young prog-metal community worldwide and paved the way for many future developments in this genre. Using pieces by Dream Theater and other bands as examples, I will outline a 5-step progression of rhythmic complication going from the simple use of irregular time signatures to more complex structures.

A first, basic stage of rhythmic oddity is the consistent employment throughout a song of an odd-time signature that – at least to average ears used to 2, 3, or 4/4 – may sound unusual. The song “Surrounded” by Dream Theater is based on a 9-beat metre organised in 4+5 (or 5+4, later in the song), displayed in the score in Figure 15.¹⁹⁷ Listen to the excerpt [here](#).

The image displays a musical score for the song "Surrounded" by Dream Theater. It consists of three staves: Guitar, Bass, and Drums. The time signature is 9/4, indicated at the beginning of the score. The guitar part features a complex melodic line with various accidentals and a key signature of one sharp (F#). The bass part provides a steady, rhythmic accompaniment. The drum part includes a variety of rhythmic patterns, including triplets and sixteenth notes, with some measures marked with 'x' for cymbal hits. The score is divided into measures by vertical bar lines, and the overall structure is consistent with the 9-beat (4+5) metre mentioned in the text.

Figure 15: Dream Theater, "Surrounded"

A further step towards rhythmic complexity is the quick succession of different time signatures, which increases the sense of unpredictability, especially in the case of irregular metres. This concept of “mixed metres” is used extensively in an instrumental passage from “Metropolis pt. 1: The Miracle and the Sleeper” by Dream Theater, where the use of atonal melodies based on tritonal and chromatic collections towards the end of the episode is also worth noting. See Video example 1 for a full-score video.¹⁹⁸

Video ex. 1: Dream Theater, "Metropolis pt1"

The impression produced by a succession of constantly changing time signatures is however still mono-dimensional, in that all the parts are inscribed in one and the same

¹⁹⁶ Dream Theater, *Images and Words* (ATCO Records – 7567-92148-2, 1992).

¹⁹⁷ See Dream Theater, *Images and Words – Band Score* (Shinko Music Co., Ltd., 1992), 63–64.

¹⁹⁸ Score excerpts from *ibid.*, 74–109.

rhythmic layer. If, however, an irregular pattern is played against a regular pulse or beat, new possibilities for rhythmic tensions/relaxations arise, caused by the respective layers diverging and converging with each other. The “grouping dissonance” thus originated is described by Harald Krebs as “the association of nonequivalent groups of pulses”.¹⁹⁹ Based on this idea, a third level of complication is displayed in the next excerpt, a syncopated 7/8 riff played against a solid 4/4 groove in the song “Sanguine draws the oath” by the Dutch band Textures.²⁰⁰ After four repetitions the riff is realigned on the downbeat by the insertion of a half-bar guitar bend (Figure 16): listen to the excerpt [here](#).



Figure 16: Textures, "Sanguine draws the oath"

The polymetry between the 7/8 and the 4/4 layer is an example of metrical dissonance, since the two layers are noncongruent (Krebs, op. cit., p. 59) – i.e., not multiples of each other. The dominance of the 4/4 layer is however quite evident, so that the antimetrical layer appears to be closer to a simple asymmetrical pattern interlocking with an even metre.

A higher degree of ambivalence is introduced in the next step of complication, exemplified by “Swarm”²⁰¹ by the Swedish band Meshuggah. The song opens with a 3-note ostinato that establishes a pulse in 3/16; after many repetitions of the cell (112, or 21 bars in 4/4), the drums switch to a 4/4 metre without obscuring the presence of the other layer, skilfully underlined by the entry of another guitar part that draws a secondary melodic line relying on the 3/16 pulse. Figure 17 is a transcription of the opening [riff](#).²⁰²

¹⁹⁹ Harald Krebs, op. cit., 31. The term “grouping dissonance” is suggested in Peter Michael Kaminsky, ‘Aspects of Harmony, Rhythm and Form in Schumann’s Papillons, Carnaval and Davidsbündlertänze’ (University of Rochester, 1989), 27. It is also used by Krebs in relation to instances found in pre-20th-century music, as the “dissonance between regular layers of motion” occurred in, for example, much of the 19th-century literature for piano, generally with an “antimetrical layer” working against a resident metrical layer.

²⁰⁰ In Textures, *Dualism* (Nuclear Blast – NB2559-0, 2011).

²⁰¹ In Meshuggah, *Koloss* (Nuclear Blast – NB 2388-2, 2012).

²⁰² Similar repetitions of the riff highlight different notes that, considered together, form a sort of hyper-melody, appearing for instance at minute [0:38](#), [1:21](#), [2:07](#), [3:57](#) of the song.



Figure 17: Meshuggah, “Swarm”

The multiplication of the number of layers creates a rhythmic polyphony that is the quintessence of the metal subgenre called “djent” or “math-metal”, of which Meshuggah are widely accepted as pioneers and masters. The mix or alternation of polymetrical textures and uneven riffs against even metres create in their music the idea of a complex clockwork mechanism whose parts sound disparate if played separately but act as interconnected cogs in a wheel when heard all together. Downtuned 8-string guitars, harsh screaming vocals, and dissonant harmonies contribute to making djent metal sound very aggressive and powerful.

The fifth and final level of the imaginary “progressive progression” embodies all of these characteristics and, among the many examples by Meshuggah and other bands such as Tesseract and Periphery, may be exemplified by the playlist in Table 5.

Band	Title	Album
Meshuggah	“Future breed machine”	<i>Destroy Erase Improve</i> (Nuclear Blast – NB 121-2, 1995)
	“The exquisite machinery of torture”	<i>Chaosphere</i> (Nuclear Blast – NB 336-2, 1998)
	“Stengah”	<i>Nothing</i> (Nuclear Blast – NB 542-2, 2002)
	“Dehumanization”	<i>Catch Thirtythree</i> (Nuclear Blast – NB 1311-2, 2005)
	“Bleed”	<i>Obzen</i> (Nuclear Blast – NB 1937-2, 2008)
	“I am Colossus”	<i>Koloss</i> (Nuclear Blast – NB 2388-2, 2012)
	“Clockworks”	<i>The violent sleep of reason</i> (Nuclear Blast – NB 3483-0, 2016)
Tesseract	“Concealing Fate pt. 5: Epiphany”	<i>One</i> (Century Media – 9980432, 2011)
Periphery	“Letter Experiment”	<i>Periphery</i> (Sumerian Records – SUM-029, 2010)

Table 5: Djent metal

From irregular time signatures to polymetres and polyrhythms in their different forms, progressive metal borrows, develops, and offers a wide array of techniques to make the rhythmic side of compositions interesting and compelling. One musician whose art embraces many of the characteristics described above, mixed with a great deal of Indian music and infused with a generous pinch of humour and irony, is Mattias Eklundh. The

Swedish guitarist and singer in the trio Freak Kitchen has been a great inspiration during the compositional process that led to *Udelt Takt*.

3.2.3 Mattias “Freak Guitar” Eklundh

Acclaimed as “one of the most innovative and ground-breaking guitar players”,²⁰³ Mattias Eklundh is, in his own words, an avid musical omnivore:

I’m not a musical snob. My record collection is one big mess of gypsy jazz, Zappa, Kiss, Miles Davis, and Slayer among many others. Zappa and Kiss were my main guys and are still inspiring to me. They were unconventional with what they did and were in many ways opposites of each other, hi-fi, low-fi. Zappa was all about the humour, the enormous skills, and the complexity of his music while Kiss was just a sledge-hammer and I love both. That duplicity of sounds, approaches and philosophy has heavily influenced how I write and record music.²⁰⁴

The Swedish musician is best known for founding and leading the progressive metal band Freak Kitchen, a name he claims to have derived from a song by Frank Zappa.²⁰⁵ As guitarist and singer of the trio, he has released records and toured the world since the early 1990s: pieces like “[Snap](#)” and “[God save the spleen](#)”,²⁰⁶ “[Freak of the week](#)”,²⁰⁷ and the more recent “[Confusion to the enemy](#)”²⁰⁸ demonstrate the level of rhythmic and compositional virtuosity Freak Kitchen has reached. A creative mind and dedicated teacher, Eklundh created a parallel solo project called *Freak Guitar*, resulting in a series of albums and a yearly guitar camp where he teaches the creative and technical secrets behind his music to an ever-increasing crowd of participants from all over the globe. The material is also often explained and described in YouTube videos which Eklundh uploads on a regular basis, all together forming the *Freak Audio Lab* series.²⁰⁹ This long-standing endeavour produced a large output of music, which despite its variety reveals at least one evident common denominator, namely Eklundh’s passion for rhythm, the unsurprising

²⁰³ ‘Freak Guitar - Biography’, accessed 21 January 2022, <https://www.freakguitar.com/bio.html>.

²⁰⁴ Ibid.

²⁰⁵ “The dangerous kitchen”, in Frank Zappa, *The Man from Utopia* (Barking Pumpkin Records – FW38403, 1983).

²⁰⁶ In Freak Kitchen, *Move* (Thunderstruck Productions - TSP0902, 2002).

²⁰⁷ In Freak Kitchen, *Cooking with Pagans* (Thunderstruck Productions - TSP54141007, 2014).

²⁰⁸ In Freak Kitchen, *Confusion to the Enemy* (Thunderstruck Productions - TSP58140918, 2018).

²⁰⁹ Mattias IA Eklundh, ‘Freak Audio Lab - YouTube Playlist’, accessed 21 January 2022, <https://youtube.com/playlist?list=PLGxpEubwDraX3ov-jWXouPXuPrhjkHXXV>.

result of his early exposure to drums and percussion, as he explains himself in the Freak Audio Lab video [Steering Wheel Konnakol](#).²¹⁰

Quite intriguing, for a half-Indian musician like me, is his fascination for the art of *konnakol* (also spelled *konnakkol*, *konakkol*, *konokol*), the rhythmic language of South India.²¹¹ Konnakol is based on the vocal recitation of rhythmic sequences with the use of specific syllables (*tha*, *dhi*, *ki*, *ta*, *thom*, *nam* and others), which are then reproduced onto the south Indian percussion instruments, mainly the *mridangam*, *kanjira*, and *ghatam*. The instrumental practice, for Indian percussionists, starts there; the amazingly complex intricacies of Indian percussion can be – and in fact are – translated into konnakol, which makes it a fundamental tool also for singers, dancers, melodic instrumentalists, and anyone who wishes to grasp the ancient and arguably unparalleled art of Indian rhythms. In this [video](#),²¹² Balakumar Paramalingam demonstrates how the vocal recitation is transferred on the mridangam, at first separately and then performing the two acts simultaneously.²¹³

Indian techniques and konnakol sweep through the majority of Mattias Eklundh's solo music and teaching methods, since he considers it the key to unlocking the gates to rhythmic development. Further details about konnakol will be given in 3.3; the remainder of the current paragraph however demonstrates how Eklundh incorporates konnakol techniques into metal riffing. In this [video](#)²¹⁴ he explains, not without his habitual humour, how the “patterning against the grid” (or grouping dissonance) encountered in 3.2.2 translates into the konnakol language. The necessity of referring irregular patterns to a steady pulse is reiterated in another [excerpt](#) from the above-mentioned video *Steering Wheel Konnakol*, through an amusing version of the quintessentially square AC/DC riff from “Highway to Hell”, spiced up with konnakol patterns.

Among the many features of Carnatic music that Eklundh applies to his pieces, two seem to recur more frequently: patterns that “shrink” and patterns that “bend time”. The former patterns are generally found at cadential points in Indian compositions, as parts

²¹⁰ Mattias IA Eklundh, *Freak Audio Lab - Steering Wheel Konnakol*, 2019, <https://www.youtube.com/watch?v=9cjsiEQ-QcU>.

²¹¹ A more detailed description of konnakol and its importance in *Udelt takt* will be provided in sections 3.3 and 3.4.

²¹² See mail pro, *Konnakol and Mridangam*, 2018, <https://www.youtube.com/watch?v=J0vo2e3TEPM>.

²¹³ For another, humorous, take on the theme of mridangam-konnakol combination, see Manjunath B.C, *SERIOUSLY--JOKING*, 2018, <https://www.youtube.com/watch?v=hmY1hEjK2h0>.

²¹⁴ See Krishna Nagaraja, *Rhythm with Konnakol, Mattias Eklundh Guitar Lesson*, 2022, <https://www.youtube.com/watch?v=fx3VQPfuxxU>.

of larger structures called *korvai* (or *tihai* in North India). A “shrinking pattern” consists of a repeated string of syllables that loses one syllable at every repetition, therefore reducing itself “until there’s nothing left” and aligning back with the metrical downbeat. One of the most common patterns in basic konnakol practice is illustrated by Eklundh in this tutorial [video](#); ²¹⁵ a similar concept is applied at the beginning of “[Valhalla Vailankani](#)”.²¹⁶

Another simple shrinking pattern opens a long piece entitled “Big Machine”, and features the sound of Eklundh’s own Volvo steering wheel being drummed on with his fingers, as can be seen in this [tutorial](#), once again extracted from *Steering Wheel Konnakol*. The whole [track](#)²¹⁷ is worth listening to, for the use and development of the shrinking pattern as main riff and the employment of an Indian *Melakarta raga*²¹⁸ as melodic material. A later part of the same piece introduces the second konnakol technique, which consists of a quick succession of metric modulations resulting in a carefully calculated *accelerando* or *ritardando*, therefore giving the impression of a time-bending procedure. As demonstrated in this [excerpt](#) from *Big Machine*, the same 7-note motif is repeated each time with different subdivision levels in relation to the main pulse: the speed is therefore increased and then decreased again. Eklundh articulates this rather advanced concept (“this sounds...mad, but it’s beautiful!”) in another [example](#),²¹⁹ where the presence of a written score helps clarifying the matter.

In “Johnny the metronome”, another *Freak Guitar* track, the technique is playfully applied to a much longer phrase (32 notes, 4x8), projecting the whole metric modulation process into larger structures and conveying more the idea of a succession of increasing or decreasing speeds than of an organic *accelerando* or *ritardando*. The riff is at first geared down to slower speeds, underlined by Eklundh’s funny facial expressions; it is then used as a fast walking-bass under a short solo, to be taken again at the slowest speed

²¹⁵ See Mattias IA Eklundh, *Freak Audio Lab - Stacking Multiple Rhythms With Konnakol*, 2019, <https://www.youtube.com/watch?v=h2LzLMbqpM>.

²¹⁶ See Mattias IA Eklundh, *Mattias IA Eklundh - Valhalla Vailankani*, 2015, <https://www.youtube.com/watch?v=FhugzeVRcRw>.

²¹⁷ See Mattias IA Eklundh, *Mattias IA Eklundh - Big Machine*, 2015, <https://www.youtube.com/watch?v=xadpVUjtdrw>.

²¹⁸ Even though it is almost impossible to define a *raga* in western terminology, since there is hardly any similar phenomenon in western music, we can equate it to a melodic framework that sits somewhere in between scales and actual melodies. A *raga* provides not only the pitch material but also some inherent melodic properties and suggestions for Indian improvisations and compositions. The *Melakarta* system is a collection of 72 “parent” or “fundamental” scales from which myriads of *ragas* can be derived.

²¹⁹ See Mattias IA Eklundh, *Freak Audio Lab - Flipping Rhythms*, 2020, <https://www.youtube.com/watch?v=SRc74H6a3oo>.

and brought up to the initial pace, finishing up in the highest gear for another short solo: listen to the entire sequence [here](#).²²⁰

Mattias Eklundh borrows a third technique from Carnatic percussion, featured in “Teargas Jazz”,²²¹ a piece by Freak Kitchen which deserves a more detailed analysis. The song is noteworthy both for its technical content and also for other features such as the presence of two real Indian musicians (on *kanjira* and violin) and the lyrics referring to the clash of western and eastern cultures with regard to freedom of speech.²²² A simple way to construct a musical line is realised by an additive repetition of notes or fragments (a, ab, abc, abcd, abcde, etc.); its deconstruction can be obtained following the opposite procedure. This mechanism resembles more complex forms of the Indian phrasal construction known as *yati* phrases. The concept of *yati* phrases, and its constituents *pala* segments and *matra* units, are explained by composer Rafael Reina in his book *Applying Karnatic Rhythmic Techniques to Western Music*,²²³ where the author describes an extensive array of konnakol principles; the book is diffusely quoted here, as reference in the next section about konnakol. A *yati* phrase is a sequence formed by short rhythmic segments or *palas*; each *pala* takes the “previous one as a starting point with a systematic increase or decrease in numbers of *matras*”, namely the smallest unit of rhythmical subdivision, generally identified as a sixteenth-note. In the passage [1:40–1:51](#)²²⁴ of the song, the process is rather self-explanatory (Figure 18).



Figure 18: Freak Kitchen, “Teargas Jazz”, excerpt 1

²²⁰ See Mattias IA Eklundh, *Mattias IA Eklundh - Johnny the Metronome*, 2013, <https://www.youtube.com/watch?v=ctwVC52cNJo>.

²²¹ In Freak Kitchen, *Land of the Freaks* (Thunderstruck Productions – TSP51091208, 2009).

²²² Cf. the excerpt from the song lyrics “Provocation or freedom of speech?”: Eklundh cites an incident that happened in 2005 when the Danish newspaper Jyllands-Posten published cartoons portraying the Prophet Mohammed and therefore allegedly violating the sensitivity of the Islamic communities, whose strong aversion to visual depictions of their highest religious leader led to accusations of blasphemy.

²²³ Rafael Reina, *Applying Karnatic Rhythmical Techniques to Western Music* (Burlington, VT: Ashgate, 2015), 105. During his childhood and youth, Equatorial Guinean-born Rafael Reina was exposed to African music, flamenco, 20th-century classical composers, jazz, and Berber music; after graduating with a degree in composition in the USA, he moved to Amsterdam and successively travelled to India to study Carnatic music. He is the coordinator of the programme “Advanced Rhythm” and the Master profile “Applications of karnatic rhythm to western music” at the Conservatorium van Amsterdam.

²²⁴ For the official video, see Freak Kitchen, *Freak Kitchen - Teargas Jazz*, 2009, <https://www.youtube.com/watch?v=JAiTj9-vg4>.

In another passage at [2:18–2:41](#), successive deconstructions and reconstructions of the same 8-note motif are interpolated by segmented (2+3) variations of the scale, marked by square brackets in Figure 19.



Figure 19: Freak Kitchen, "Teargas Jazz", excerpt 2

Later in the song, we encounter yet another rhythmic patterning, consisting of the first four notes of the previously featured scale repeated in a riff built with the alternation of eighth-note and sixteenth-note values (marked as 1 and 2 in Figure 20). In the excerpt, the scheme of six rows of six notes is notated in the rectangular box. The 3-bar sequence is repeated four times at [3:25–4:05](#), after which another deconstruction-reconstruction passage follows, leading to a violin solo.



Figure 20: Freak Kitchen, "Teargas Jazz", excerpt 3

To conclude the overview of Mattias Eklundh's inventive art, before providing a description of konnakol as the second fundamental influence on *Udelt Takt*, Table 6 offers a playlist of pieces where the marriage between Indian rhythms and metal is, in my opinion, particularly creative and inspiring.

Title	Album
" Teargas jazz "	<i>Land of the Freaks</i> (Thunderstruck Productions – TSP 51091208, 2009)
" Babali bedouins "	<i>Growing Your Own Moustache – Vol. 4</i> (2013)
" Blues for FK "	
" Floor Tom Tim "	
" Johnny the metronome "	
" Big machine "	<i>Growing Your Own Moustache – Vol. 5</i> (2015)
" The mysterious Mrs. Todi "	
" Valhalla Vailankani "	
" Wash it in July "	
" Have a peasant flight "	<i>Growing Your Own Moustache – Vol. 8</i> (2019)
" A reshuffling of atoms "	

Table 6: Mattias Eklundh

3.3 Konnakol

Somashekar Jois, one of the most acclaimed contemporary konnakol masters, proposes a definition of this discipline in the video [Introduction to konnakol](#):

Konnakol is an Indian rhythmic language. Konnakol is the art of reciting rhythmic syllables associated with the Carnatic music tradition [...], in a pleasant manner and in reference to any tala. Konnakol is the oldest rhythm system known to us: according to modern historians, konnakol is an art form that is easily five thousand years old.²²⁵

Several important concepts are condensed in these words, the first of which equates konnakol to spoken languages such as "Kannada, Telugu, Tamil, Malayalam, English, German, Sanskrit, Arabic, etc." Every konnakol teacher will mention to beginner students that the recited syllables function just like words to form phrases, sentences, periods, paragraphs, sections, chapters, and even entire books; for this reason, sequences must not be recited mechanically, but should on the contrary be treated as melodies of rhythms with accents, emphasised syllables, modulations of the voice, anything that is normally applied to the spoken word or to melodic singing. Hence, the "pleasant manner" mentioned by Someshekar is a fundamental requirement for the achievement of a convincing konnakol rendition.

The speaking, discursive quality of this rhythmic language has parallels in many other genres, from the Irish lilting to the Swedish *trall*, from jazz scat singing to the art of vocal percussion and beatbox. A very amusing example of a konnakol conversation is the dialogue between the members of the Vinayakram Indian percussion Trio, performed

²²⁵ For the full first volume of *Konnakol Basics* tutorial videos, see Konnakol Somashekar Jois, 'KONNAKKOL BASICS - ADI TALA - YouTube', accessed 21 January 2022, <https://www.youtube.com/playlist?list=PLmnmCVC0PGc2D3VLuSjyJVhmXA8zPlojN>.

during a collaborative concert with Swedish bassist Jonas Hellborg and the late US guitarist Shawn Lane, captured in a DVD entitled *Paris*.²²⁶

Somashekar Jois relates konnakol structures to the *tala*, namely the rhythmic cycle in Indian music. In Carnatic music a cycle is made of units of different lengths, measured in beats: 8-beat cycles for instance can be 4+2+2 (*adi tala*) as well as 3+2+3 (*sara*) or 5+1+2 (*chana*). A *tala* therefore does not straightforwardly coincide with a time signature, since an 8/8 bar in western music would not specify any internal division and could refer to any of those three *talas*. A time signature of 4+2+2/8 and similar would in that respect be more fitting. Rafael Reina (op. cit., 13) translates *tala* as metre, though specifying that the very strict and sometimes complex inner construction of the *talas* have a decisive effect on the development of musical phrases, whereas western metre might remain in many instances a simple referential background structure. Further distinctions between metre and *tala* seem to tap deeper into music philosophy:

The real meaning of *tala* is not metre but cycle (*avartana*). The whole socio-cultural Hindu background inherited in the music created a concept that separates itself from our (i.e., western) concept of metre – although, in fact, the concept of cycle is common to all eastern musical cultures, from Morocco to Vietnam, in very similar ways. [...] Where is then the line that separates cycle from metre? [...] A cycle is, somehow, a recurring frame that is born, develops and dies. There is a certain ‘narrative’ quality to it, a quality that generally lacks the western construction of metres. [...] It is my perception that the concept of cycle is not a technical one that can be dissected and regulated; it somehow belongs to the realm of ‘feeling’ or ‘intuition’. [...] Since the intuitive understanding of the concept of cycle is an empirical process, in my view and experience analysing or dissecting the concept of cycle in a Cartesian manner will always fall short of the complexity, extent and nuances of this concept, which is closer to a philosophical notion than to a musical technique.²²⁷

The *tala* provides the musicians with a safe, regular structure upon which they can perform all sorts of extraordinary intricacies: *tala* and tempo should never change throughout a composition or improvisation, so that all the complex rhythms that work against the beat or tempo can be referred to a constant common denominator.

With all the due differences, this principle reminds one of the concept encountered while analysing the music of Meshuggah and Mattias Elkhundh, namely that very irregular and complicated patterns (guitar riffs) can be inscribed in or referred to a “steady pulse”

²²⁶ Jonas Hellborg, Shawn Lane, and The Vinayakrams, *Paris* (Bardo Records – bardo243, 2004).

²²⁷ Op. cit., 18–19.

(Eklundh) or a simple 4/4 bar (Meshuggah).²²⁸ The song *Nostrum* by Meshuggah²²⁹ has in fact been used in a collaboration between international metal musicians and konnakol virtuoso B.C. Manjunath, who translates some of the song riffs into rhythmic language and improvises solos in between: see the result [here](#).²³⁰

The long lineage of western artists who have to varying extents been inspired by the art of konnakol can perhaps be traced back to English musicians Pete Lockett and John McLaughlin. The former, an eclectic percussionist, was one of the first Europeans to [master](#)²³¹ and teach konnakol in the West, incorporating it into his own drumming routines, as he demonstrates in a [video](#)²³² with B.C. Manjunath where they both recite the rhythms and play them on percussion instruments. Guitarist John McLaughlin is to be vastly credited for the popularisation of Indian music in the West. Founder and guitarist of the fusion supergroup Shakti, he surrounded himself with stellar musicians such as violin virtuoso Lakshminarayana Shankar and *tabla* wizard Zakir Hussain; the percussion line-up was completed by Thetakudi Harihara Vinayakram on *ghatam* and Ramnad Raghavan on mridangam. Their music brought together northern and southern Indian classical rhythms, western music elements, and the use of konnakol.²³³ In 2007 McLaughlin released the DVD [The Gateway to rhythm](#)²³⁴ in collaboration with *kanjira* master Selvaganesh Vinayakram (one of the three percussionists in the konnakol conversation video quoted above), with the purpose of condensing his 30-year knowledge of Indian rhythms into a series of lessons covering konnakol [basics](#).²³⁵ A third and well-acclaimed musician who has imported Indian rhythms into Europe, both through teaching and in his music-making, is Danish multi-instrumentalist Henrik Andersen, who studied with

²²⁸ See O2backstagechat, *Meshuggah: Maths and Music*, 2013, <https://youtu.be/NqQuMB2xvm0?t=89>. In this interview, rhythm guitarist Mårten Hagström declares that the music they play is “supposed to groove...we’re grooving a lot but, you know, even if it might be in an ‘awkward’ way, it is still revolving around a 4/4 beat”. To reinforce the idea that Meshuggah riffs can ideally be transcribed in 4/4 measures, see Mike Godette Music, *Five 4/4 Meshuggah Riffs Transcribed (Part 1)*, 2019, <https://www.youtube.com/watch?v=Y-HDXoQxrhQ>.

²²⁹ In Meshuggah, *The Violent Sleep of Reason* (Nuclear Blast – NB 3483-2, 2016).

²³⁰ See Manjunath B.C., *NOSTRUM BY MESHUGGAH, THE KONNAKKOL VERSION*, 2018, <https://www.youtube.com/watch?v=RaeM8mzEzI8>.

²³¹ See PETE LOCKETT, *Pete Lockett Konnakol*, 2006, <https://www.youtube.com/watch?v=BDPwr66xJy0>.

²³² See PETE LOCKETT, *Pete Lockett & BC Manjunath on Konnakol and Mridangam*, 2020, <https://www.youtube.com/watch?v=4HHcujvyBwU>.

²³³ See for instance PKF, *John McLaughlin & Shakti ‘Joy’ (Live Montreux 1976)*, 2015, <https://www.youtube.com/watch?v=VnW2g6qbbrA>.

²³⁴ John McLaughlin and Selvaganesh Vinayakram, *The Gateway to Rhythm* (Blue Frog – 88697344179, 2008).

²³⁵ See ‘JMCL - KONOKOL The Gateway to Rhythm - YouTube’, accessed 3 February 2022, <https://www.youtube.com/playlist?list=PLcpKfB6isZLiD7HVm3pZVCM510P3v5x9C>.

Pete Lockett and Indian masters such as Trilok Gurtu. Andersen incorporates konnakol elements in the music he writes and performs, as well as in his vocal percussion routines and polyrhythm [tutorials](#).²³⁶

The ancient art of konnakol is nowadays enjoying a rapidly increasing popularity all over the world, as more western musicians realise its potential as a tool to enter into new dimensions of rhythmic thinking and to access the complexity of some modern and contemporary art music rhythms as well.²³⁷ Even at the basic level of motoric coordination, practicing konnakol by keeping the constant tala with a hand while reciting patterns or polyrhythms against it, has, for non-percussionists, the remarkable effect of developing the inner sense of subdivision (necessary to remain anchored in the tala) and a multi-layered use of the musical mind (getting used to the simultaneous scrolling of different layers). The next two paragraphs will describe konnakol techniques that have profoundly influenced the composition of *Udelt takt*.

3.3.1 Rhythmic descent

In paragraph 3.2.3 the shrinking patterns in Mattias Eklundh's music have been mentioned as parts of a larger structure called *korvai*. Moreover, it has been underlined how *Teargas Jazz* extensively applies the concepts of construction (or expansion) of a fragment and that of deconstruction (or contraction).²³⁸ Expansion and contraction are integral parts of Carnatic rhythmic thought; they inform the construction of specific sequences found in cadential places, especially at climactic points such as the end of a percussion (or konnakol) solo.

One of the most basic contraction forms is the *kuraippu* (also spelled *koraipu* or *korapu*), a sequence that is based on the idea of "rhythmic descent" described by Manarkoil J. Balaji.²³⁹ A kuraippu follows a set of steps and rules that change slightly depending on the tala, but whose underlying idea is to repeat a pattern for a number of times that decreases geometrically, so as to form groups of 8→4→2→1 repetitions in a

²³⁶ See Henrik Andersen, *Polyrhythm + 4 Levels of Awareness. Singing the Math KONNAKOL*, 2019, <https://www.youtube.com/watch?v=rL1-fASdHtk>.

²³⁷ The final section of the quoted book by Rafael Reina is entirely devoted to the *Application of Karnatic techniques to existing Western pieces*, including excerpts by Xenakis, Ferneyhough, Donatoni, and others.

²³⁸ The shrinkage of a sequence realised by a progressive, calculated shortening of note values was also used by Olivier Messiaen, and is described in the first volume of his *Technique de mon langage musical* (Alphonse Leduc, 1944), 16. Messiaen derived many of his compositional techniques, both rhythmic and melodic, from Indian music.

²³⁹ See Manarkoil Jagannathan Balaji, 'Rhythmic Descent in Karnatic Music-Principles, Practice and Standardization', 2018, 13.

row, separated by a specific amount of rests. In the third group, one more double repetition of the pattern and the related rest is added; in the last group, the single repetition of the pattern is reproduced 4 times in total, including the rests. Following Balaji's example, if we are in *chatusra adi tala* – 8 beats, or 2 bars in 4/4, with 4 notes per beat – we will use a basic “p” pattern of 7 notes and the sequence will be as follows (“r” in square brackets indicates a rest).

- A: [r] [r] p x 8 = 16 beats
 B: [r] p x 4 = 8 beats
 C: [$\frac{1}{2}r$] p x 2 [$\frac{1}{2}r$] p x 2 = 1 $\frac{1}{4}$ beats (2 times)
 D: [$\frac{1}{4}r$] p [$\frac{1}{4}r$] p [$\frac{1}{4}r$] p [$\frac{1}{4}r$] p = 1 beat (4 times)

An ending is then attached to the sequence, formed by 5 seamless repetitions of the basic pattern (at E in the figure below) followed by 3 other repetitions (F) using a triple (*tisra*) subdivision instead of quadruple (*chatusra*). The complete sequence must end on the next downbeat, realigning with the beginning of the tala cycle. Figure 21 puts the whole kuraippu in western notation.

Audio ex. 3: Misra kuraippu

Tha - ka - dhi - mi - tha - ki - ta Tha - ka - dhi - mi - tha - ki - ta Tha - ka - dhi - mi - tha - ki - ta Tha - ka - dhi -
 mi - tha - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta
 Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta
 Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta
 Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi -
 mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha - ka - dhi - mi - ta - ki - ta Tha

Figure 21: Misra kuraippu

A kuraippu generally precedes a korvai, one of the most popular and exploited composed sequence forms in the konnakol repertoire. It consists of two parts: the first (*purvanga*) is known for its “mathematical brilliance”, whereas the second (*uttaranga*) is based on short patterns of odd lengths and is a chance for the virtuosity of quick passages to shine. The whole sequence is repeated three times. Somashekar Jois explains it in simple terms in a tutorial [video](#),²⁴⁰ where he also presents a very popular and basic korvai [example](#) (Figure 22).

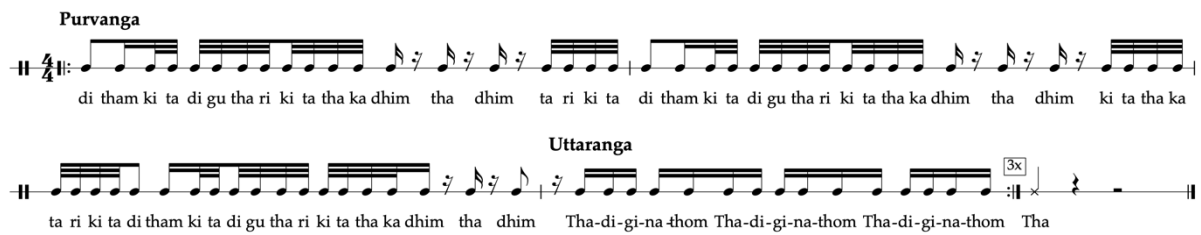


Figure 22: Somashekar Jois, Korvai

Israeli drummer and konnakol teacher Asif Sirkis quotes this definition of korvai in an introductory [video](#):

Korvai is another cadential form, which is generally complex in structure. Korvai literally means ‘strung together’. It consists of various phrase structures arranged in a sequential order following the model of a yati. Yati is a concept that deals with the arrangement of patterns in various way, giving rise to different geometric shapes.²⁴¹

The mathematical aspect leading to a contraction or shrinking of the sequenced patterns is often calculated in subtractive formulas, such as the one explained by the same Somashekar Jois [here](#)²⁴² (see the transcription in Figure 23). In the first application he realises, the “x” is a 5-unit pattern followed by another 1-unit *dhim* and a 1-unit rest. The formula then becomes:

²⁴⁰ See Konnakkol Somashekar Jois, *KONNAKKOL BASICS | EP 57 | Adi Tala Basic Lesson No.55 | Somashekar Jois | Video Series | 4K ULTRAHD*, 2020, https://www.youtube.com/watch?v=O_3eSO4_n5c.

²⁴¹ See Asaf Sirkis, *Mastering Rhythm With Konnakol (17) The Korvai*, 2019, <https://www.youtube.com/watch?v=Ob4LCDMnzrI>.

²⁴² See Konnakkol Somashekar Jois, *Formula To Compose Korves I B R Somashekar Jois*, 2018, <https://www.youtube.com/watch?v=-d4H2NyiDH8>.

Purvanga

5+2

4+2

3+2

2+2

1+2

Uttaranga

5

5

5

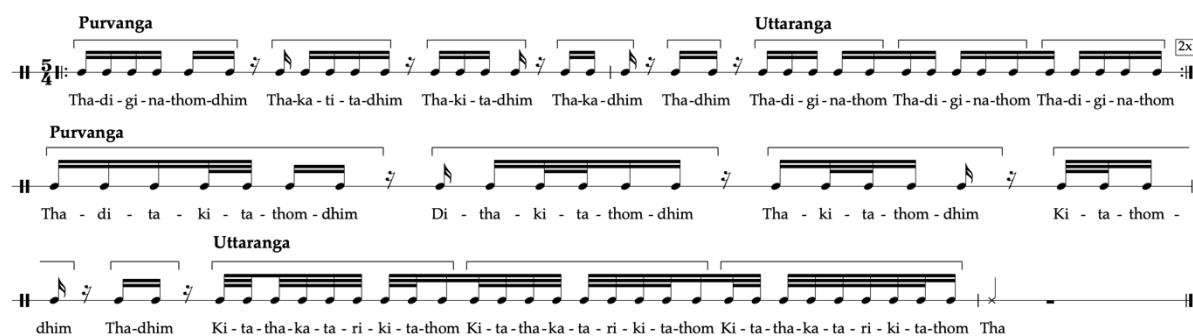


Figure 23: Somashekar Jois, Korvai formula

A similar formula is suggested by Sai Narasimhan in another [video](#),²⁴³ where each of the three notes in the pattern is reduced by a sixteenth-note at every repetition, in adi tala (Figure 24).

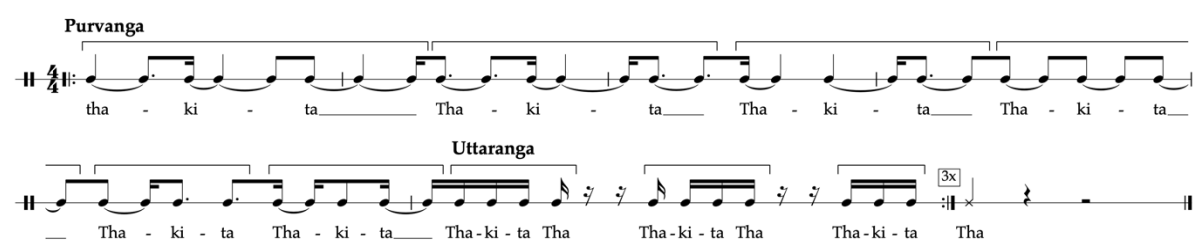


Figure 24: Narasimhan, Korvai formula

To conclude the overview, Figure 25 displays a korvai in adi tala using pink blocks for the shrinking pattern (each block formed by 5 units of 4→3→2→1 sixteenth-notes in the *purvanga*, the last and shortest unit repeated 9 times in the *uttaranga*), and blue blocks for the spaces in between (inversely expanded in blocks of 1→2→3 eighth-notes in the *purvanga*).²⁴⁴ Listen to the performance by Somashekar Jois [here](#).

²⁴³ See Sai Narasimhan, *Korvai Formulas by Sai Narasimhan Adhi Talam*, 2016, <https://www.youtube.com/watch?v=yUlnWmWeqBw>.

²⁴⁴ See percuss.io, *Konnakkol Somashekar Jois — Animated Transcription*, 2018, <https://www.youtube.com/watch?v=K1Q9QgFyJjw>.

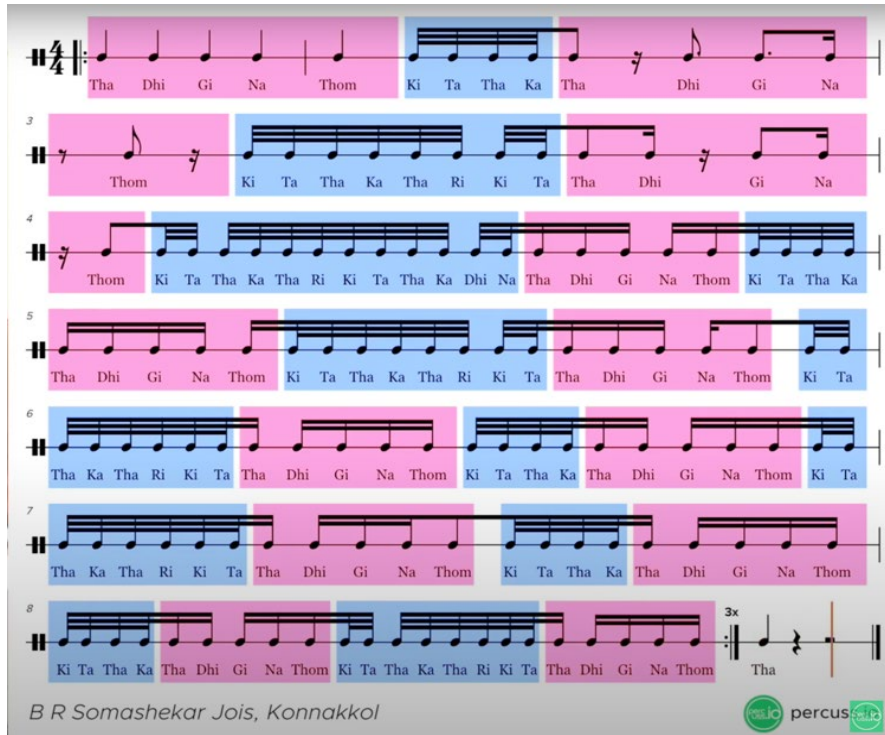


Figure 25: Somashekar Jois, Adi tala korvai

The number 3 seems to take on a particular relevance in Carnatic composition. A korvai is repeated thrice, and we have seen how formulas of the *uttarangam* require three repetitions of the “x” pattern; furthermore, the *mukthay* or *muktaya* is “a phrase repeated three times” (Reina, op. cit., 75), usually at the end of a piece or solo. The idea of threefold repetitions at cadential places and the contraction/expansion principle constitute two important techniques that I have transferred from konnakol into *Udelt takt*, along with a third element that is very reminiscent of western metric modulations.

3.3.2 Gati

A shift between two metres can be realised through a pivot unit that stays the same throughout the change, namely according to a ratio between the two metres. From the ancient *proportio* to the modern metric modulations, a note value heard before the

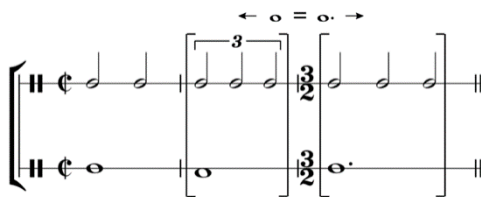


Figure 26: Proportio sesquialtera

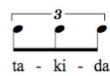
change is the key to unlock the new metrical door. For instance, in the *proportio sesquialtera* presented in Figure 26, the same unit (a whole-note in a bar of 2/2) changes from a duple to a triple subdivision (a dotted whole-note in a bar of

3/2), creating a ratio of 3:2. The change of subdivision causes a change in metre and the feeling of a faster tempo.

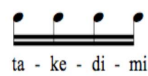
In Carnatic music, the number of subdivisions (*matras*) in a beat is called *gati*. The rhythmic recitation of the subdivisions syllables has already been encountered in most of the videos mentioned so far, and is summarised by Reina as shown in Figure 27 (ibid 21–22).

The syllables assigned to every gati are:

Tisra:



Chatusra:



When two beats of chatusra are sung consecutively, it is customary to use the syllables



Khanda:



Misra:



or **ta-ke-di-mi-ta-ki-da** can also be used.

The four gatis look like this

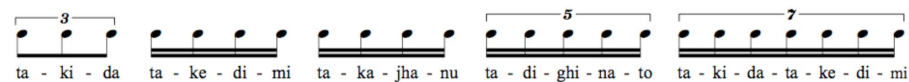


Figure 27: Reina, Gatis

Within a certain gati, these subdivisions can be grouped into patterns of other lengths simply by changing the accentuation and therefore applying the principle of grouping dissonance described regarding progressive metal: a sequence of 20 sixteenth-notes in chatusra (normally divided in 5 groups of 4 notes, *ta-ke-di-mi*) may be reorganized in 4 groups of 5 notes (*ta-di-gi-na-to*); likewise, 12 notes in tisra (3 notes per beat, *ta-ki-da*) can be recited in 3 groups of 4 notes (*ta-ke-di-mi*). Rafael Reina refers to this accentuation as *jathi*, even though this word has multiple and sometimes different meanings – as is often the case with Indian musical terminology:

A jathi can be defined as a systematic accent applied to a gati, producing as a result crossing accents over the beat. A jathi takes a number of matras that is always different to the number of the gati.²⁴⁵

The interplay between gati and jathi (the latter intended as irregular accentuation against the beat) can originate a Carnatic version of the metric modulation, when an equivalence between elements of the old and the new metre (gati or jathi) is established. In Figure 28 a 4-note grouping in chatusra gati (4 subdivisions per beat) is regrouped in tisra jathi (3-note) and then used as the new gati, so that the pulse or beat becomes quicker but the smallest rhythmic unit (the sixteenth-note) remains the same. The modulation goes from a 3/4 to a 12/16 time signature.

Audio ex. 4: Gati-jathi

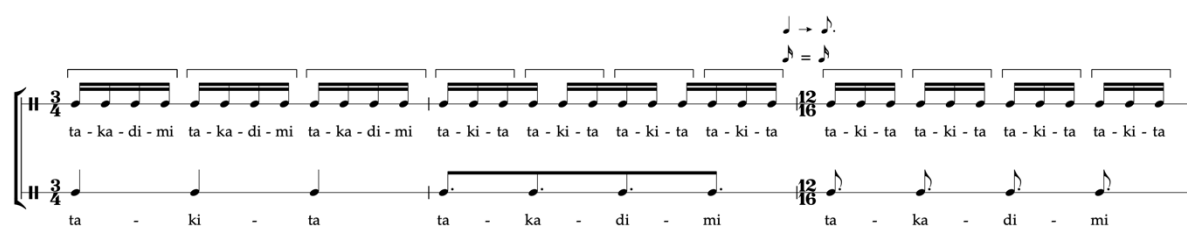


Figure 28: Gati-jathi

Alternatively, we can change the gati before the jathi: as shown in Figure 29, going from a quadruple to a triple beat subdivision, and then regrouping the triplet notes in four, which creates a new metre where the triplet note stays the same and becomes the new smallest unit (the eighth-note in the 3/2 bar, where the chatusra subdivision is restored in the new beat).

Audio ex. 5: Jathi-gati



Figure 29: Jathi-gati

²⁴⁵ Op. cit., 35.

It is important to underline that these transcriptions and metrical interpretations are mere translations of konnakol practices into western terms. In a Carnatic composition the tala and its beat structure never change, so that in a way the metre stays the same, consequently frustrating any attempt to render a literal translation of the metric modulation concept. The result is in any case similar; moreover, Carnatic music can prove to be very useful in internalizing complex western rhythms and in developing one's rhythmic – and to some extent structural – approach to composition.

The fact that in a Carnatic piece all rhythmic events are enclosed within the same grid (the tala with its specific number and distribution of beats), is further demonstrated in the genre of *gati bhedom*, translated by Reina (ibid., 45) as a “change of gati through destruction”. The metric modulations are put in a tree-like sequence, where different gatis and jathis are connected “via a *common denominator*” (ibid., 51). Reina's transcription of a gati bedham (ibid., 55) is used in a [video](#)²⁴⁶ by Marta Camón featuring B.C. Manjunath. The notation shows how the initial time signature of 7/4 is never changed, while the artist goes through all of the gatis (except the one in 9 subdivisions), in this succession:

chatusra (4)→*khanda* (5)→*tisra* (3; in this case 6, or 3x2)→*misra* (7)→*chatusra* (4)

Within these gatis, several groupings are realised (jathi 3, 4, 5, as indicated by the dashed slurs and the box texts in the visual score), giving the idea of irregular geometries unfolding on top of the solid tala framework. Figure 30 is taken from Camón's video.



Figure 30: Manjunath, Gati Bedham

²⁴⁶ See Marta Camón, *Tree Gati Bhedom En Tala Tripura Tisra - Transcription*, 2019, <https://www.youtube.com/watch?v=2LrdW8P-C70>.

Carnatic musicians generally “prize more a constant change of techniques and variety over a long segment of music with crossing accents, regardless of how much tension this could create in the music” (Reina, *ibid.*, 42). Long sequences built on one or a few single techniques seem mechanical and are rarely used: hence the constant sense of surprise and rhythmic tension/resolution that a solo like the one by B.C. Manjunath conveys. The extremely precise and meticulously calculated structures of konnakol allow grouping dissonances in the guise of sequences that are inscribed in a system whose boundaries they bend and push without ever breaking them. The resolution of the friction achieved when an intricate korvai ends and aligns back on the downbeat very well symbolises the tension of the departure from normative structures that I have always felt so attracted to, a rhythmic synthesis of regular and irregular, stable and unstable, expected and unexpected.

3.3.3 Recapitulation

Sections 3.1, 3.2, and 3.3 described elements from the Norwegian “undivided beat” springar tradition, the progressive metal, and the art of konnakol – which share similar rhythmic characteristics – used as compositional tools in *Udelt takt*. A short list is provided below:

Element	Springar	Prog metal	Konnakol
1. Odd and irregular structures	X	X	X
2. Grouping dissonances		X	X
3. Polyrhythms, polymetres		X	X
4. Metric modulations		X	X
5. Contraction/expansion		X	X
6. 3x repetitions at cadential points			X

The next section will show how these elements were fused in a piece of music that stems from all of them, but attempts to achieve its own identity.

3.4 *Udelt takt*: musical study

The six principles listed above innervate *Udelt Takt* at three levels of musical organisation:

- Linear, or how motifs and short melodies are constructed
- Phraseological, or how structures larger than the bar (such as hypermeasures) are built
- Metrical, or how the “layers of motion” (Krebs 1999) interact with each other

As seen in previous chapters, contraction/expansion techniques appear in *kuraippus*, *korvais*, and *yati* phrases, and are copiously used by Eklundh; together with triple motivic repetitions (*mukthays*), they relate to the linear level. Odd and irregular groupings of beats and bars constitute a distinctive element of both the Norwegian undivided springars and some of the phrases or metres found in progressive metal and konnakol: this informs the organisation of building units in the multiple-bar structures of *Udelt Takt*. Lastly, grouping dissonances created by patterns working against a time signature, polymetres, polypulses, as well as metric modulations found both in progressive and in Carnatic music, are perhaps the prominent metrical features displayed by *Udelt Takt*. The piece is articulated into several sections, as summarised in Table 7 (see the complete score in Appendix 1).

Section	Letter	Bars
Introduction	-	1–15
	A	16–40
Springar 1	B	41–123
Springar 2	C	124–164
	D	165–179
Bridge	E	180–218
Reprise	F	219–263
Coda	G	264–280

Table 7: *Udelt takt*, Structure

The Introduction presents rhythmic features that will be developed throughout the movement, and prepares the entry of the *udelt takt* springar melody at B. Like the second springar tune in C and D, the melody is composed according to the characteristics of *udelt takt* springars and triple even-beat springars. The episode at E develops elements of the two springars with procedures borrowed from minimalistic music, aiming at producing auditory effects similar to the optical illusions present in Escher’s art. A reprise of the first springar in *fugato* style (a homage to my baroque background, along with imitations and

other simple contrapuntal moments) sets off the entrance into the last section of the movement, which ends in a coda that condenses most of the rhythmic techniques applied so far.

3.4.1 Springar melodies

Stringar exhibits the influence of Norwegian folk elements at several levels, firstly in the composition of new melodies based on the characteristics of the original Norwegian springars learned during the study of the folk material. It is a common practice among musicians that, after a tradition or style has been studied, they feel ready to express themselves in that particular idiom. After folk fiddlers have learnt springars, polskas, jigs, reels, etc. from masters, they might decide to compose their own new tunes, sometimes pushing stylistic boundaries from within, or importing features from other traditions and genres. The folk tradition is thus kept alive and re-invented: in a way, it is both preserved and changed at the same time. The intriguing – and complex, even controversial – interplay between the static and dynamic essence of a tradition, a body of knowledge that seems solid and yet ever-changing, does not directly fall within the scope of this thesis, but offers the ground for some of the reflections included in the Conclusions chapter. With no intention of placing myself in the lineage of the Norwegian springar tradition, nor of advancing any attempt at its renovation, I nevertheless set out to write my personal version of *udelt takt* springars based on the knowledge I had gathered, from the perspective of an informed outsider.

Among the several examples of *udelt takt* springars given in tables 1 and 2 (3.1), three melodies were taken as references. The transcriptions in Figures 31, 32, and 33 display no time signature, in accordance with the undivided character of the beat (a correct but unpractical time signature would be 1/4). The beat itself functions as the building block to form groups of different lengths, marked in circled numbers and separated by dashed barlines. The proposed division is based on my personal interpretation of the motivic material and of the accentuation: the metrical ambiguity allows room for alternative groupings of different lengths.

Audio ex. 6: Geitungen, "Springar (Alternative)"

Springar
(alternative)

Trad./Geitungen (*Bra Katt!*, 2005)

Figure 31: Geitungen, "Springar (alternative)"

Audio ex. 7: Geitungen, "Springar"

Springar

Trad./Geitungen (*Bra Katt!*, 2005)

Figure 32: Geitungen, "Springar"

Audio ex. 8: Geitungen, "Tveitaslåtten"

Tveitaslåtten

Trad./Geitungen (*Bra Katt!*, 2005)

Figure 33: Geitungen, "Tveitaslåtten"

The bouncing 1,1,1,... groove at the beat level allows hypothetical bars of 4, 3, 2 beat units at a measure level, and by extension hypermeasures of 6, 7 beat units or more at higher structural levels. The first springar in *Udelt Takt* is built upon the same property. Figure 34 isolates the A part of the melody and applies the bar-less beat notation using the dotted eighth-note as unit. Apart from dashed barlines at section endings, no measure or hypermeasure structure is suggested this time, since in the original score the units are grouped slightly differently every time the melody reappears.

Audio ex. 9: *Udelt takt*, Springar 1A

Springar 1
A part

Krishna Nagaraja (*Udelt Takt*)



Figure 34: *Udelt takt*, Springar 1A

In the piece, this version of the melody is exposed by the first violin at A (bars 41–52), and its repetition is then initiated by the cello and concluded, again, by the first violin (53–64). The first exposition mostly happens without an accompaniment emphasising the accentuation, so that no underlining of possible beat groupings is given; possible grouping suggestions can be left to the interpreter's choice, provided that the characteristic 1,1,1,... bounce is preserved. Furthermore, when the other instruments enter in imitation of the lead voice, the contours of possible groupings are blurred by the ambiguous nature of the 3-sixteenth-note figuration, interpretable both as an upbeat and as a downbeat. This indeterminacy is resolved a little later (bars 59–61), when the onsets of the accompanying chords accentuate specific beats, thus creating a phrase of 5+3 beats (see Figure 35).

Audio ex. 10: *Udelt takt 41-64*

B Allegro giocoso

f leggiero

mf

mf

mf

50 *mp*

mp

mp

mf in evidenza

58 *f* *mf* *sf* *mp* *f* *mp* *mf* *p*

Figure 35: *Udelt takt 41-64*

The beginning of the melody is reintroduced as subject of the *fugato* episode at F, modified to accommodate the contrapuntal needs (Figure 36).

F Allegro ancora più giocoso

mf sub.

mf

mf

Figure 36: *Udelt takt 219-224*

Lastly, the A part of the springar is repeated at section G, inscribed in a new metrical structure that sums up the superimpositions developed earlier in the piece (described in detail in 3.4.7). To fit into the viola/cello kuraippu pattern in bars 267–271, the springar melody ending (red rectangle in Figure 37) was shortened by one beat.



Figure 37: *Udelt takt* 264–271

The A part of the springar was composed according to the principle that, regardless of the inner irregular groupings, the overall count of beats would make it possible to inscribe the melody in regular and calculated metrical structures. The version used in the last excerpt has a length of 96 sixteenth-notes, or 32 beats in the normal dotted eighth-note pulse; the very last resolution bar of the springar is not counted, as it is generally of no primary melodic or rhythmic importance. This allows, for instance, 8 bars in 12/16, 8 bars in 3/4, 4 bars in 3/2, 12 bars in 2/4: these metres are all featured to varying extents in *Udelt Takt*, as will be described later.

The B part of the springar is a development of motivic material from the A part: to avoid redundancy of such motifs throughout the movement, this part only appears once, in the exposition at A (bars 70–86), split between viola, second and first violin. Its simpler and unambiguous structure is suggested with the usual numbers in Figure 38.

Audio ex. 11: *Udelt takt*, Springar 1B



Figure 38: *Udelt takt*, Springar 1B

Despite its uncomplicated nature, the melody becomes the basis for two consecutive shrinking patterns played by viola and cello, analysed in 3.4.3.

The second springar melody contrasts with the first one both in its more lyrical character and for its rhythmic feel, derived from the hybrid *udelt takt* springars that sway between a 3-beat springar groove and duple-time 6/8 gangar metre. Even if these springars would normally be notated in 3/4, the 6/8 time signature is adopted in the notations of two reference tunes listed in table 4 (see 3.1), presented in Figures 39 and 40. The first part of the tunes clearly shows typical gangar bowing patterns and accentuations.²⁴⁷ The idiomatic polyphonic playing style of the *hardingfele* is displayed in the notation by the use of bigger notes for the main voice and smaller notes for the drone accompaniment. Embellishments and rhythmic subtleties are reduced to a minimum, for the sake of clarity.

Audio ex. 12: Svidal, "Udelt Springar"

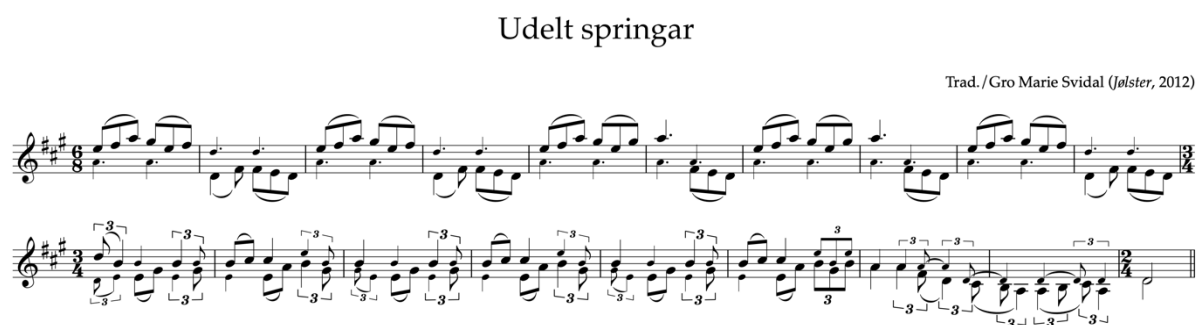


Figure 39: Svidal, "Udelt springar"

Audio ex. 13: Apneseth, "Springar etter Ole Viken"

Springar
etter Ole Viken

Trad./Erlend Apneseth (*Blikkspor*, 2013)

Figure 40: Apneseth, "Springar etter Ole Viken"

²⁴⁷ The audio files however reveal how in both cases the fiddlers' foot tapping, faint but audible, marks the 1,1,1,... pulse and therefore contradicts the 6/8 time signature, employed here for the sole purpose of graphically underlining the shift between metres.

Following the same principle, the A part of springar 2 in Figure 41 is notated in 6/8, but the bowing slurs, and therefore the accentuations of the phrase (square brackets), often suggest a 3/4 metre. A strong gangar character is affirmed in the last five bars with the typical offbeat 3-note slurring (dashed square brackets).

Audio ex. 14: *Udelt takt*, Springar 2A

Springar 2
A part

Krishna Nagaraja (*Udelt Takt*, 2020)

Figure 41: *Udelt takt*, Springar 2A

The B part, played by the viola at section D, presents a classic 3-beat springar pattern and concludes the excursion across the several springar forms coinciding with or derived from the *udelt takt* type, as summarised in Table 8.

Springar 1-A	Springar 1-B	Springar 2-A	Springar 2-B
Undivided, single beat	Undivided, multiple beat	Springar/Gangar hybrid	3-beat springar
1,1,1,...	1,1,1,...	3/4 ↔ 6/8	3/4

Table 8: *Udelt takt*, Springar types

Springar 2 (Figure 42) is concluded by a long cadential phrase of seven bars, with hemiolic formulas borrowed from the end of “*Udelt springar*” (Svidal) and “*Springar etter Ole Viken*” (Apneseth) notated above, indicated here under square brackets. The dashed square brackets indicate hypermeasures in 3/2 and 2/2.

Audio ex. 15: *Udelt takt*, Springar 2B

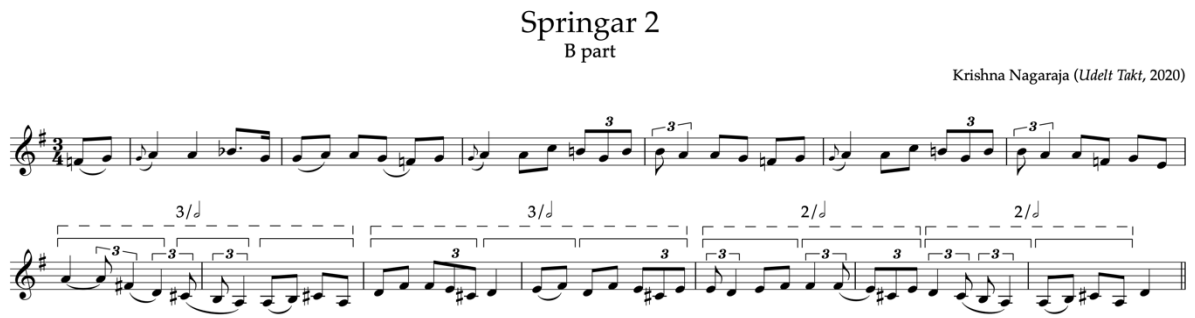


Figure 42: *Udelt takt*, Springar 2B

The description of the two springars in *Udelt Takt* has shown how, at the hypermeasure level, small units were used to construct sequences of odd and irregular length, in accordance with the basic principles of the *udelt takt* groove. Moreover, at the metrical level, these structures encourage an interplay between layers that amplifies or contradicts their periodicity. This will be made clearer as the study of the complete movement unfolds in the next paragraphs.

3.4.2 Introduction

The Introduction is formed by a first part (bars 1–15), presenting much of the motivic, structural, and metrical material developed in the rest of the movement, and a second part (section A) that prepares the entrance of springar 1. The first part is melodically built on the basic motif of springar 1, namely



This short cell is extrapolated and used for rhythmic constructions that introduce the



Figure 43: *Udelt takt* 1

principles upon which *Udelt Takt* is constructed, largely borrowed from *konnakol*. In measure 1 (see Figure 43), the cell works as an axis at the centre of the 5/4 bar, splitting it into two mirroring patterns of 4+3+3 and 3+3+4 sixteenth-notes. The bar is therefore made of two units of 5/8, so that number 5 appears at both the motif and the bar level: similar reiterations of the same prime number often

recur in different structural layers of the piece. This is a condensed example of how the melodic, metrical, and structural level intersect in *Udelt Takt*, and how all of the material is derived from one short 4-note cell. In bars 2–3 (see Figure 44), the two violins play a motif that is still based on the same basic cell but is in 7/16. Repeated four times, its rhythmic pattern originates two sequences of 7/8 and one hypermeasure of 7/4. The same principle is followed in bars 5–6, with an ascending sixteenth-note pattern.

Audio ex. 16: *Udelt takt* 2-5, VI1



Figure 44: *Udelt takt* 2–5, VI1

The click in the audio example marks the underlying pulse, showing how the pattern works against a grid. Bar 3 is beaten in four beats instead of three: viola and cello temporarily shift the metre to 12/16 and introduce the regular pulse of dotted eighth-note that will characterise the springar melodies. The two instruments also present a first basic rhythmic shrinkage applied to metre and motif in bars 2–3 (Figure 45).



Figure 45: *Udelt takt* 2–3, VIa

The whole passage (1–5) is shown in Figure 36.

Audio ex. 17: *Udelt takt* 1-5

I. Udelt takt

Allegro ritmico (♩ = 114)
♩ = ♩ sempre

Figure 46: *Udelt takt* 1–5

A kuraippu pattern (Figure 47) makes its first real appearance in the viola and cello line in bars 6–9. A 4-note melody is reduced at every repetition to the shortest sixteenth-note values.

Audio ex. 18: *Udelt Takt* 6–9, Vla



Audio ex. 21: *Udelt takt* 16–40, Vc

Figure 49: *Udelt takt* 16–40, Vc

The first group of five bars is a rhythmically shrinking sequence where the pulse unit becomes smaller and smaller, as displayed by the note values above the horizontal arrows. The melody, on the contrary, undergoes a process of expansion similar to the one in *Teargas Jazz* explained in 3.2.3, turning two conjunct notes into a descending 6-note arpeggio. Groups 2 and 3 have an almost identical organisation of patterns and beats against the underlying quarter-note grid played by the metronome (in the original score, by the viola). The aforementioned 5/8 motifs are predominant here, turning into an ostinato in group 4, therefore featuring number 5 at all higher structural levels: six patterns in 5/8 amount to three measures in 5/4 and one hypermeasure in 25/4 or 5 dotted half-notes. The last group follows the overall crystallisation of the music around the newly confirmed dotted eighth-note as the new established pulse. The descending arpeggio



is the building block of the viola part (Figure 50), which begins with the metronome-like repetition of the first A-note for hypermeasure groups 1 and 2, then adds a 5-note descending melody in group 3, goes back to the metronomic pattern with an intensified

figuration in group 4, and finally exposes a kuraippu sequence based on the arpeggio in group 5.

Audio ex. 22: *Udelt takt* 16–40, Vla-Vc

Figure 50: *Udelt takt* 16–40, Vc-Vla

The second violin entrance at group 3 (Figure 51) adds a third layer, based on a dotted eighth-note pulse in a 12/16 metre: this causes polypulses and a 4:3 polymetrical dissonance with the viola part, as can be heard in Audio examples 23 and 24 (VI2-Vla and VI2-Vla-Vc respectively).

Audio ex. 23: *Udelt takt* 26–30, VI2-Vla

Audio ex. 24: *Udelt takt* 26–30, VI2-Vla-Vc

Figure 51: *Udelt takt* 26–30, VI2-Vla-Vc

Audio ex. 26: *Udelt takt* 31-35, VI2

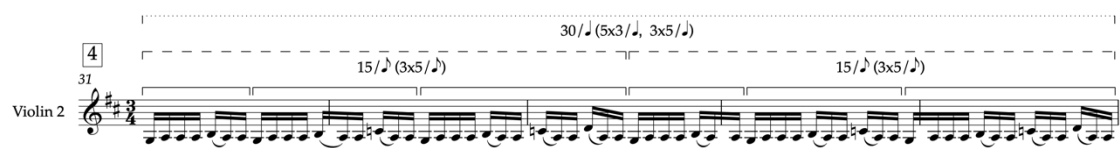


Figure 53: *Udelt takt* 31-35, VI2

Figure 54 displays the full score for groups 4 and 5. The second violin phrase at 31–35 is repeated at 36–40, with a modified ending to fit the dotted eighth-note pulse affirmation. The first violin joins in at group 4, repeating the shrinking phrase heard from the cello at group 1. Throughout group 5 it takes up the metronomic role with figures that mark the quarter-note pulse and then shift to the consolidating dotted eighth-note pulse.

Audio ex. 27: *Udelt takt* 31-40

Figure 54: *Udelt takt* 31-40

The entire section sets the scene and gains the momentum for the entrance of the protagonist of *Udelt Takt*, springar 1, on whose first short motif the Introduction is built. Polypulses and 4:3 polymetrical relations, contraction and expansion sequences, and organisations of the phrases at the hypermeasure level, are presented here as the elements with which the whole movement will be developed, as shown in the next

paragraphs. Audio example 28 presents the complete Introduction section (see the complete score in Appendix 1).

Audio ex. 28: *Udelt takt* 1–40

3.4.3 Springar 1

The springar 1 melody in section B of *Udelt Takt* has been described in 3.4.1; this paragraph analyses the rhythmic techniques applied in the accompanying parts, inspired by the concepts of contraction/expansion, grouping dissonance and metric modulation. The shrinking sequences, similar to Carnatic kuraippus and parts of korvais, occur here in three instances, with an increasing complexity of structure and instrumentation. The first example is found at bars 64–66, where a descending hoquet melody²⁴⁹ is passed from the second violin to the viola and finally to the cello (Figure 55).

Audio ex. 29: *Udelt takt* 64–67, VI2-Vla-Vc



Figure 55: *Udelt takt* 64–67, VI2-Vla-Vc

Figure 56 translates this into one single konnakol phrase.

Audio ex. 30: *Udelt takt* 64–67, Konnakol

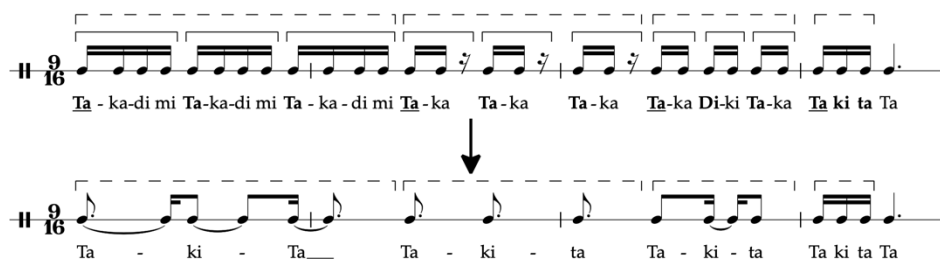


Figure 56: *Udelt takt* 64–67, Konnakol

²⁴⁹The hoquet is a compositional technique dating back to the 13th and 14th centuries, where a melodic line is split consecutively between two or more voices, with each voice alternating fragments of the melody and rests. The “broken” effect thus produced reflects the original French meaning of *hoquet* as “interruption”.

In the above example, the second system eliminates the subdivisions and reduces the pattern to the underlying pulse of the groupings: this practice improves the inner sense of subdivision when approaching polyrhythms and grouping dissonances. Henrik Andersen explains the extrapolation of complex rhythms from a subdivision grid in a [video](#)²⁵⁰ where he also explores playful developments of the concept. This same sequence returns at bars 79–86 in the viola and cello part, immediately followed by a similar phrase that shrinks a segment of four units instead of three (Figure 57).



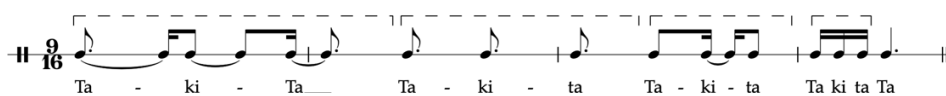
Figure 57: *Udelt takt 79–86, Vc*

Audio examples 31 and 32 respectively include a konnakol version, and the MIDI playback.

Audio ex. 31: *Udelt takt 79–86, Konnakol*

Audio ex. 32: *Udelt takt 79–86, Vc (MIDI)*

The third shrinking episode occurs at bars 104–106. The same konnakol phrase described above (Figure 56) is split between violin 1 (Ta), violin 2 (ki), and viola (ta), using the hocket technique.



Here, though, the contraction is realised differently: as shown in Figure 58, instead of reducing the length of each single 4-note segment, it is the distance between the

²⁵⁰ See Henrik Andersen, *Konnakol Motivation Video*, 2019, <https://www.youtube.com/watch?v=O3V7q7at9PA>.

individual onsets that is increased by 0→1→2 notes, so that the total size of the Ta-ki-ta patterns is decreased, as in the two previous cases, by 12→6→9→3 notes.

Figure 58: *Udelt takt 104–107, V11-V12-Vla, Konnakol*

Figure 59 presents the orchestrated score only showing the reducing segments.

Audio ex. 33: *Udelt takt 104–107, V11-V12-Vla, Reduction*

Figure 59: *Udelt takt 104–107, V11-V12-Vla, Reduction*

Figure 60 provides the complete version of the passage with all the secondary notes.

Audio ex. 34: *Udelt takt 104–107, V11-V12-Vla*

Figure 60: *Udelt takt 104–107, V11-V12-Vla*

The continuation of this passage in bars 107–112 features a metric modulation from 9/16 to 3/4, established by the new time signature in bar 111. The two violins and the viola obsessively repeat the formula



in close canon with each other (at the distance of one sixteenth-note), weaving a texture that shifts from the 3-note to a 4-note grouping and therefore suggests the new quarter-note pulse (Figure 61).

Audio ex. 35: *Udelt takt* 107–112, VI1-VI2-Vla



Figure 61: *Udelt takt* 107–112, VI1-VI2-Vla

On top of this continuum, the cello sings a *molto espressivo* melody (Figure 62) whose pulse gradually becomes slower until it reaches the new metre (similarly to the gati change in konnakol).

Audio ex. 36: *Udelt takt* 102–115, Vc



Figure 62: *Udelt takt* 102–115, Vc

The cello phrase in the new 3/4 time signature embraces five bars: the number 5 appears again to signal the importance of the passage, which introduces the conclusion of the entire section; it is also featured in the following phrases, as will be explained shortly. The metric modulation is made possible by the smallest rhythmic unit (the sixteenth-note) remaining equal. The procedure is transcribed in Figure 63.

Audio ex. 37: Udelt takt 106–112, Konnakol

Figure 63: Udelt takt 106–112, Konnakol

The whole episode, complete with the accompanying lines and their polymetrical ending at 113–114, is shown in Figure 64.

Audio ex. 38: Udelt takt 102–115

Figure 64: Udelt takt 102–115

The B section is then concluded by two phrases built on a motif of 5+3+6/16:

The first phrase (bars 116–120) regroups five 3/4 measures in three hypermeasures in 5/4. The third hypermeasure repeats the first 5-note segment of the motif (VI2 and VIa) four times and juxtaposes it with the quarter-note grid of VI1 and Vc: the tension is therefore prepared for the final *mukthay* (121–123), the threefold cadential repetition of the motif which lands and resolves on the new downbeat. See Figure 65 for the complete passage 116–123.

Audio ex. 39: Udelt takt 116–124

Figure 65: *Udelt takt 116–124*

Figure 66 presents a condensed konnakol version of bars 116–124.

Audio ex. 40: Udelt takt 116–124, Konnakol

Ta-din-ta ta-ki-ta Ta-thom Ta-ka Ta-ka Ta-din-ta ta-ki-ta Ta-thom Ta-ka Ta-ka Ta-din-ta Ta-din-ta Ta-din-ta

Ta-din-ta ta-ki-ta Ta-thom Ta-din-ta ta-ki-ta Ta-thom Ta-din-ta ta-ki-ta Ta-thom

Figure 66: *Udelt takt 116–124, Konnakol*

3.4.4 Springer 2

As explained in paragraph 3.4.1, some Norwegian udelt springars present a hybrid metre that inserts phrasing and accentuation typical of the duple-time gangar in the triple-time metre common to the majority of the springars with even beats. This produces a polyrhythmic feel of 3:2, or hemiola, also found in the ancient *proportio sesquialtera*. The whole A part of springar 2 (section C in the score) is notated in 6/8 and sways between a pulse of dotted and simple quarter-note. The alternation is displayed by the main melody

in the first violin and underlined by the accompanying voices, which interrupt the static long notes with small undulations imitating the first violin: see Figure 67 for the conclusive part of springar 2.

Audio ex. 41: *Udelt takt* 154–164



Figure 67: *Udelt takt* 154–164

The duple-time metre of the gangar is a reminder of its descent from renaissance or even earlier walking dances: the Norwegian word itself refers to the act of walking (*gå*), as reflected in the dance, whose basic move is a medium-paced gait. However, as Jan Petter Blom points out, the duple-time feel refers more to the musical form and the dance than to the actual rhythm, where

in principle there is no differentiation between the first and the second beat. [...] For this reason there are cases where measures of 3/8 or 9/8 have been applied. However, every 3/8 cluster has equal stress and is parallel to the even shifts in support between right and left foot during normal gait.²⁵¹

The last sentence reminds one of the 1,1,1,... pulse that is a characteristic of *udelt takt* springars: the metrical hybridity employed in springar 2 revolves specifically around this similarity, which confers a certain level of ambiguity to both gangar and springar.

²⁵¹ Blom, 'The Dancing Fiddle. On the Expression of Rhythm in Hardingfele Slåtter', 307.

Gangars are notated in 2/4 or 6/8 depending on how the beats are subdivided; in both cases the underlying pulse is embodied by the players' foot tapping pattern, which follows the iambic ~ - (short-long) poetic metre. Fiddler Daniel Sandén-Warg gives an example of [gangar in 2/4](#)²⁵² played for dancers in a characteristic outdoor gathering in Setesdal, Norway. The same musician performs a [gangar in 6/8](#),²⁵³ also from the Setesdal tradition, at the *Fanitullkåringa* competition; in both cases the foot tapping is clearly audible and visible.



In *Udelt Takt*, the iambic gangar pattern is introduced at the beginning of C, in the second violin, viola, and cello part (Figure 68). This rhythm will reappear in the E Bridge section, analysed in the next paragraph.

Figure 68: *Udelt takt* 124–127

The D section features the viola taking the lead and exposing the B part of springar 2, accompanied by a decorative line in the second violin, which then joins in the cadential formulas organised in hemiolic hypermeasures, as seen at the end of 3.4.1. The phrase in bars 165–170 establishes a 3/4 metre with a strong downbeat accentuation, and therefore a beat hierarchy that had not yet been encountered in the piece; such groove is shared by most of the common springars and polskas, where the foot is tapped on the 1 and 3. A strict *pizzicato* canon between violin 1 and cello accompanies bars 165–172; subsequently, the two instruments complement the hemiolic cadential formulas of viola and violin 2 (173–175), with quotes of the gangar iamb creating a fleeting sense of polymetre between the two layers. Violin 1 and cello re-establish the dotted eighth-note pulse in bars 177–179, slurring first in six and then in three sixteenth-notes. Bars 165–179 are included in the Audio example 42 (see the complete score in Appendix 1).

Audio ex. 42: *Udelt takt* 165–189

²⁵² See Agder folkemusikkarkiv, *Gangarring På Håmåren, Rysstad.*, 2017, <https://www.youtube.com/watch?v=fQ5yHQswo9E>.

²⁵³ See Norwegian Centre for Traditional Music and Dance, *Sff: Daniel Sandén-Warg - Heggteiten*, 2011, <https://www.youtube.com/watch?v=jAp0WK8qoPQ>.

3.4.5 Bridge

Section E (see bars 180–218 in the complete score) prepares a reprise of springar 1 by summarising and elaborating the metrical elements presented so far. It is based on three layers, each with a different pulse, two of which have variants (see Table 9).











Layer	Pulse	Figures	Source
A			Springar 1
A ₁			Springar 1
B			Springar 2, A part
C			Springar 2, B part
C ₁			Introduction

Table 9: *Udelt takt E*, Layers

All of the figures are repeated to form ostinatos, except for layer C, which is arranged in short melodic phrases for its different character. Layers are normally hair-pinned in and out of the musical texture at every occurrence, so that they often cross-fade. The unfolding of the episode is similar to the apparently static atmosphere of minimalistic pieces, where stripes of sound come in and out of focus; when overlapping or juxtaposed, their rhythmic patterns originate interference effects that may alter the perception of linear time. Table 10 graphically describes the layer disposition in bars 180–215.

	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197
A																		
A ₁																		
B																		
C																		
C ₁																		

	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215
A																		
A ₁																		
B																		
C																		
C ₁																		

Table 10: *Udelt takt 180–215*, Layer disposition

Table 11 shows how the layers are distributed between the instruments.

	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197
VI1																		
VI2																		
Vla																		
Vc																		

	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215
VI1																		
VI2																		
Vla																		
Vc																		

Table 11: *Udelt takt* 180–215, Layer orchestration

As it is evident from both tables, the moment with the maximum number of simultaneous rhythmic patterns and characters is bar 211 (red rectangle), the apex of a slow intensification of the layer variety and of the grouping dissonance, subsequently channelled in four bars (212–215) that crystallise onto the dotted eighth-note pulse of springar 1, soon to make its reappearance.

Bars 216–217 repropose an alternation of 12/16 and 3/4 time signatures (quoting the Introduction and its of 4:3 polyrhythmic feel), while bar 218 concludes the episode, affirming the dotted eighth-note pulse and leading straight into the next section. Listen to the complete E section (180–218) in the Audio example 43 (see the complete score in Appendix 1).

Audio ex. 43: *Udelt takt* 180–218

3.4.6 Reprise

The F section revisits material from springar 1 and the Introduction, and recapitulates the main metres, pulses, and rhythmic figures used in the movement. These are organised in an arch that points towards their full superimposition in the last bar of the section (263), which continues into the final G Coda section.

As mentioned in 3.4.3, the beginning of springar 1 is reprised in section F and adapted as the subject of a *fugato* passage with the same pulse as in section B, but in a different metre (four beats instead of three). The new 12/16 time signature is functional as a reference frame for the superimposition of the different metrical layers taking place

later in the section. The typical subject-countersubject structure is preserved here for all entries except the last one in the bass, with a modified countersubject (Figure 69).

Audio ex. 44: *Udelt takt* 219–229

F Allegro ancora più giocoso

Figure 69: *Udelt takt* 219–229

While the B part of springar 1 is not reprised, bars 230ff. develop the corresponding 87ff. in section B. A rhythmic technique from bar 92 is used from here onwards for metrical shifts and superimpositions, namely the augmentation of a melodic motif from the end of the springar 1 A part (Figure 70).

Violin 1

Figure 70: *Udelt takt* 51 and 92, V11

In the new 12/16 metre, the augmented pattern fits into a 6/8 time signature, producing an overall 3:2 hemiolic feel in bar 234 (Figure 71).

Audio ex. 45: Udelt takt 233-235



Figure 71: Udelt takt 233-235

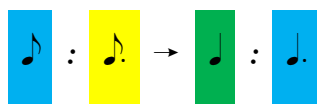
As shown in Figure 72, the 6/8 pattern is inserted into the 12/16 texture between 239 and 245, passed from voice to voice to build up the grouping dissonance, subsequently increased in 246-249 by the introduction of other figures encountered earlier in the Bridge section. The sense of obsessiveness is enhanced by the close canon between the two violins.

Audio ex. 46: Udelt takt 239-249



Figure 72: Udelt takt 239-249

The polypulse shifts in 245–249 bring the grouping dissonance to a calmer pace:



The passage prepares a last resurgence of tension in 250–253 (Figure 73), where rhythmic figures become shorter again and the polymetrical relation returns to 12/16 against 3/4, or 4:3, thus reprising a similar passage in the Introduction (10–11); bar 252 functions as a homorhythmic inversion axis for the figures in the two neighbouring bars.

Audio ex. 47: *Udelt takt* 250–253

A musical score for four staves, numbered 250 to 253. The staves are labeled with dynamics: *mp cresc. molto* and *f*. The score shows various rhythmic patterns, including eighth and sixteenth notes, and rests. A red box highlights a specific section of the score, and a green box highlights another section. The staves are color-coded: the top two staves are green, and the bottom two are orange.

Figure 73: *Udelt takt* 250–253

The kuraippu in 254–256 (Figure 74) parallels the one in the Introduction (6–9), and prepares a second and final example of metrical superimposition where three different pulses used in the piece are stacked and resolved into the following G section.

254

2/4. (6/4)

cresc.

2/4. (6/4)

cresc.

4/4.

4/4.

259

cresc. molto

cresc. molto

cresc. molto

cresc. molto

ff

ff

ff

ff

G

3.4.7 Coda

1. 2. 3. 4. 5. 6. .

136

Audio ex. 49: *Udelt takt* 264–271, VI1



Figure 75: *Udelt takt* 264–271, VI1

The springar melody had been notated in 9/16 (section B, 41–52), but due to its characteristic *udelt takt* 1,1,1,... property it did not show an unambiguous periodicity: it therefore lends itself to being embedded in a 12/16 or 3/4 metrical frame, simply by adjusting the total number of beats from the 33 dotted eighth-notes of the exposition to the current 32, adding up to eight bars in 12/16. The total count of sixteenth-notes is $12 \times 8 = 96$; if we “change jathi” and group them by 4, we obtain $96:4 = 24$ quarter-note beats, adding up to eight bars in 3/4. This calculation was taken into account while writing springar 1, so as to allow a different metrical framing by shortening the melody without significantly affecting it.

Throughout the passage, the two violins keep the dotted eighth-note pulse while the viola and cello pass through all the of six above-mentioned pulses, creating polypulses against the springar melody. A contraction process similar to *kuraippu* phrases (Figure 76), shrinks the viola and cello note values from longer to shorter, until they align with the violins in the dotted eighth-note patterns.

Audio ex. 50: *Udelt takt* 264–271, Vla-Vc



Figure 76: *Udelt takt* 264–271, Vla-Vc

The superimposition of all of these layers is shown in Figure 77, where the rectangular boxes indicate the polypulse relation between the springar melody (joint VI1 and 2) and the accompaniment (Vla and Vc).

Audio ex. 51: *Udelt takt* 264–271

Figure 77: *Udelt takt* 264–271

After this metrical recapitulation, *Udelt Takt* ends by adjoining two phrases that had concluded respectively section A (Introduction) and B (springar 1), as shown in Figure 78.

Audio ex. 52: *Udelt takt* 272–280

Figure 78: *Udelt takt* 272–280

In 272–276, the second violin plays a short version of the expansion phrase from bar 31, whereas cello and viola propose a close canon with the first violin based on the motif of 26, originally exposed by the second violin. The metrical friction is soon resolved at 274, with the alignment of all of the parts to the dotted eighth-note pulse, culminating in a final

mukthay phrase repeated three times. The whole G section (264–290) is available for listening in Audio example 53 (see the complete score in Appendix 1).

Audio ex. 53: *Udelt takt* 262–280

3.4.8 Summary

The G section has shown how the 1,1,1,... groove, typical of Norwegian *udelt takt* springars, can be used to create metrical dissonances at several levels through the superimposition of layers whose pulse is derived from that of the original melody. The entire *Udelt Takt* movement articulates this concept into a trajectory that reaches its maximal condensation through a process unfolding in preceding sections, each with a specific function: the Introduction presents the basic motivic and metrical material; the two springars expose the melodies and suggest polyrhythmic framings; the Bridge juxtaposes the main metrical layers in an almost minimalistic context; the Reprise sets the scene for the final superimposition by developing a fugue exposition of the springar 1 motif and bringing all of the main pulses closer and closer together; the Coda culminates the previous sections, quoting the complete A-part of springar 1 in polymetrical relation with the other layers.

The rhythmic grouping dissonance is the idea that underpins the combination of Carnatic rhythms and progressive metal with Norwegian springars operated in *Udelt Takt*. Irregularities and oddities emerge when put against a regular, grid-like structure, be it an *udelt takt* sequence or an odd time signature framework. A constant unit of measure is at the basis of both *udelt takt* springars (1,1,1,...) and the intricate *konnakol* constructions (the small subdivision, or *matra*): it is the “rhythmic passport” to travel across metres in all directions by establishing mathematical relations between them.

In this movement, the metrical properties of *udelt takt* springars are explored, extrapolated, and transplanted into a context that revolves around three main possible interactions between metrical layers, as summarised in the following scheme.

metre TO metre → metric modulations

Cf. 107–112

metre ON metre → polymetres, polypulses

Cf. for ex. E, G

metre IN metre → metrical ambiguity

Cf. 3/4 ↔ 6/8 in C

The three fundamental time signatures used in the piece and their relative pulses are displayed in Figure 79.

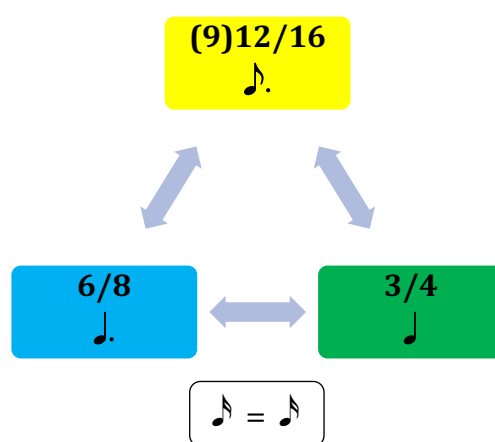


Figure 79: *Udelt takt*, Pulses

The ♩-equivalence is what makes the shifts across these metres possible and accessible, through the development of a strong sense of the inner subdivisions on behalf of the performers. The internalization of the sixteenth-note grid provides a rhythmic ruler to which all pulses, metres, hypermeasures and even entire sections can be referred, therefore enhancing the *feeling*, or embodiment, of the rhythms. It allows performers more ease when switching between all of the beat units presented in the piece:

$$\text{♩} \leftrightarrow \text{♩.} \leftrightarrow \text{♩} \leftrightarrow \text{♩.} \leftrightarrow \text{♩} \leftrightarrow \text{♩.}$$

The way in which the six principles listed in 3.3.3 have been used in *Udelt Takt*, and how they informed the music at the linear, phraseological and metrical levels, has now been described. Table 12 lists the main principles in each section and gives one or two reference examples of their occurrence in the score.

Elements	A	B	C-D	E	F	G
1. Odd/irregular structures	16-40	59-62	171-177 (VIa)		218-229	264-271 (VI1)
2. Grouping dissonances	3-4	119-120				
3. Polyrhythms, polymetres	31-35	113-114	173-175	180-217	245-253 258-263	264-270
4. Metric modulations/shifts		91-94 (VIa) 107-111	124-164 (Hybrid 6/8- 3/4 groove)	216-217	233-236	
5. Contraction/expansion	6-9 31-33 (VI2)	79-86	173-179		254-257	264-270
6. 3x repetitions	9	121-123			257	277-280

Table 12: *Udelt takt*, Elements in sections

To conclude the study of *Udelt Takt*, the link below²⁵⁴ and the QR code provide the full live performance of the movement by string quartet Meta4 (see the complete score in Appendix 1).

[I. Udelt takt](#)



²⁵⁴ Krishna Nagaraja, *Stringar: I. Udelt Takt*, 2022, <https://www.youtube.com/watch?v=3VusyPv8H3U>.

4 Stringar II: Telespringar

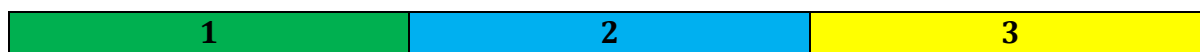
4.1 Asymmetrical tunes

The undivided springars found in southwestern Norway, and the triple-metre, even-beat springars from the western, central, and northern parts of the country can all be included in the second type of springar dialects listed by Aksdal (see 2.2.4), namely those with a symmetrical metre, or equally long beats.

Udelt takt springar: Geitungen, "[Springar \(alternative\)](#)"



Triple-time even-beat springar: Håkon Høgemo, "[Bestefarslått](#)"²⁵⁵



As can be inferred by listening to the performances of other forms of polskas, pols and springars, another metrical type emerges when the triple-time bar is divided into three beats of unequal length: these structures are termed as asymmetrical metres, as opposed to the symmetrical metres based on equal units such as the one in "Bestefarslått". The above graph can for instance be altered by sliding the left border line of beat 2 towards beat 1, while keeping the overall bar length intact; a metre with a short-long-medium beat ratio will be created, as is typical in the Swedish *kort-etta* (short-one) polskas from Värmland.

Kort-etta polska: MP3, [Polska efter Olof Andersson i Höltebärshaget](#)²⁵⁶



If, on the other hand, the duration of beat 2 stays the same while beat 1 is elongated, beat 3 will necessarily shrink in order to keep a consistent bar length, resulting in a long-medium-short metre, which is the distinctive trait of the *Finnskog pols* found in border regions between Sweden and southern Norway.

²⁵⁵ In Håkon Høgemo and Karl Seglem, *Utlå* (NORCD – NOR-CD 9205, 1992).

²⁵⁶ See Magnus Thörnblad, *Polska Efter Olof Andersson i Höltebärshaget*, 2017, <https://www.youtube.com/watch?v=Tz12L-tgpas>.

Finnskog pols: Mats Berglund, [Polska efter Jon Andersson](#); ²⁵⁷ the same tune with dancers [Stig&Helen Eriksson](#)²⁵⁸

1	2	3
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The linked dance videos display how the metre of the Värmland polska and the Finnskog pols is visually reflected in the steps and body gestures of the dancers. This correspondence suggests that the metrical asymmetry is an inherent property of both the music and the dance, instead of being an external structure that is superimposed onto an otherwise symmetrical metre. In other words, the uneven distribution of the beats is not perceived by modern-day folk musicians as a deviation from a symmetrical normative metre, but as an independent basic rhythmic framework: it is therefore embodied and danced as such, with specific movements bound to the durational and accentual structuring of rhythm.

The concept and realisation of asymmetrical metres might seem obscure to people unacquainted with such folk traditions, considering that most western rhythmic music heard today is based on regular, evenly distributed beats. Asymmetries might therefore be interpreted as off-accented figures against an even grid. The organic, coherent rhythms heard in the examples above, however, do not seem to encourage this interpretation, especially if considered in their connection with the dance. While rehearsing a movement of my doctoral composition *Gränser* (2018), based on Swedish asymmetrical polskas from Värmland, the orchestral conductor James Salomon Kahane, whose background is mainly in Western art music, faced the question of how to beat the time signature I had used, namely a 2+4+3/16 metre which contrasts with an even 3+3+3/16, although the total of 9 subdivisions per bar is the same in both cases (see Figure 80). Some of his teachers, perhaps unfamiliar with Swedish folk music, advised him to beat it according to the standard triple-time pattern with three equal beats, thus transforming the early second beat into an accented offbeat. This, however, would have gone against the inherent structure of the music, as confirmed by the folk musicians and researchers I consulted. Such a beating pattern would have disturbed the music, working against the inherent properties of the groove by means of normalizing it to an external

²⁵⁷ See Simon Nyberg, *Polska Efter Jon Andersson - Mats Berglund & Simon Nyberg*, 2019, <https://www.youtube.com/watch?v=dkTF9pIY3Kk>.

²⁵⁸ See Rickard Nilsson, *Finnskogspols*, 2014, <https://www.youtube.com/watch?v=qW2yR27S8xs>.

reference grid that does not effectively exist: the agogic accent that marks the early beginning of the second beat does not function as an off- or up-beat.

III.
Över gränsen

[A]
Polska efter Olof Andersson

♩ = 132

Solo 5-string Viola d'amore

Violin I

Violin II

Viola

Cello

Double Bass [D-A-D-G]

Figure 80: Nagaraja, *Över gränsen*

Kahane finally decided to challenge himself and beat the metre with a prolonged outward gesture for the second beat of the pattern, which was crucial in order to keep all of the performers (the soloist Mats Edén and the string orchestra) bound together with the music. Video example 2 shows the results is an excerpt from my second doctoral concert at S:t Andreas Kyrka in Malmö, Sweden, with the Hurra Baroque String Orchestra (recorded live on May 26, 2018).

Video ex. 2: Nagaraja, *Över Gränsen*, dir. Kahane

These fundamental concepts, and their implications regarding metre perception and musical notation, will be analysed later in this chapter.

4.1.1 Historical notes

Folk music research has shown how asymmetrical metres are nowadays formalised and self-standing structures, recognised both in music and in dance. It is legitimate to wonder how they originated and developed throughout the history of Nordic folk traditions: the question is the subject of an ongoing scholarly discussion and represents an interesting

ground for future studies. No answer is likely to be conclusive, as is often the case for cultural phenomena such as folk styles and traditions, which are generally transmitted aurally and involve musical parameters (rhythm and timing) that are particularly difficult to measure and notate.

Drawing an unequivocal picture of how polska-related dance tunes might have been played around the time when Polish dances gained popularity in Sweden, Finland, and Norway, and in later centuries as well, seems a rather difficult task; due to a lack of written or direct documentation, ascertaining to what degree rhythmic unevenness was applied to the performance is equally challenging. Until the late 19th and early 20th century, music notation did not make use of odd time signatures, let alone uneven metres: unsurprisingly, the tunes from the historical collections bear only standard time signatures such as 4/4, 3/4, 2/4. This does not mean, of course, that the melodies were performed exactly as they appear on paper, especially if one takes into account their traditional (i.e., aurally transmitted) nature, for which the transcription was merely an approximated shorthand. The extent to which the performance of music was freer and more rhythmically complex than what can be read in historical sources is rather difficult to verify: folk music lacked the written theorisation and codification that comprises the basis of the common understanding and study of styles from the past. However, musics whose transmission mostly relies on literacy also seem to leave much of their essence and performing codes unwritten. How largely and deeply does the tacit knowledge that constitutes the core of a style or a tradition influence the notation, transmission, development, and stratification of that same musical phenomenon?

An interesting case of rhythmic unevenness at the level of metrical units, though within the framework of even metrical structures, is provided in art music by the *inégalité* praxis in the French baroque style, where notes with the same value, especially if stepwise, are played unequally, which reminds one of the modern swing or triplet-feel applied in jazz music and other genres. A French treatise dating to 1550 explains this practice, and represents a very rare and early example of the codification of a rhythmic aspect of music. Nancy Hadden's PhD thesis 'From Swiss flutes to Consorts' describes it in the paragraph "Inequality":²⁵⁹

²⁵⁹ Nancy Hadden, 'From Swiss Flutes to Consorts: History, Music and Playing Techniques of the Transverse Flute in Switzerland, Germany and France ca. 1470–1640.' (University of Leeds, 2010), 307–8.

The earliest musician to illustrate this concept was Loys Bourgeois (ca. 1510–60). [...] In his little treatise, *Le Droict Chemin de Musique* (Geneva, 1550), Bourgeois wrote that when singing stepwise pairs of *demiminimes* (crotchets), the first should be held a little longer, as if the first note had a dot. [...] Singing them this way, they have more grace (“elles ont meilleure grace”).



Ex. 4.8.1. Loys Bourgeois, *Le droict chemin de musicque* (1550), showing how to perform step-wise crotchets and quavers *inegales*.

The rhythm is altered for expressive purposes, in pursuit of a more graceful rendition which, as the aesthetics of the time prescribed, always holds the voice and the speaking articulation of singers as the highest model for all instrumental playing:

Notation is an approximate way of describing rhythm, but it is inadequate to the task. Minute subtleties of rhythm and inflection can be produced by singers through the text, and these must be imitated in wind playing [...]. Articulation syllables can produce natural strong and weak accents, and they also can aid in producing rhythmic inequality. Renaissance references indicate that inequality could be either long-short or short-long, and even when notated as equal rhythms, some degree of inequality was often applied. Inequality is well-known today as an important feature of Baroque style, called ‘pointing’ in eighteenth-century English sources.²⁶⁰

The imitation of the voice as the motor for stylistic changes in performance practice, also appears in treatises by Italian theorists. In Antonio Brunelli’s *Vari Esercitii* (1614), the author ranks different ways of performing pairs of quavers from “ordinary” (equal) to “better” (long-short) and “best” (short-long). He adds that all of them should be performed “according to the new manner of singing”:²⁶¹

[Several examples of crotchets, which if sung the ordinary way do not possess grace, so that, being such passages found both in these exercises and in compositions, they will need to be sung in the fashion written below, as it can be seen here]



²⁶⁰ Ibid., 307.

²⁶¹ Richard Erig, ed., *Italianische Diminutionslehren*, vol. 2 (Zürich: Zum Pelikan, 1976), 2.

In some cases, this practice eventually made its way into notation of actual scores in late 16th-century Italian diminution repertoire, as Hadden explains (op. cit., 308–9).

If we apply the principle of mutual influence between voice and instruments to the close interplay between folk dance and playing styles, we could conclude that the rhythmic asymmetries in polska and springar music might have undergone a similar process of micro-timing development. Without implying that unevenness developed as a gradual departure from an initial normative evenness (for which there can be no definitive proof), it is reasonable to think that rhythmic flexibility has always been present in music performance. In addition to inequality, rubato playing – and in a certain way even the Italian baroque *sprezzatura* – demonstrate how playing styles deeply affected the treatment of rhythmic aspects such as tempo and note values. In more recent times, an example of beat asymmetry can be found in the 20th-century performance conventions of Viennese waltzes, which require the first beat of the 3/4 bar to be shortened and the second beat to start earlier and last longer than notated.

Folk music research, though, could not rely on written scores to trace the development of metrical asymmetries until attempts at their notation started appearing in the late 19th- and early 20th-century ethnomusicological literature. According to current evidence, collectors such as Einar Övergaard (1871–1936) started observing, describing, and transcribing Swedish and Norwegian asymmetrical tunes no earlier than at the turn of the 19th century: before that period, only conjectures can be advanced regarding metrical oddities in folk music styles. Swedish fiddler and researcher Sven Ahlbäck mentions Övergaard's work and the later publication of the *Svenska Låtar* tune collection²⁶² as factors with a remarkable impact on the very use of asymmetrical metres:

In some areas in Sweden (e.g. northern parts of Dalarna, western parts of Värmland) relatively strong evidence of beat asymmetry existed about a hundred years ago (in notations as well as recordings). This practice declined during the 20th century, until in some places the discovery of Övergaard's collection and other evidence started a new wave of using beat asymmetry. The decline of the use of beat asymmetry coincides strikingly with the increased use of notations published in *Svenska Låtar* and other collections as a prime source for interpretation of tunes.²⁶³

Magnus Gustafsson detects the presence of asymmetries in Swedish folk traditions where rhythms are normally considered even. He writes:

²⁶² Nils Andersson, ed., *Svenska Låtar*, vol. 1–7, 7 vols (Stockholm: Norstedt, 1922).

²⁶³ In Ramsten, *The Polish Dance in Scandinavia and Poland*, 178.

In Uppland, for example, sixteenth-note polskas are played with a rhythm which is close to the *bondpolska* “long 2”. [...] [O]ne can find examples of asymmetry even here. Among some older archive recordings, we can in my opinion (something maybe surprising) find some southern Swedish sixteenth-note polskas (*slängpolskas*) which are presented with a partly asymmetric rhythm.²⁶⁴

A suggestive hypothesis proposed by, among others, Bjørn Aksdal, links the modern short-long-medium and long-medium-short asymmetries to the ancient practices of the Polish and German proportion (see 2.1):

There were two main interpretations of triple meters by the time “Polish dances” spread to the Nordic countries. One was the Polish interpretation, which has been connected to the Polish mazurka rhythm. As discussed above, typical features of melodies with this kind of rhythm include shorter notes on the first beats of the measure and longer tones at the end. These melodies also often begin without an upbeat and have a cadence on a weak beat. In contrast, we have the German interpretation of triple time, which we get if we moved the bar line one beat to the right. Here, the longest notes are found at the beginning of the measure, there is usually an upbeat, and the melody cadences on a strong beat. These two types of rhythms represent the two main types of the Norwegian pols and springar measures. [...] In many Norwegian districts, the Polish rhythm appears in pols and springar tunes together with a certain asymmetrical measure type, which has an extra short first beat, a longer second, and an approximately normal third beat. By contrast, in many areas, there is a strong relation between the German rhythm and springar tunes in triple time; these tunes exhibit a longer first beat, an approximately normal second, and shorter third beat.²⁶⁵

Such view is shared by Norwegian fiddler and researcher Ånon Egeland, quoted by Gustafsson:

Ånon Egeland believes that the German and Polish proportions are clearly reflected in two different beat perceptions in Norwegian folk music: “In that sense, the eastern mountainous regions of Norway can be split into two areas – one in the north, which includes the southeastern parts of Sør-Trøndelag, most of Hedmark, Oppland and the northern parts of Buskerud, and a southern one, which covers the southern parts of Hedmark, Akershus, Østfold, the southern parts of Buskerud, Vestfold, Telemark and Aust-Agder. In the north, the springar/polskas generally follow the ‘Polish’ rhythm [---], while the same type of tune in the south follows the German way.” Egeland believes that today the difference between these different beat perceptions has been further emphasized by rhythmic asymmetry, but that “the asymmetry in both areas is in principle

²⁶⁴ Gustafsson, ‘Polskans historia’, 73.

²⁶⁵ Aksdal et al., *Glossing over Rhythmic Style and Musical Identity*, 17.

the same, although different accentuations and realizations in the form of the dance can give very different results”.²⁶⁶

As a last notion in this overview of the traces of asymmetries in the history of polska, it is interesting to quote Gustafsson’s connection between syncopations in late 18th-century tunes and uneven metres:

In connection with transitional polska types, a number of forms also emerged with syncopated rhythms [...]. These syncopations might provide on possible explanation to the question of the origin of different rhythmic asymmetries. The following example is taken from a condensed transitional form:



Notexempel: Synkoperad rytm i de inledande takterna ur en "Polo" efter klockaren Nils Wieslander, Vislands ur Johan Fogelbergs notbok, daterad 1826.²⁶⁷

A similar type of syncopation with more advanced rhythms can be found even in older polska-minuet tunes.²⁶⁷

4.1.2 Asymmetrical springars

A first listening to Norwegian springars, such as those performed in this [video](#)²⁶⁸ by Hauk Buen, may leave musicians without previous knowledge of such tunes quite baffled in their perception of the metrical structure. It seems difficult to tell where the bar actually begins, and to extrapolate a steady reference pattern from those complex rhythms. Yet, we know that this is highly comprehensible music for experts in the field, and all of the rhythmic subtleties performed by the fiddler respond to conscious intentions. This paragraph describes the main types of Norwegian springars in asymmetrical metres, with special attention to those that were relevant for the composition of *Stringar*.

The short-long-medium and long-medium-short beat ratio appears in Norway in many local types of springar. It should be reiterated that ratios only provide an abstract reference: in fact, the degree of asymmetry can vary significantly even within a single performance of a tune. Generally speaking, however, Norwegian springars respond to a similar principle as Swedish polskas, according to which the shortening of one beat tends to be inversely proportional to the lengthening of the subsequent beat, with the remaining beat remaining of average or medium length (approximately one third of the

²⁶⁶ Op. cit., 81.

²⁶⁷ Ibid., 289.

²⁶⁸ See MrPanderG, *Hauk Buen - 'Fjellrosa', 'Tjugedälaren' Og 'Rosa'*, 2017, <https://www.youtube.com/watch?v=qbtvWflpKsE>.

bar). The proportion between the long, medium and short beat is estimated to vary between 8:7:6 and 5:4:3, the former implying a slight degree of unevenness and the latter being markedly asymmetrical. Depending on which beat of the bar is long, medium, and short, one of the two main tune types mentioned above occurs.

Springars with a short first beat and a consequently long second and medium third beat (possibly related to Polish rhythms, as Aksdal, Egeland, and others suggest), are found in the districts of Valdres, Gudbrandsdalen Hallingdal, and some parts of Østerdalen. Even if they both belong to this group, the [*hallingspringar*](#)²⁶⁹ and the [*valdresspringar*](#)²⁷⁰ present a significant difference in the degree of asymmetry, the valdresspringar displaying a shorter first beat than the hallingspringar. The other tune type features a long first beat, medium second, and short third beat, common in the districts of Telemark, Numedal, and some parts of Vestfold and Østerdalen. The [*Numedal springar*](#)²⁷¹ and the [*telespringar*](#)²⁷² both belong to this group, despite the high level of variability of the asymmetry: while some bars are played almost evenly, others display a strong unevenness; further bars feature intricacies that make the metre not immediately evident, as was the case in *Fjellrosa*, the first telespringar in the set performed by Hauk Buen mentioned above.

Returning to the slider model proposed at the beginning of 4.1, we could, in short, say that the sliders between the beats are always fluctuating, though approximately responding to an overall beat ratio. This principle is, among similar concepts, the subject of the next chapters, as well as the fundamental idea for the composition of the second movement of *Stringar*. Before the piece is analysed, it is important to provide a summary of the pre-existing literature and research on the asymmetrical tunes that formed the musicological background for my artistic work in the piece.

²⁶⁹ See Ellen Vesterdal, *Hallingspringar - Ingunn Stræte Lie Og Ulf-Arne Johannessen*, 2010, <https://www.youtube.com/watch?v=ccSh1VQ6ghY>.

²⁷⁰ See Agurkmix07, *Valdresspringar*, 2013, <https://www.youtube.com/watch?v=QBdyC5JXthA>.

²⁷¹ See PaintedCloudsStudio, *Numedal Springar*, 2010, <https://www.youtube.com/watch?v=VBjEgTB6Tgs>.

²⁷² See Norwegian Centre for Traditional Music and Dance, *Sff: Hæge Manheim Og Øystein Romtveit - Telespringar*, 2011, <https://www.youtube.com/watch?v=GkzEitcBvc0>.

4.2 Research on asymmetry

This section is based on Mats Johansson's PhD thesis 'Rhythm into style' (2010). The essay will be described in 4.3, but its contents regarding earlier folk collection, notation, and research on the subject, alongside reflections and conclusions relevant to my own work, are presented here.

4.2.1 Einar Övergaard

The Swedish folk music collector Einar Övergaard was one of the first scholars to transcribe and scrutinise asymmetrical metres in Swedish and Norwegian folk tunes. The fruit of his extensive travels in Norway and the western regions of Sweden is nowadays collected in *Einar Övergaards folkmusiksamling*, a book edited by Swedish researcher Märta Ramsten that includes both the collector's transcriptions and his remarks.²⁷³ Övergaard worked in a period when modern ethnomusicology had not yet fully developed its methodology, and Western art music often regarded folk music more as an exotic source of inspiration than as an equally dignified musical phenomenon. Nordic composers such as Edvard Grieg shared a diffused opinion among the intellectuals active towards the end of the 19th century, who seemed to show little interest in the accuracy of folk tunes notation and their use in art music contexts: the case of Grieg's *Slåtter* op. 72 for solo piano (1902/03) is emblematic. The score is introduced by a foreword where the composer claims that the purpose of his arrangements of folk melodies is to

raise those works of the people to an artistic level, by giving them what I might call a style of musical concord, or bringing them under a system of harmony.²⁷⁴

In addition to the hierarchical conception of art/folk music betrayed by this revealing statement, the introduction is made even more problematic by Grieg's suspiciously fleeting and vague citation of sources:

These Norwegian slåtter, now for the first time brought before the public in their original form for the violin (or for the so-called Hardanger fiddle) and rearranged for the piano, were written down after an old fiddler in Telemarken.²⁷⁵

²⁷³ Einar Övergaard, *Einar Övergaards folkmusiksamling*, ed. Märta Ramsten (Svenskt visarkiv, 1982).

²⁷⁴ See Edvard Grieg, *Slåtter* (Edition Peters, 2002), 2.

²⁷⁵ Ibid., 2.

The “old fiddler” (*gammel spillemand*), of whom no further mention or detail is provided, was Knut Dahle (1834–1921), forefather of a long and influential lineage of Norwegian fiddlers. Dahle had asked Grieg several times, over a period of thirteen years, to meet him in Telemark and write down his tunes, which were otherwise threatened with disappearing along with him, due to the looming loss of general interest in local traditions. Grieg never visited him in Telemark but instead offered Dahle money to travel to Oslo and meet violinist and composer Johan Halvorsen, who eventually realised the transcriptions. Halvorsen’s work is credited by Grieg in the foreword:

The few passages where I considered myself authorised as an artist to add to, or to work out the given motives, will easily be found, on comparing my arrangement with the original, written down by Johan Halvorsen, in a manner reliable even for research-work, and published by the same firm.²⁷⁶

A closer look at the “reliable research-work” by Halvorsen, however, reveals some fundamental flaws that can certainly be excused, considering the historical period, but which nevertheless invalidate the authenticity claim made by Grieg. The telespringar *Jon Vestafe* is featured as the second number in the *Slåtter* (op. cit., 8). Figure 81 presents the beginning of the [piece](#).²⁷⁷



Figure 81: Grieg, Jon Væstafæ's Springar

If we compare this notation with renditions of *Jon Vestafe* available today, such as one by [Ottar Kåsa](#)²⁷⁸ where the foot tapping is clearly audible, we notice that the two versions

²⁷⁶ Ibid., 2.

²⁷⁷ In Ingrid Breie Nyhus and Åshild Breie Nyhus, *Edvard Grieg – Slåtter Op. 72* (Simax Classics – PSC1287, 2007).

²⁷⁸ In Ottar Kåsa, *Kjoskrullen* (Ta:lik – TA115CD, 2016).

do not quite match. Halvorsen (and therefore Grieg) barred the tune incorrectly, placing the long beat as the second in the bar whereas it should be the first, which is the distinctive telespringar feature: it is evident that neither of the two musicians was very acquainted with that specific folk tradition. Pandora Hopkins, in her ethnographic book *Aural Thinking in Norway*, gives a very critical account of the case, in a section dedicated to the complex relation between folk traditions and art music:

In actual fact, the Halvorsen-Grieg versions of Knut Dahle's material show their lack of knowledge of the tradition. [...] It may readily be noted that the structure of this Telemark *springar* was distorted through incorrect barring. The Grieg arrangement, which was based on Halvorsen, naturally had to be equally incorrect. Now we have a clue to the peculiar brand of Norwegian-ness that belonged to Grieg and other nationalist composers who actually had little or no contact with "the Folk". [...] It is clear that Grieg successfully used (insofar as his audience was concerned) ideas drawn, not from the folk tradition, but from the pale reflection of it found in published transcriptions: collections that did not differentiate between *hardingfele* and *flatfele* styles, let alone regional styles, and made no reference to pitch system, uneven beat ratios, ornamentation, or improvisation. From the evidence found in contemporary references, we can deduce that the uninitiated public would have found it more difficult to deal with the real thing.²⁷⁹

Placed in this context, Övergaard appears to be quite ahead of his own time. He was keen on studying fiddlers whom he considered "genuine" (*genuint*), whereas he labelled as "quasi-improved" (*kvasi-förbättrad*) the type of folk music performed by classically trained violinists.²⁸⁰



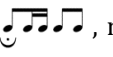



His reflections on stylistic features, especially of rhythmic nature, pioneered the modern interpretations of metrical asymmetries, which he was arguably among the first to bring to the attention of musical research. He had come across such peculiarities while studying Ludvig Mathias Lindeman's (1812–1887) music collection, where some tunes from Østerdalen were notated in the unusual time signature of 2½/4.²⁸¹ When Övergaard travelled to Østerdalen (Elverum) himself in 1895, to his great surprise those tunes were still alive and asymmetrical; his interest in these tunes (of the short-long-medium type) became so compelling that he had to go back to Elverum twice in order to develop a

²⁷⁹ Pandora Hopkins, *Aural Thinking in Norway: Performance and Communication with the Hardingfele* (New York, NY: Human Sciences Press, 1986), 251–57.

²⁸⁰ Övergaard, *Einar Övergaards folkmusiksamling*, 22.

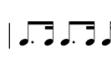
²⁸¹ The episode is quoted by Sven Ahlbäck in Ramsten, *The Polish Dance in Scandinavia and Poland*, 165.

satisfying metrical notation. The pencil annotations found in Övergaard's collection describe the events in his own words:

The fact is that the three beats [in tunes from western Dalarna] are not performed in even 3/4 time. The second quarter-note [beat] has a longer durational value compared to the remaining ones. And particularly striking is the shortness of the first quarter-note [beat]. The ratio between the beats then is approximately 1:1½:1. This pattern is particularly emphasised when playing for dancing, in that the dance steps require this. [...] Several notations of Norwegian spring-dances are in my opinion wrong, in that what seems to be the first beat becomes the third beat of the nearest subsequent bar. The third beat appears to be of shorter duration than the others, though not as short as the first one. In the notations I made in 1895 in Elverum and Østerdalen, I therefore used a 2½/4 bar . Later I changed it into ½+2/4 , but in the end I went back to the common 3/4 notation, which would be played more or less like this: , namely with the length of middle beat determined in relation to the other beats, of which the first one remarkably short. We could be speaking of measures in 5/8, but the rhythm is however in three, not  but  but .²⁸²

Introducing the section dedicated to Østerdalen music, he sheds more light on performance style:

Tunes in 2½/4

These strange tunes were all collected in Elverum (southern Østerdal). They go under the name of "polska dance". Tunes of this kind are thought to be spread within a rather limited area. [...] As far as I know, these tunes have never been printed before. Their rhythm is , and as a rule they end on the stressed beat of the bar.²⁸³

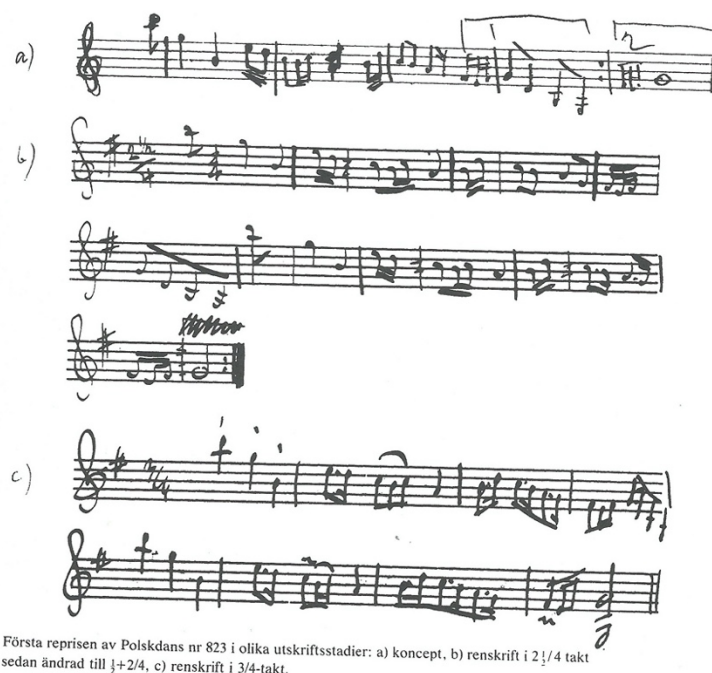
Övergaard's doubts and second thoughts regarding metrical transcription are exemplified by further annotations, such as one where a tune from Elverum undergoes several stages of notational development:²⁸⁴

²⁸² Ibid., 24. English translation of the Swedish texts from this collection by the author of this thesis.

²⁸³ Ibid., 455.

²⁸⁴ Ibid., 456.

[First part of Polskdans nr. 823 in different notation stages: a) concept, b) fair copy in $2\frac{1}{2}/4$, later changed into $\frac{1}{2}+2/4$, c) fair copy in $3/4$]



Övergaard's research on the interpretation and notation of the different length of beats in a measure lay almost forgotten for decades, until Märta Ramsten discovered it and brought it to light with her edition of the *Folkmusiksamling*. His isolation might have partly been caused by his open criticism towards the *Svenska Låtar* collection of Swedish folk tunes, a work initiated by Nils Andersson in 1908 and developed over more than three decades by several researchers in many Swedish regions. Övergaard challenged its editors and their notational choices, which seemed to overlook the rhythmic subtleties he considered so distinctive: "Much in *Svenska Låtar* is accented as if it were from Skåne [i.e., rather flatly and evenly]. The whole of Sweden is thought to be an appendix to Skåne" (ibid., 18). His output provided the foundations for much of the later folk music research in the field, as most scholars nowadays recognise and editor Märta Ramsten acknowledges in the volume.

4.2.2 The 20th century

The previous paragraph clarifies the meaning of Sven Ahlbäck's remark, mentioned in 4.1.1, regarding the use of *Svenska Låtar* as a potential hindrance to the thriving of asymmetrical tunes at the beginning of the 20th century. The tunes in the collection were

notated without considering the subtle but substantial peculiarities of uneven polskas: transcriptions were realised in 3/4 and provided no exhaustive stylistic explanation, which proved that no researcher seemed to have picked up the thread Övergaard had initiated. When *Svenska Låtar* became an authoritative reference for the transmission of Swedish tunes, including those which were incorrectly notated, the incorrectness started circulating as well, and asymmetrical metres entered a phase of temporary decline. Decades later though, when a renewed interest in local folk traditions germinated in the ground of the already established modern ethnomusicology, a new line of scholars applied new resources and methods to the study of asymmetrical polskas, pols, and springar.



Eivind Groven (1901–1977) is perhaps mostly known for his many compositions influenced by Norwegian folklore, (see 1.6.3). An accomplished fiddler himself, his work as a music researcher also left a profound mark on Norwegian musical life, with a total of around two thousand collected tunes and an intense activity as a folk music consultant for the national radio NRK. He was the first Norwegian scholar to attempt a mathematical measurement of the beat ratio in asymmetrical pols and springar tunes, ingeniously using the Morse code:

I mentioned that the three beats in the springar all have different durations, and that these differences can vary from village to village and are decisive for the playing dialect. If we look at a transcription of a tune, we cannot find out how large the durational differences between the beats are supposed to be. The score only indicates equal values for counting. If we are to learn a tune from a score only, we will not learn the melody correctly, as it was originally. The problem therefore is to come up with a clear picture which can provide us with a view of the wave movements of the rhythm. To record this I found (in the 1930s) a *Morse receiver* to be a useful device. [...] The method was that I simply tapped the beat with my finger and got dots on a slip which was transported by the machine. The slip moved with a speed of 30 mm per second. If I then measured the distance between the dots in millimeters, I got a time measurement with a precision of 1/30 seconds. Then I could measure a larger number of measures, thus arriving at a kind of average rhythm.²⁸⁵

Among the many personalities who contributed significantly to the documentation of tunes and songs in the first half of the 20th century, Johansson cites Catharinus Elling (1858–1942), Ole Mørk Sandvik (1875–1976), Arne Bjørndal (1882–1965), and Erik

²⁸⁵ See Johansson, 'Rhythm into Style', 53.

Eggen (1877–1957). It is interesting to note that alongside the resurgence in the study of Nordic folklore, those decades witnessed an increasing number of new compositions inspired by those folk traditions: in addition to Groven, it is worth mentioning Erland von Koch (Sweden, 1910–2009), Klaus Egge (Norway, 1906–1979), Geirr Tveitt (Norway, 1908–1981), Johann Kvandal (Norway, 1919–1999), Vagn Holmboe (Denmark, 1909–1996), Jón Leifs (Iceland, 1899–1968), and Jean Sibelius (Finland, 1865–1957).

Around the end of the 1950s, a line of Swedish researchers referred to as the Uppsala school and led by Ingmar Bengtsson (1920–1989) started using sound-recording technology to discover and measure systematic duration patterns that were specific to asymmetrical types of tunes. Sound-analysis programmes timed rhythmic events to the millisecond and helped to underline how the perception of rhythm was shaped by metrical forces acting from beneath the musical surface. The conclusions he drew from the measurements, however, show that Bengtsson in fact did not consider those tunes to be asymmetrical. He seemed inclined to relate beat length to the motivic rather than the metrical level: when comparing two versions of the same passage in a tune, for example, he noted that whenever the fiddler replaced a  figure with a  figure, this generally resulted in a beat prolongation, referred to a normative even beat structure. As Johansson explains:

Bengtsson's way of treating this topic is that he does not seem to share the assumption that the basic rhythmic structure (meter) of these styles is asymmetrical (with a short-long-average or long-average-short beat duration pattern). Instead, his reasoning is based on the premise that the variations observed, or "dialectal peculiarities", are to be considered to be "deviations from the [polska] code's triple-time norm".²⁸⁶

Bengtsson's model is therefore closer to an even triple metre subjected to varying degrees of flexibility, rather than an inherently asymmetrical structure. This view is generally confuted by more recent generations of researchers such as Johansson, for whom the reference to a normative even structure in asymmetrical tunes is problematic:

All tendencies for asymmetry could be described as variations, as Bengtsson seems to prefer. The obvious problem with the [...] model is that it is not consistent with the way performers and dancers seem to experience this music. One only needs to consider the fact that dance movements are also clearly structured in an asymmetrical way, leaving a symmetrical beat duration ratio as a

²⁸⁶ Ibid., 67.

purely theoretical reference. However, to what extent a specified, asymmetrical beat duration ratio is suitable as a reference with which to measure rhythmic variations is an open question.²⁸⁷

4.2.3 Sven Ahlbäck

Sven Ahlbäck is a familiar figure to anybody who has studied Swedish folk music from a theoretical or practical standpoint. His activities as music researcher and teacher at the Royal College of Music in Stockholm are closely intertwined, as his “contribution to rhythm research is in this context considered to be wide-ranging in that it forms a central part of the teaching of talented and potentially influential Swedish and Norwegian folk musicians” (Johansson, op. cit., 68). For what concerns the scope of this chapter, at least two of Ahlbäck’s achievements are of remarkable significance: the study of the connection between accentuation and metre, and the use of specific compound time signatures, described in his quoted chapter in *The Polish dance in Scandinavia and Poland* and in his pedagogical essay *Karaktäristiska egenskaper för låttyper i svensk folkmusiktradition*.²⁸⁸

Ahlbäck preliminarily highlights two aspects of rhythm: the periodicity of repeated actions such as, for instance, walking, and the gestural or *gestalt* group quality of the single act of taking a step:

I use the term “meter” for the experience of the periodic aspect of time and “rhythm” for the experience of gestalt aspect. In rhythm we experience sounds that are bound together in groups – gestalt groups. Every gestalt group is a rhythm. In meter we experience sounds together through a periodic subdivision of musical time. The periodic subdivision is a meter.²⁸⁹

In his view, polska dance relates primarily to the periodic aspect, that is, metre:

It is quite obvious that most of our dances in northern Europe continue with the same steps, body movements and patterns regardless of the ongoing variation of melodic rhythm – the gestures/figures – in most melodies. This is a bit oversimplified, but I am dealing with the primary relationship between music and dance.²⁹⁰

According to Ahlbäck, the *gestalt* aspect reflected in the melodic contour seems to have characterised the common western notation, in that it favours the relevance of figures

²⁸⁷ Ibid., 67.

²⁸⁸ Sven Ahlbäck, *Karaktäristiska egenskaper för låttyper i svensk folkmusiktradition: ett försök till beskrivning* (S. Ahlbäck, 1995). English translation of the Swedish texts from this book by the author of this thesis.

²⁸⁹ Ibid., 3.

²⁹⁰ In Ramsten, *The Polish Dance in Scandinavia and Poland*, 167.

over metre, which explains the lack of suitable time signatures for asymmetrical polskas until recent times, and accounts for the fact that the notated rhythm does not necessarily correspond to structural or perceived metre.

In order to shift the focus onto what he believes to be the “primary relationship between music and dance”, he suggests an identification and consequent notation of periodic rhythm based on what he calls metrical accents. Two types of emphasis placed in certain positions in the bar respond to different functions and serve as basic markers to distinguish between tune types. In his own words:

To describe metrical accents, I have found it useful to distinguish between two main types of accents, with terminology borrowed from phonetics grave (deep, stressed) and acute (short) accents. [...] The first can be characterized as heavy, sustained, round, with a sound progression that resembles movement of objects with a heavy weight. [...] The acute accent, on the other hand, can be characterized as light, short, sharp, with a sound progression that resembles the movement of objects with a light weight. [...] A deep accent can be experienced as a movement downwards, putting your body weight on a step, and an acute accent can be experienced as a movement upwards, like a jump or a raise of the body. [...] This is expressed in general terms, and these categories are defined as relative entities. This means that “gravity” and “acuteness” of the accent is experienced in relation to other articulations. [...] An acute accent among other non-accented tones or acute accents, can be perceived as relatively deep because of its relative strength. In other words: *The pattern is important, not the individual strength of each accent.* [...] “Grave” accentuation seems to govern the start of the bar, even if acute accents are dynamically stronger.²⁹¹

The accentuation patterns recognised by this principle outline the metrical structure of a tune. In the short-long-medium type, for example, the grave accent marks the downbeat, whereas the acute accent launches the long second beat with an upwards springing motion that is normally realised on the fiddle with an upbow. The pattern is completed by a third accent, landing with a more neutral stress on the third beat, of regular length. The result is clear if we pay attention to the use of the bow Mats Berglund makes in his rendition of the renowned Värmland [*Polska efter Gubben Kihlstedt*](#).²⁹² In my own arrangement of this polska, *Polska after Somebody in Värmland*, I introduce the concepts of grave and acute accentuation in the explanatory page (Figure 82).²⁹³

²⁹¹ Ibid., 173–74.

²⁹² See zioup1, *Mats Berglund*, 2014, <https://www.youtube.com/watch?v=ErV90GX5IUI>. Please note that the caption “Jössehärs polska - Finnskog pols” appearing in the video is incorrect.

²⁹³ See the version for two violas (Biviola Project): *Live in Dublin: Polska after Somebody in Värmland (Trad. Swedish, Arr. K. Nagaraja)*, accessed 3 February 2022, <https://soundcloud.com/krishna-nagaraja/live-in-dublin-polska-after-somebody-in-varmland-trad->

Polska groove

The *polska* patterns used here feature reflect the different weights of the three beats within the bar, borrowed from the steps of the actual *polska* dance.

Players should bear in mind the difference between the *betoning*, namely the beat where the weight of the body is leaned on the ground, and the *accent* where the weight is swiftly lifted from the ground.

◡ = lean the weight on the string (*betoning*): down-bow

▲ = accent realised with bow speed, not pressure: up-bow

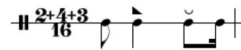
Therefore:

- the short first beat (often slurred to the upbeat in the previous bar) is usually played as a normal first beat, with no particular stress;
- the long second beat has a fast, accented motion upwards;
- the normal third beat is the landing of the second beat motion, and is very often slurred to the next downbeat so that it acquires the *betoning*.

The typical pattern for a polska with a short first beat is then:



or:



It is however typical that the last bar of a phrase (see bars 10, 20, 28, 36 and similar) follows a straight, even beat distribution, just like a bar in 9/16 with 3 equal beats. The present notation displays this feature through the note beaming and grouping:

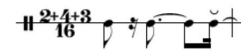


Figure 82: Nagaraja, *Polska after Somebody in Värmland*

The time signature I used for the notation was suggested in 2017 by the Ahlbäck himself, who had been using a similar solution for many years.²⁹⁴ The numerator 2+4+3 suggests a way to group the sixteenth-note subdivisions in a proportion that resembles the beat ratios described in previous paragraphs. What is also worth noting is that the groupings are made even more graphically evident by the beaming of the figures occurring in common notation with a 16-denominator; the same would not be possible with an 8-denominator. Figure 83 provides a rhythmic reduction of the first four bars of Ahlbäck's transcription of a polska from Orsa, Sweden, as played by Gössa Andersson (1878–1963).

swedish-arr-k-nagaraja. The piece also exists in the version for the Brú musical group: Brú - New Early Music., *Live at MiTo 2018: Polska after Somebody in Värmland*, 2018, <https://www.youtube.com/watch?v=ne5tPwPZyyQ>.

²⁹⁴ For a recent study on Swedish asymmetrical polskas supporting the use of the 2+4+3/16 time signature in tune notation, based on the quantitative computer analysis of 20 recordings of five polska tunes played by four different players, see Misgeld, O., Holzapfel, A., Kallioinen, P., Ahlbäck, S. (2021). The Melodic beat: exploring asymmetry in *polska* performance. *Journal of Mathematics and Music*. <https://doi.org/10.1080/17459737.2021.2002446>

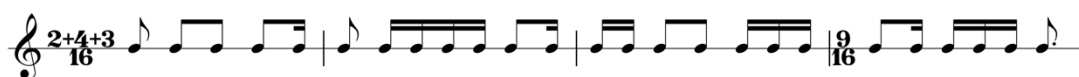


Figure 83: Ahlbäck, Asymmetrical notation

Since the grouping in the fourth bar changes to three even beats, I adopted a $9(3+3+3)/16$ signature. Ahlbäck (1995) delivers the whole transcription in 9/16 but beams the note groups asymmetrically when needed (Figure 84).²⁹⁵



Figure 4. Excerpt from an *Orsa-polska* played by Gössa Anders Andersson. Adopted from Ahlbäck (1995). M1, M2 etc. indicate measure numbers. Audio sample 1a.

Figure 84: Ahlbäck, Orsa polska

In the words of Johansson, this way of representing rhythmic features

reflects his basic conception of the asymmetry phenomenon and implies a constitutive relationship between the subdivision and beat level timing. By using 9/16 notation he is able to communicate both the asymmetry and the alternating meter through the way the notes are grouped within the measure. Somewhat simplified, the notation is based on a set of beat motif figures which also indicates the shape of the asymmetry on the beat level.²⁹⁶

In my opinion, this solution connects very successfully the metrical and the gestural aspects of asymmetrical pols/springars/polskas, since it offers a reliable, visually effective structure for score readers (especially of art music background) to get acquainted with these tunes.

²⁹⁵ Excerpt adopted from Johansson, op. cit., 70.

²⁹⁶ Ibid., 69.

4.2.4 Jan-Petter Blom and Tellef Kvifte

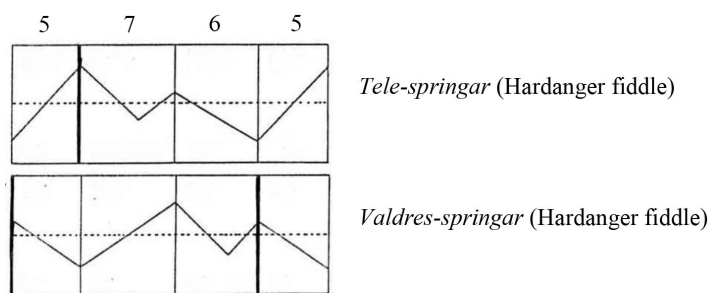
Since the last decades of the 20th century, the study of asymmetrical Norwegian tunes has increasingly converged towards the scientific measurement of the beat inequality ratio and the development of models that enabled a more complete and holistic interpretation of rhythm, taking the aspect of rhythmic perception into great account. The influential work of Jan-Petter Blom aimed at interpreting asymmetrical tunes through the lens of the dances to which they are connected. He developed a system to underline the connection between body movements and rhythmic structures based on the “libration patterns” of the dancing bodies, defined as the fluctuation trajectories of the body’s centre of gravity.

Blom uses the Greek words *thesis* (T) and *arsis* (A) to identify the two basic types of dance movements: they relate, in turn, to the downward, lowering motions of repose, and to the upward, raising motions of action, as in the hand movement related to the *tactus* measurement of musical time encountered in 3.2.1. A complete cycle of falling and raising movements (i.e., a downbeat and upbeat) is called a full libration (TA) and is equivalent to a dance beat, the smallest unit of the rhythmic pattern (for example, the 1,1,1,... pulse in *udelt takt springars*). The metrical unfolding is therefore the resulting sequence of TA-TA... motions which form the dance metre. The libration pattern is a graphical representation of this flow, measuring the position of the body gravity centre in the several parts of the bar: the lower the point on the vertical axis, the heavier the *thesis* and vice-versa. Straight lines between these points give an idea of how the movement is carried across the temporal duration of the music, allowing the measurement of the beat distribution in the bar to be essentially related to a specific point or body movement. Despite the generalisation it implies, this system very well illustrates structural or categorical stylistic differences.

Johansson borrows a graph from Blom to examine the libration patterns of Norwegian springars such as *telespringars* and *valdresspringars*:²⁹⁷

The model below is adopted from Blom (1993: 180) and illustrates librational patterns for different varieties of springar dances. Vertical lines specify musical beats, while the zigzag lines illustrate the motion of the center of gravity of the dancers along a time line, i.e., dance beats. The numbers (5, 7 and 6) indicate the durational ratio of the musical beats (i.e., 5:7:6) and the bold vertical lines (added by me) show the start of the period (measure) for each type.

²⁹⁷ Ibid. 58–59.



The dashed horizontal line indicates the gravity centre reference at resting position. In this perspective, metre becomes a more complete, three-dimensional structure, in that the musical events (i.e., the borders of the beats) are linked to points of tension or relaxation proper to the movement; this relation is embodied by the fiddler, who uses different accentuations, articulations, bowings, and even ornamentations depending on the function that those specific points may fulfil in the dance.

The musical metre appears to be extrapolated from the physical experience, a construction that only exists (or, rather, is recognised) in the mind of listener and/or the performer. This view is shared by Blom and his colleague Tellef Kvifte in a joint article:

Meter is something one uses; a way of ordering sounds in a musically meaningful fashion. Meter is not “in the music”, but in the mind. That is, by the way, also obvious from the fact that metrical signs in written music – time signatures and barlines – are not represented by distinctly audible features in the music. One can pick out the pitch, say “a-flat” from the sound of the music; barlines can only be inferred, not directly perceived. [...] Even if meter is not present in the sound, as a listener one will nevertheless have to rely on information that is present in the sound.²⁹⁸

In order to achieve a better grasp of the phenomenon of asymmetrical metres in pols/springar playing, Kvifte extracts four hypotheses from the existing research in the field to explain how the variation of asymmetry works in the tunes. Summarising Johansson’s description of Kvifte’s suggestions (op. cit., 73ff.):

1. The “average value” hypothesis takes the medium-length beat of the bar (33%) as the reference and shrinks or expands the others accordingly, so as the average value stays intact and the rhythmic flexibility depends on the shifting relationship between the short and the long beat.

²⁹⁸ Jan-Petter Blom and Tellef Kvifte, ‘On the Problem of Inferential Ambivalence in Musical Meter’, *Ethnomusicology* 30 (1 October 1986): 495, <https://doi.org/10.2307/851591>.

2. The “One” hypothesis identifies the complete measure (i.e., the distance between two subsequent downbeats) as the invariant point of reference against which smaller-scale asymmetries can be realised.

Kvifte argues that since the beats are of unequal and varying length, the perception and control of tempo cannot rely on the beat level, as is the case in many other styles (cf. beats per minute (bpm) as a tempo indicator). Thus, the lowest level capable of defining tempo is hypothesized to be the measure level.

3. In the “foot-tapping” hypothesis it is the tapping of the musician’s foot that serves as grid or reference: it is suggested that the highest degree of asymmetry variation can be realised in the position where the foot is not tapped, i.e., in between taps.
4. The “libration curve hypothesis” refers to Blom’s model: complete libration successions (TA) are observed to be more stable than the individual T and A phases.

4.2.5 Mari Romarheim Haugen

The focus on sonic-kinetic models and on metre perception is evident in the output of Norwegian musicologist Mari Romarheim Haugen, whose research has been mentioned in the introductory chapter of the present thesis. Her post-doctoral project TIME (Timing and Sound in Musical Microrhythm) and her work at the RITMO Centre for Interdisciplinary Studies in Rhythm, Time, and Motion (Oslo University) “investigate rhythm production and perception in Scandinavian folk music performance”.²⁹⁹ In her analysis of asymmetrical metres, their measurement in connection to dance and their perception, Haugen starts by establishing a relation between the common notion of pulse as an even succession of rhythmic points and the asymmetrical folk tunes:

The pulse level in music is often described as a series of isochronous beats that provides an underlying reference structure against which we perceive rhythmic patterns. This notion is challenged by music styles that seem to feature an underlying reference structure that consists of beats of uneven duration, such as certain traditional Scandinavian dance music genres in so-called *asymmetrical meter*. [...] Although it may coincide with sonic events in the music, the pulse is

²⁹⁹ See Mari Romarheim Haugen, ‘Research’, mariromarheimhaugen.com, accessed 22 January 2022, <https://mariromarheimhaugen.com/research>.

constructed, first and foremost, by the perceiver and may not be represented by sonic events (for example, during pauses or syncopated sequences).³⁰⁰

Even when the pulse sequence in a metrical structure seems to be isochronous, the beats are not necessarily processed as equal, due to the surface musical events such as articulation, dynamics, melodic contour, etc.: the question is therefore whether an isochronous pulse is necessarily the underlying reference in asymmetrical tunes. Researchers seem to be critical towards this preconception, suggesting that the production and perception of those metres is something more complex than a simple deviation from an even reference grid:

Researchers have noted that this asymmetrical beat pattern should not be understood as a deviation from an underlying isochronous pulse; instead, the underlying pulse in *telespringar* should be understood as asymmetrical *in and of itself* (Groven, 1971; Blom, 1981; Kvifte, 2007; Johansson, 2009; Haugen, 2015).³⁰¹

The way a fiddler accentuates specific notes, as we have seen describing Ahlbäck's concepts of grave and acute accents, shapes the way the metre is perceived, to the point that the same asymmetrical tune can sometimes be performed in the short-long-medium form or in the long-medium-short form, depending on how the accentuation is handled. The perception of metre is, in other words, influenced by a multiplicity of factors rather than solely being implied from an imagined sequence of isochronous beats. Deciphering asymmetrical metres demands more effort from unacquainted listeners:

In music with an unfamiliar meter, a perceiver must first extract relevant periods, based on what is heard, then locate a fitting metrical framework for them. For performers, on the other hand, the sense of meter has to be established internally before they start playing.³⁰²

Shared stylistic codes therefore play an important role in understanding difficult metres, since the pattern recognition is much easier if a listener can relate to the memory of previously decoded patterns. Regarding socially learned cues in rhythmic experiences, Haugen writes:

Human cognition and perception are complex processes that encompass constant interactions between memory, attention, expectation, information that arrives via our senses, filtering of this

³⁰⁰ Mari Romarheim Haugen, 'Investigating Periodic Body Motions as a Tacit Reference Structure in Norwegian *Telespringar* Performance', *Empirical Musicology Review* 11, no. 3–4 (25 April 2017): 272, <https://doi.org/10.18061/emr.v11i3-4.5029>.

³⁰¹ *Ibid.*, 274.

³⁰² Justin London, *Hearing in Time: Psychological Aspects of Musical Meter*, 2nd ed (New York: Oxford University Press, 2012), 69.

information, and so on (Sethares, 2007). In other words, when we perceive the world, we do so in the context of our previous experiences (Snyder, 2000). [...] Music cognition also depends on the relevant *music culture* (Leman, 2008) – that is, when a group of people shares the same musical experiences, conceptions, ideals, and norms. [...] The terms *perception* and *cognition* are sometimes used interchangeably in the literature, but often perception is aligned with sensing and cognition with the processing of what is perceived.³⁰³

Her studies and computerised measurements of music and dance have allowed Haugen to examine the crucial issue of metrical perception in asymmetrical tunes such as Norwegian telespringars, which she chooses as case study in several publications. She demonstrates how perception is influenced by several forces at play, from pulse references to accentuation patterns and cultural influences, and underlines a distinction between the measured, or physical, sound signal emitted by the source and the sound perceived by the listener:

Yet we must remember that when we measure sound, we produce a *representation* of the physical sound, whereas the *perception* of the physical sound is a rather more complex process that depends on multiple factors. This is why it is important to differentiate between sonic rhythm and perceived sonic rhythm.³⁰⁴

As the picture of the rhythmic experience becomes more and more multi-dimensional, before describing the details of Johansson's thesis it is worth introducing the concept of "total rhythm" advanced by US ethnomusicologist David Kaminsky.

4.2.6 David Kaminsky: "total rhythm"

In a 2014 article entitled 'Total rhythm in three dimensions', ethnomusicologist David Kaminsky argues that rhythmic phenomena cannot be perceived as detached entities from all other sonic and cultural parameters that form the musical experience as a whole:

One cannot hear a rhythm without also hearing pitch, timbre, and intensity, any more than one can see a pattern of items arranged in a space without also seeing those items. A more holistic understanding of rhythm – what I will call 'total rhythm' – would consider the arrangement of all of those elements in time, and not just attack.³⁰⁵

³⁰³ Mari Romarheim Haugen, 'Investigating Music-Dance Relationships: A Case Study of Norwegian Telespringar', *Journal of Music Theory* 65, no. 1 (1 April 2021): 9–12, <https://doi.org/10.1215/00222909-9124714>.

³⁰⁴ *Ibid.*, 20.

³⁰⁵ David Kaminsky, 'Total Rhythm in Three Dimensions: Towards a Motional Theory of Melodic Dance Rhythm in Swedish Polska Music', *Dance Research* 32 (1 May 2014): 46, <https://doi.org/10.3366/drs.2014.0086>.

This view justifies Kaminsky's criticism of "skeletal rhythm", exemplified in the tendency of a certain strand of western music to separate rhythm from interacting domains such as pitch, timbre, and intensity. This reduction to a simple pattern of attacks emerges in the common western staff notation, which frames rhythm between barlines and depends on a rhythmic perception based on sound onsets rather than sonic phenomena:

It [the idea of skeletal rhythm] has gone largely unchallenged in the realm of music/dance relations because the two domains in which most of the research have been done are the Western classical tradition (which is also based in staff notation) and percussion-heavy African traditions (in which attack is a reasonable locus for analysis).³⁰⁶

These reflections become even more relevant when analysing irregular dance rhythms that have little relation to the grid-like rhythmic structures that are common, as mentioned, in African percussive music and its derivations (e.g., the majority of Western pop and rock music).

In a study based on interviews with sixteen Swedish polska dance musicians, Kaminsky draws conclusions that resonate with the findings of other recent research and aim at bringing into the scholarly realm an approach to rhythm that takes into account how Swedish polska dance music is perceived by dancers, and how musicians play for dance. His observations emphasise the close connection between the musical rhythm and the dancing bodies, in accordance with Haugen's convictions about Norwegian asymmetrical springars:

Researchers have also criticized the preconception that an underlying reference structure must consist of isochronous beats. [...] It is commonly agreed that the music and dance of telespringar evolved together and influenced one another, and it has been further suggested that the rhythm structures in the music should be investigated in relation to the motion patterns of the corresponding dance.³⁰⁷

The main difference with African and African-derived music, Kaminsky argues, is that in polskas (and springars, by extension) the groove is traditionally provided by melodic instruments and by means of the melody itself, thus creating a multifaceted experience where the rhythm, the melodic line, the accentuation and even the timbre of the instrument engage in an interplay that ultimately results in the dance-musical rendition

³⁰⁶ Ibid., 46.

³⁰⁷ Haugen, 'Investigating Periodic Body Motions as a Tacit Reference Structure in Norwegian Telespringar Performance', 272.

of the tune itself. This very complex event is admittedly difficult to force into an external, abstract structure used as metrical reference:

In African and African-derived music, meter (poly- or otherwise) functions as a theory because rhythmic events are not necessarily coterminous with the dancing body. Instead they provide an external framework, a groove, within which the dancer has space to move. But when the melody is meant to coincide with the dancing body, when the dancer herself becomes the centre of rhythm, the length and form of any rhythmic event must now be determined by her movements, and can therefore no longer be assumed a direct function of mathematical beat division or addition.³⁰⁸

Therefore, according to Kaminsky, metre in asymmetrical tunes ceases to be a pre-existing matrix of absolute reference: beat proportions are rather a “by-product of dance functions” (op. cit., 48). It might be objected that irregular metres in other folk traditions are experienced as very precisely framed, delimited structures: Balkan tunes such as the [horo](#) quoted at the end of 3.2.1 display a clear and regular periodic division of the beats. Here, however, “footwork is privileged and all the beats tend to be downward-oriented, and as a result exact beat locations and proportions are less a subject for debate”; in similar cases such as Western art and African-derived music, then, “conceptualising metre as a prior abstract matrix may not obfuscate the connections between music and dance” (ibid., 61).

The udelt takt springar tradition, where the pulse level corresponds to the dance metre (the step 1,1,1,...) and in some sense every beat is a downbeat, may fall in the same category, since it unfolds sequences of very unequivocal beat attacks. Asymmetrical springars disclose a different world of possibilities, where fluidity and rhythmic flexibility are the prevailing forces. These tunes, as well as similar pols and polska melodies, may challenge the rhythmic perception of the newcomer, but to the experienced ear they sound just as familiar as other codified types of music:

The same mechanisms of cultural learning that would allow a reggae fan, for instance, to nod her head on the beat simply from hearing the off-beat skank in the beginning of ‘Stir It Up’, allows a seasoned polska dancer to hear the beginning of a tune in a given regional style and dance the appropriate dance, whether or not the music opens with overt pattern repetition. The only difference is that the first example can be explained as simple beat induction, while the second requires understanding of a more complex implied pattern.³⁰⁹

³⁰⁸ Kaminsky, ‘Total Rhythm in Three Dimensions’, 45.

³⁰⁹ Ibid., 50.

In order to give a more detailed analysis of the formation and perception of asymmetrical grooves in Norwegian folk music, the next section turns to Mats Johansson's thesis, extracting the aspects that are more relevant to the composition of the second movement of *Stringar*.

4.3 Mats Johansson: rhythmic performance as *process*

Ethnomusicologist and fiddler Mats Johansson holds a post as professor at the Folk Culture Department of the University of Southeast Norway, Rauland, and collaborates with the same RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion of which Mari Romarheim Haugen is also part. In his PhD thesis 'Rhythm into style' (2010), he meticulously explains the reasons behind his conviction that the rhythmic construction in asymmetrical tunes is not unilaterally structured and controlled by an underlying and independent metre. In his view, it is instead the product of two simultaneous factors: a "top-down" process where the beat and measure level informs the timing of the melodic-rhythmic articulation of a tune (metre as an external structure), and a "bottom-up" process where on the contrary it is the rhythmic architecture of motivic segments that shapes and outlines the metrical asymmetries (metre as the result of micro-timing and rhythmic flexibility).

Johansson investigates how rhythmic styles are historically, socially, and individually constructed and adapted. His point of departure is the high degree of subjectivity – or rather contextuality – that seems to characterise the asymmetrical springars performance:

Performing music inevitably involves shaping and controlling time. However, musical time is not equivalent to the absolute durations of events in the physical realm. Rather, it is experienced as relative, contextual, ambiguous and negotiable. [...] As a fiddle player performing traditional Norwegian and Swedish dance tunes, I have always been intrigued by the way in which subtle details of phrasing and timing determine the quality of a performance. A similar and related source of fascination is the great rhythmic-temporal flexibility which stylistic conventions afford. This is especially apparent in performances of dance tunes in asymmetrical triple meter, in which the creative shaping and reshaping of musical time stand out as characteristics distinguishing a skilled performer. Thus, a seemingly contradictory relationship between temporal flexibility and fine-

grained rhythmic detail is indicated, and this stylistically determined interplay between freedom and constraints is the intriguing paradox which has fueled my research endeavors.³¹⁰

Johansson takes the telespringar *Markensmondagen* as a case study: the subtle rhythmic intricacies the tune traditionally presents are well displayed in this interpretation by [Hauk Buen](#).³¹¹ Johansson's thesis analyses a version from 1935 by Gunnulf Borgen and provides the measurements of rhythmic durations realised with computer software, as well as reflections arising from the interpretation of the data.

In line with the assumption that asymmetrical metres cannot be considered solely as abstract deviations from a normative symmetrical reference, Johansson's findings conclude that the *Markensmondagen* grooves are "both consistent and inconsistent" and that "durational values may fluctuate significantly and continuously within a single performance" (ibid., 1). However, if seen from a bottom-up perspective, the irregular patterns become internally consistent with the melodic contour, the ornamentation, the dynamics, technical difficulties such as double stops, and other musical aspects that produce various degrees of micro-timing. Rhythmic contextualisation therefore plays a crucial role in understanding these tunes, particularly when the duration of a beat is explained through its function at the metrical or the motivic level:

The main analytical focus in this thesis is on how different organizational, contextual and architectural factors interact to shape rhythmic patterns. Organizational and contextual influences include two main aspects:

- 1) The general groove (or meter), understood as a recurrent pattern of longer and shorter beats, organizes the relationship between rhythmic levels (measure, beat and subdivision) into a coherent and predictable order. From this perspective, the contextual influence on a beat is dependent on the placement of the beat within the measure (1st, 2nd or 3rd beat position), which determine its durational (short, average or long) and accentual (light or heavy) characteristics.
- 2) The unique motivic and sectional structuring of the tune/performance in question exerts influence on rhythmic components in a variety of ways. From this perspective, the contextual influence on a beat is determined by the placement of the beat within a motif (two-measure motif as a rule) and/or section (strain or longer phrase). Architectural factors, then, refer to the actual shape/contour and subdivision pattern of melodic-rhythmic segments, in particular their density and degree of complexity.³¹²

³¹⁰ Johansson, 'Rhythm into Style', vii.

³¹¹ In Hauk Buen, *Konsert Med Hauk Buen* (Buen Kulturverkstad – BKM C8, 1984).

³¹² Op. cit., 4–5.

4.3.1 Top-down: metre as construction

According to the top-down process, metre can be inferred from melodic-rhythmic fragments that show similar levels of asymmetry. The measurement of beat distribution in every bar of *Markensmondagen* shows that the average pattern is long-medium-short, although the ratio is constantly fluctuating. The rhythmic framework itself, detached from the motivic content, reveals a structure which is subject to instability and unpredictability, having no independent existence of its own.

Even if the durational variability displayed by early 20th-century archive recordings has decreased in modern springar playing (perhaps due to the introduction of multi-instrumental arrangements that require vertical alignment, and therefore a normalisation of the rhythms), the quoted renditions of *Markensmondagen* still demonstrate very little signs of a clear, unambiguous metre. At this point, Johansson poses a fundamental question:

Does this mean that beat duration is an active parameter in the sense that the fiddler intends to produce beats with different lengths? Or does it mean that beats are (passively) allowed to stretch and contract, leaving room for the active shaping, articulating and ornamenting of the melodic-rhythmic phrases in which these beats are embedded? In any case, the answer to this question cannot be deduced from the sound of the recording and the way musicians and researchers chose to interpret these signs from the past is a crucial aspect of the ongoing *construction* of style.³¹³

Can beat asymmetry be a by-product of the lack of rhythmic mastery on behalf of the fiddlers? If irregularity is thought to be a deviation from a regular norm, how intentional is this feature in springar playing? An illuminating parallel is provided by microtonal intonation in Swedish and Norwegian folk traditions:

Another striking example is the so-called quarter-tones (tones in between semitones) often found in early recordings. Since most Norwegian and Swedish fiddlers of today are used to a tempered scale, these tones tend to be experienced (and highlighted in performance) as deviations or exceptions from nominal pitch values, while this most certainly was not the case for fiddlers who lacked the musical “education” of growing up in a world filled with tempered music.³¹⁴

The construction of an average model of metre intuited through listening to many bars of a single tune, or several versions of the same tune, raises the consequent question of “where/what is the tune?”, since especially in Norwegian folk music two performances

³¹³ Ibid., 27.

³¹⁴ Ibid., 27.

can be so different that the tune may be barely recognisable to unexperienced ears. Johansson quotes James Cowdery's idea (1990) of a "tune model" that resonates with the concept of an idealised metre:

The term [tune model] does not refer to any single performance of a tune, nor to an average of renditions by one or more performers; rather, a tune model is a generating pattern in the mind of the individual and, by extension, of the group. Any given rendition is one of an infinite number of possible manifestations of the tune model, which can be studied on the individual level (comparing renditions by one person) or various group levels. On any level, a tune model is a *living potential* which may unfold slightly differently in different situations, but which will always be recognizable as itself, just as a plant retains its identity whether it grows in sun or shade, soil or sand.³¹⁵

Cowdery's idea of the tune model can be applied to metre as an artificial, external reference structure that only exists in the mind of the performer and/or listener. It is an invisible shape that is suggested by the physical sounds, implied by their perception.

The interplay between the abstract character of the metre and its actual flexibility is evident in two experiments, one conducted by Sven Ahlbäck and one by me, which reveal the ambiguity of asymmetrical grooves. In his quoted chapter for *The Polish Dance in Scandinavia and Poland* (op. cit., 172), Ahlbäck recounts how some of his pupils, mostly music education students with no particular interest or experience in Swedish folk music, were asked to describe their perception of metre as he played an asymmetrical polska from Dalarna, without telling them what the tune was. They all found the rhythm very strange, and as he slightly modified the accentuation of certain notes the students' perception and placement of the downbeat changed as well, although the tune remained the same. Figure 85, adopted from Ahlbäck,³¹⁶ shows how the barring in his transcription of the *Polska after Spaken* varied according to the two different accentuations.

³¹⁵ Ibid., 45.

³¹⁶ In Ramsten, *The Polish Dance in Scandinavia and Poland*, 172.

Polska after Spaken



Fig 5. Brief transcription of examples 33 and 34. Two different interpretations.

Figure 85: Ahlbäck, *Polska after Spaken*

At first, Ahlbäck played the high A (a registrally and melodically topical pitch) as the second beat of a short-long-average polska, preceded by the low A with a grave accent on beat 1; later, in the second example, he placed the grave accent on the high A, and played the low one as an upbeat. He kept the beat proportions intact, while switching the pattern around so that the perceived pattern was long-medium-short. The two different beginnings can be heard on the CD included in *The Polish Dance in Scandinavia and Poland* (tracks 33–37), reproduced here in Audio examples 54 and 55 by kind consent of the author.

Audio ex. 54: Short first-long second pattern (acute accent on high A)

Audio ex. 55: Long first-short third pattern (grave accent on high A)

Audio examples 56 and 57 present the whole phrase in the two different interpretations, followed by a full version of the tune (Audio example 58) where Ahlbäck sways between the two accentuations and challenges the students to find the downbeat of the pattern.

Audio ex. 56: Short-long-medium pattern

Audio ex. 57: Long-medium-short pattern

Audio ex. 58: Mixed pattern

While describing kort-etta polskas in his essay *Karaktäristiska egenskaper*, Ahlbäck stresses the importance of accentuation as the determining factor in the formation of metrical patterns and, at the same time, of their inherent ambiguity:

There is, so to speak, an inbuilt metric instability in the uneven polska with short first beat and long second beat. The measure count starts, as previously stated, from the beat that is more deeply stressed. In the presence of gravely accented notes, even if acute accents were strongly marked we would still not perceive them as the starting point of the measure count. In a rock song, the drummer might accent the upbeats with full strength and leave the downbeats empty, but we would still hear them as upbeats. However, the perception of a musical stress as grave/acute, down/up, heavy/light, etc., can certainly depend on many factors apart from articulation, such as note duration and height.³¹⁷

As Ahlbäck explains, it is not the individual strength of each accent that should be given importance, but rather the context of the whole pattern. The relation between accents in metrical pattern recognition also emerged from a listening experience I had while composing the *Gränser* concerto for 5-string viola d'amore and orchestra, written for my second doctoral concert inspired by Swedish polskas. The third movement of the piece is based on two asymmetrical tunes, a short-long-medium polska ([*Polska efter Olof Andersson från Höltebergshaget*](#))³¹⁸ and a long-medium-short Finnskog pols ("[*Puken i kjerketårnet*](#)").³¹⁹ The idea is to use accentuation and metric modulations so that the polska is re-interpreted with the Finnskog pols beat ratio, and vice-versa (hence the title *Över gränsen*, "Over the border"). When I heard the polska for the first time in the interpretation of Mats Berglund & co., I had no previous notion that the tune was commonly known as a kort-etta polska. From my first listenings I had the impression it was a Finnskog pols with a long accented first beat and a very short third beat. When I discovered that the tune is, in fact, a Värmland kort-etta polska, my fascination for the ambiguity of this tune – or rather, of how it was performed – increased. Figure 86 shows the notation of the tune as short-long-medium polska, as it appears in *Gränser* (note that in Audio example 59 by Mats Berglund & co., the foot tapping happens mainly on beats 1 and 3).

³¹⁷ Ahlbäck, *Karaktäristiska egenskaper för låttypen*, 23.

³¹⁸ See Magnus Thörnblad, *Polska Efter Olof Andersson Från Höltebergshaget*, 2015, https://www.youtube.com/watch?v=R4YV7kD_OP0.

³¹⁹ In VA, *24 Polsdanser Från Finnskogen* (Nordic Sound, 2002).

Audio ex. 59: Berglund&co., *Polska efter Olof Andersson*



Figure 86: Polska efter Olof Andersson

With the help of an audio cutting and pasting programme, I created a loop based on the very first phrase of the polska, the one that had thrown me off the most: detached from the rest of the context and due to obsessive repetition (and despite the foot tapping), this fragment arguably becomes more suggestive of a long-one pattern, since the high A (again, a very topical note) is strongly emphasized and, more importantly, the low A is extremely short and lightly accented. Figure 87 approximates the resulting pattern to 3+3+2 instead of the 4+3+2/16 time signature that would be the exact translation of 2+4+3/16 with the new barring.

Audio ex. 60: Berglund&co., *Pols efter Olof Andersson*



Figure 87: Pols efter Olof Andersson

Accentuation, melodic contour, contextualisation in phrasal and formal structures, and many more aspects resonate with the listener's individual rhythmic notions, and outline a metrical reference that, as previously said, is not physically present in the music but is constructed in the mind. Furthermore, the metre can be perceived in different ways, depending on the level of rhythmic ambiguity applied in the performance: the top-down process, in the asymmetrical polska/pols/springar, therefore provides an abstract reference and not a rigid, pre-existing matrix, as these two cases have demonstrated.

4.3.2 Bottom-up: micro-timing and rhythmic contextualisation

If we take the motivic level as the point of departure to understanding metrical asymmetries, we will see how specific aspects such as motif architecture, ornamentation, and technical difficulties affect the general metre: the point of view of the person who is performing the tune comes into focus. In addition to mapping beat proportions in *Markensmondagen*, Johansson subjects the tune to further measurements of short motivic fragments, analysing their overall length and the relative duration of the single notes in a group. He focuses above all on “formulaic motifs”, namely recurring segments that are very typical of telespringars, such as triplets or long ornaments such as trills. The timing applied in these instances varies depending on the expressive or structural function of the fragment: if, for example, a trill is placed on the resting downbeat after a cadential formula, the fiddler might take a few extra milliseconds than in other downbeats elsewhere in the tune. Johansson also notes how in many cases these expansions are not compensated for by the shrinking of other beats in the bar, so that they also affect the total duration of the measure: this disputes Kvifte’s average value hypothesis, which requires the overall bar length to remain intact.

Figure 88, adopted from Johansson,³²⁰ shows how the same motif is repeated three times in Borgen’s version of *Markensmondagen* with different musical intentions, resulting in three slightly different durations of the third beat: interestingly, in the third instance the beat prolongation due to the trill is so pronounced that the beat becomes the longest of the bar, whereas it should normally be the shortest according to the overall metre.



Figure 50. Comparison between architecturally different motivic segments (M64/66 vs. M68) illustrating the relationship between ornamentation and beat duration. Audio sample 6z.

Figure 88: Johansson, Ornament timing

Complex ornaments or other technical difficulties such as string crossings may also represent reasons for the fiddler to dwell on certain notes for a longer time. Johansson

³²⁰ Johansson, ‘Rhythm into Style’, 160.

summarises his conclusions on timing alterations caused by contextual or technical constraints as such:

The timing of ornaments is influenced by what might be termed absolute and contextual constraints. Absolute constraints concern technical limitations and aspects of performance timing that involve motor automatization. For instance, fiddlers may not be able to perform trills in the same way with all fingers. [...] Contextual constraints, then, concern the ways in which the surrounding melodic-rhythmic context influence the shaping of the ornamental figure. [...] These micro-rhythmic patterns are *produced* and *reproduced* with knife-edged precision and certain irregularities (that similar ornaments have different total durations etc.) are consistently associated with certain contextual positions within the rhythmic segments. These observations support the notion that rhythmic performance may be conceptualized as a continuous and dynamic interaction between stable and flexible levels.³²¹

Reoccurring motivic fragments are often the result of a transformation of the rhythmic architecture, which Johansson defines as “rhythmic reshaping”. The same rhythmic formula is treated differently according to the context in the phrase, which might or might not affect the beat duration.



The picture on the left, adopted from Johansson (ibid., 157), extrapolates three motivic fragments and their modifications. This level of micro-timing can therefore be involved in the development of beat asymmetry. Since the beat length ratio is not rigidly fixed, the fiddler is allowed to apply different degrees of unevenness according to the musical inclination of the moment. The hypothesis of an external metre that strictly governs the forming of an asymmetrical metre loses its plausibility: the relationship between the timing at the motivic and at the beat level is, in other words, the constitutive force of the bottom-down process of metre formation.

4.3.3 Triplets and rhythmic reshaping

Rhythmic reshaping is one of the fundamental principles borrowed from the telespringar playing style, used in the second movement of *Stringar*. In the previous paragraph, it has been described how the length of some notes in *Markensmondagen* was stretched or contracted according to the fiddler's musical intention. In short figures such as 3-note groups (see the picture in the quote below, the groups on the last beat in the first bar of

³²¹ Ibid., 167.

each system), unevenness is applied to the three notes in different ways depending on whether they lead the phrase onwards or they stop for a pause:³²²

The extension of the final tone of the triplet may be interpreted as a kind of “preparation” where the fiddler brings the rhythmic flow to a microscopic halt before the final part of a longer section.

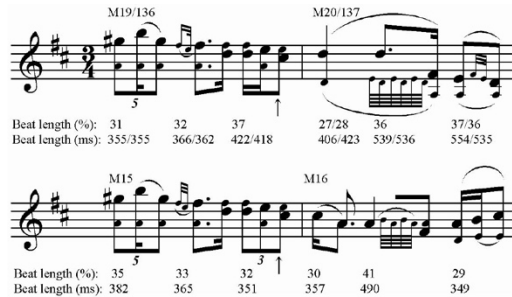


Figure 41. Comparison between contextually different motivic segments (M19/136 vs. M15). Audio sample 6q.

The different contextual position of the last triplet note indicated by the arrow underneath (preparation vs. continuation) also determines a significant variation in beat length (beat 3=37% vs. 32% of the bar). Johansson notes that the triplets, an important building unit in springar tunes, are hardly ever played in a perfectly symmetrical (i.e., even) manner, and he argues that this is due more to their motivic contextualisation than metrical position:

There is no alignment between beat position and the duration of triplet beat motifs that could be explained with reference to a generalized telespringar meter (long-average-short/long-long-short). Rather, the variation in temporal architecture and total duration of triplets may be interpreted with reference to the melodic-rhythmic/motivic contexts in which they appear.³²³

Symmetrical triplets, when they occur in *Markensmondagen*, are generally played rather fast, reducing beat length; instead, in asymmetrical triplets the extension of the first or last note prolongs the duration of the beat they are placed in. This form of rhythmic reshaping is an example of interaction between fixed and flexible elements, and responds to the fiddler’s stylistic, technical, and rhetorical needs:

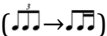
Some kind of mechanism related to stylistic constraints and/or the motor capacities of the performer tend to produce a temporal pattern in which the two shortest elements of the triplets remain constant in duration, while the remaining tone (the first or the last) fluctuates extensively. [...] What is performed here [...] is a complete musical sentence which cannot be reduced to separate, decontextualized units in any musically meaningful way. [...] The individual triplets are

³²² Ibid., 171.

³²³ Ibid., 168.

not autonomous gestures but closely interrelated parts of a rhythmic whole (i.e., the complete cadential triplet formula) in relation to which the durational and architectural properties of these parts are to be understood.³²⁴

In conclusion, the rhythmic reshaping of triplets in *Markensmondagen* is aligned to the beat duration by virtue of the contextual function within the musical phrase:

Triplets were constantly rhythmically reshaped () and this reshaping affected the total duration of the beat motif.³²⁵

4.3.4 Rhythmic tolerance

As the overview of the interpretation of metrical asymmetries becomes more complete and approaches its conclusion, it is now useful to return to the idea of “time sliders” introduced in 4.1 and further expand it. Not only does the average position of the borders between the three beats in the asymmetrical bar determine a specific tune type (short-long-medium pattern like kort-etta polskas and valdresspringars, or long-medium-short like Finnskog pols and telespringars), but even within the same tune type – or the same tune – the distribution of unevenness may vary causing beat delimitation to fluctuate.

It has been explained how the beginning of a beat, in folk traditions like Norwegian springars where melodic instruments are also responsible for bringing out the rhythm, is marked by a multiplicity of events that cannot be solely identified with onset attacks: they relate to accentuation, ornamentation, dynamics, and other aspects. Musicologist Anne Danielsen, head of the RITMO centre, has developed an interpretation of this phenomenon that conceives of the beat as an area of concentration of rhythmic energy that cannot be framed into a specific point in time. Its borders are not unambiguously defined lines, but rather continuous gradients of aggregation, as Johansson articulates in his explanation of Danielsen’s idea:

This is particularly apparent when the physical representation of the start of a rhythmic event is ambiguous, as often is the case in fiddle music, where musicians use the almost endless potential for articulative variation as an expressive resource. Accordingly, the “fading-in” of tones, ornamentation, glissandi, legato, bow dynamics etc. may increase the tolerance range within which

³²⁴ Ibid., 170.

³²⁵ Ibid., 228.

a rhythmic event is estimated to start. Or, the musical onset may be perceived as having a certain extension rather than being represented by a specific point in time.³²⁶

This implies that mathematical measurements of beat asymmetry, put against the grid of an abstract metre, generally produce results that fall within a certain margin of error. Hence, a “rhythmic tolerance” needs to be taken into account, as suggested by Johansson:

Rhythmic tolerance, then, refers to the fact that the experience of a rhythmic event need not correspond to a measurable point in the musical flow. Instead, the event has a certain extension which may vary according to a variety of acoustic and perceptual factors.³²⁷

Coherence to the stylistic features of a tune type therefore requires a degree of rhythmic tolerance, the opposite of a normalisation of micro-timing, to fit the performance into a predefined metrical grid. The question of how much a pattern can be altered without falling into another rhythmic category is probably bound to fall short of definite answers, which is arguably what makes the ambiguity of asymmetrical tunes so intriguing and full of potential for musical and cognitive experiments. In this regard, Johansson stresses that the rhythmic fluctuations do not necessarily weaken the solidity of the overall groove: it is the ability of the performer to “shape melodic-rhythmic phrases within a malleable temporal framework” that enables the listener to perceive the metre as stable (ibid., 244). The experienced fiddler uses this *flexible groove* to conjugate the two directions of musical timing (top-down and bottom-up): their good balance is the essential ingredient for a groove to be stable without becoming rigid, as is evident in all the telespringar interpretations by Norwegian masters presented so far.

Johansson then wonders whether flexible groove and rhythmic tolerance can be achieved in ensemble playing, namely in a context where a high degree of rhythmic synchronisation between musicians is required. Though the task might seem extremely challenging, he mentions the Swedish folk band Groupa as a successful example of interaction between rhythmic freedom and groove stability, resulting in a high level of togetherness . The group has a reputation for playing the challenging asymmetries of Swedish polskas and Norwegian springars in tight arrangements that, instead of caging the melody, allow it to shine by enhancing its inherent characteristics. The secret of their mastery lies, in Johansson’s opinion, in a shared conception of “melody as rhythm

³²⁶ Ibid., 246.

³²⁷ Ibid., 247.

carrier”, an approach to flexible grooves that derives metrical references from the tunes themselves and from the practiced knowledge of stylistic codes:

To these musicians, beat duration diversity and onset ambiguity are simply challenges to be overcome rather than insurmountable obstacles to rhythmic coherence. The notion of melody as the rhythm carrier, then, implies that the groove-forming element is the melody rather than some structure of percussive accents in the backing section. Thus, the melody, not the accompaniment, provides the rhythmic reference on which all rely. The accompaniment instead accommodates different ways of articulating this melodic rhythm.³²⁸

Two tracks by Groupa are listed by Johansson as listening suggestions, namely “[Sparve lilla](#)”³²⁹ and “[Springlek](#)”.³³⁰

4.3.5 Recapitulation

The possible interpretations of the asymmetrical pols/springar phenomenon can be summarised in three main hypotheses, listed according to Johansson in a growing gradient of plausibility (ibid., 251–52):

1. All asymmetries are deviations from an imagined symmetrical triple metre.
2. Asymmetrical metres are a predefined reference structure, and smaller-scale asymmetries are excursions from this model.
3. The “performed rhythm” is the categorical reference, constantly negotiating between a preconceived asymmetrical structure and real-time pattern variations.

The third alternative is the one suggested by Johansson and is also reflected in the conclusions of other researchers such as Haugen and Kaminsky; it differs from the other two in that “the reference is seen as growing from the events unfolding as opposed to being pre-established and independent of the performed music” (ibid., 252).

In his analysis of Borgen’s *Markensmondagen*, Johansson demonstrates the extent to which micro-timing affects beat length and consequently beat ratio, while at the same time showing how the overall groove or metre is perceived to remain stable. This can be seen as the result of three main factors:

³²⁸ Ibid., 247.

³²⁹ In Groupa, *Imeland* (Amigo – AMCD730, 1995).

³³⁰ In Groupa, *Lavalek* (Xource Records – XOUCD125, 1999).

- Rhythmic tolerance: beat onsets are not precise points in time, but rather areas where rhythmic energy concentrates. Beat delimitation and therefore metrical perception is governed by a series of factors (articulation, ornamentation, melodic contour, dynamics, etc.) which, despite their non-rhythmic nature, are in fact the rhythm carriers and allow for a larger margin of flexibility than a series of simple onset attacks.
- Flexible groove: the ability of a fiddler to master the rhythmic content of the tunes allows intentional fluctuations, within the boundaries of preconceived metrical reference structures.
- Metrical recognition: the set of stylistic codes shared in a musical community provides the boundaries of such metrical structures and enables listeners to relate a single performance to a certain tune type; a cultural phenomenon by nature, this is also subject to changes and variations over time.

The rhythmic reshaping and contextualisation of motivic architecture (cf. the case of the typical springar triplets) are manifestations of a performer's flexible groove skills, and are all the more efficient if they manage to create a satisfactory balance between particular micro-timing and general metrical references. This lies at the core of the top-down/bottom-up simultaneous interplay described by Johansson, and summarised as follows:

The asymmetrical beat duration pattern might be explained as the result of an interaction between the rhythmic structure of motifs (top-down process) and the idiomatic temporal structure of individual beat motifs (bottom-up process), rather than as imposed by a predefined beat duration structure. [...] First, there is the rhythmic articulation of the motivically structured melodic-rhythmic material, to which certain durational patterns seem to be intrinsic. Second, there is the overall groove functioning as a framework within which the melodic-rhythmic course of events is chiseled out.³³¹

The relation between organisational framework (metre) and local events is, in the case of asymmetrical springars, more mutual and less hierarchical than what might be expected. In Johansson's opinion, a specific springar type does not *prescribe* but rather *affords* certain temporal patterns; their realisation addresses other domains than simply the temporal, such as the melodic, dynamic and accentual level. All of these aspects are

³³¹ Ibid., 177.

related so intrinsically and inextricably to each other that it is impossible to determine which parameter affects the other; it is however certain that the influence is mutual and constant. In conclusion, the top-down and bottom-up forces cannot be treated separately when aiming at a more holistic, multi-layered grasp on the essence of asymmetrical tunes. Their interplay suggests the idea of rhythmic performance as a *process*:

[It] might be said that *the process* of performance timing comprises both these constitutive influences. [...] Experientially, it seems musical parameters are invading each other's perceptual domains in a way so that timing cannot be perceived independently of our perception of other structural and expressive parameters.³³²

Performance timing ultimately results from the combination of the two forces: inscribed in the temporal unfolding of musical events, this is conceptualised as the “*process* of performance timing, comprising both these constitutive influences” (ibid., 208).

4.4 Telespringar: fundamental principles and musical study

The second movement of *Stringar* draws inspiration from the Telemark springars with a long-medium-short beat ratio and explores their essential rhythmic aspects in the light of some of the principles articulated by Johansson in his thesis. As an introduction to the piece and a reminder of the telespringar tune type, the Table 13 contains a few listening suggestions, some of which served as reference tunes for the composition.

Performer	Title	Album
Hauk Buen	“Bøheringen” “Bokkoen”	<i>Spel til dans III</i> (Buen Kulturverkstad – BKMC31, 1989)
Hauk & Knut Buen	“Kivlejenta” “Nordfjorden”	<i>Spel til dans</i> (Buen Kulturverkstad – BKCD10, 1995)
	“Håvards draum”	<i>Spel til dans IV</i> (Buen Kulturverkstad – BKMC32, 1989)
	“Igletveiten” “Siklebekken”	<i>Myllarfela</i> (Buen Kulturverkstad – BKMC41, 1991)
	“Fjellrosa” “Fykerud’n” “Livius Smiths minne”	<i>Fykerud’n</i> (Buen Kulturverkstad – BKCD4, 1992)
Bjarne Herrefoss	“Tjugedalaren” “Markensmondagen”	<i>Draumespel</i> (Buen Kulturverkstad – BKMC39, 1990)

Table 13: Telespringars

³³² Ibid., 240–41.

As a video addition to this list, the TV series *Spela spelmann, lat fela låte*, quoted earlier about *udelt takt* springars, includes an episode about music from Telemark where fiddlers Kjetil Løndal and Olav Øyaland play and dance telespringars: see the video [here](#), from minute 5:52.³³³

The principle of rhythmic freedom within a reference groove, described by Johansson as rhythmic tolerance, flexibility, and reshaping, lies at the core of *Telespringar* and presupposes a conception of time as an uninterrupted flow or stream, a line that can be stretched or shrunk without losing its continuity. Similar to a rubber ball subjected to expansion or compression and then released to regain its original size, in *Telespringar* time is conceived as a malleable material that is progressively moulded into a complete rhythmic pattern constructed with formulaic motifs from the Telemark folk tradition. Temporality here is therefore radically different than in *Udelt takt*, where the time continuum was formed by a sequence of discreet small units: the entire first movement was built on an ongoing grid of sixteenth-note subdivisions, organised in clearly delimited and even beats which were in turn grouped in measures and hypermeasures of even or odd length. The overall time structure of *Udelt takt* resembles a solid brick construction, whereas in *Telespringar* the rhythmic material is fluid, the shapes are rounder, and indeterminacy and ambiguity overtake clarity and transparency. The elastic manipulation of the material, or the action of *stretching/shrinking*, is the first fundamental idea behind the piece.

The second constitutive principle in *Telespringar* is that of *interference*, a phenomenon that occurs when two wave trains from different sources meet and interact. For example, when the ripples originated by two stones thrown in a pond meet, the combined waves are the result of the respective original wave phases at the meeting point, creating a pattern of additions and subtractions of wave amplitude. Interference, in a way, reminds one of the negotiation between stability and instability that is the result of the top-down/bottom-up interplay. The friction between the stable reference pattern of the ideal metre and the behaviour of the performed rhythm in every bar reveals an ongoing synergetic process similar to interference: in that case, of course, one of the

³³³ 'Dansar frå Aust-Telemark', *Spela spelmann, lat fela låte* (NRK1, 1971), <https://tv.nrk.no/serie/spela-spelmann-lat-fela-laata/1971/FOLA71000771/avspiller>. Another [episode](#) in the same series features a dance competition especially organised for the programme. Kjetil Løndal plays a telespringar from minute 4:43 to 7:30, danced by Olav Sem and Ingrid Strand: see 'TV-Kapppdans', *Spela spelmann, lat fela låte* (NRK1, 1971), <https://tv.nrk.no/serie/spela-spelmann-lat-fela-laata/1971/FOLA71000871/avspiller>.

sources – the stable metre – is only implied, since it is not really present in the physical sound. If, instead, the reference pattern is actually performed and the second pattern is its exact but slightly displaced replica, the acoustic effect of interference will be perceived and not simply imagined. The misalignment may be realised on many levels, such as the temporal placement (the second pattern may begin slightly later) or the performing speed (different tempi).

This technique has been exploited by exponents of “phase music”, a branch of minimalism where interferential phasing is used as the primary compositional resource. In *Piano Phase* (1967), Steve Reich captures the mesmerising effect of patterns resulting from the first type of displacement, constantly morphing under the action of microscopical shifts in the attack or tempo of the unstable source. This [video](#)³³⁴ clarifies the principle with graphics and score excerpts. A similar technique is applied in *Violin Phase*³³⁵ (1967). In his monumental and ground-breaking piece *Drumming* (1970–71), Reich introduces variation of speed as a tool to put identical objects out of reciprocal focus: after starting in unison, some of the drummers change the tempo slightly until they reach a temporal displacement that creates a similar combined pattern effect as seen in *Piano Phase* and *Violin Phase*, reached there through the more elastic procedure of tempo-bending. Figure 89 explains the technique in Reich’s own words, from the initial pages of the score (the passage between 9 and 10 can be viewed in this [video](#)).³³⁶

³³⁴ See Matekon, *Steve Reich - Piano Phase - Visualization*, 2015, <https://www.youtube.com/watch?v=57TuvksMR70>.

³³⁵ In Ensemble Modern, *Steve Reich – Eight Lines. City Life* (RCA Red Seal – 74321664592, 2002).

³³⁶ See PDXPercussionGroup, *Steve Reich Drumming - Portland Percussion Group*, 2012, <https://www.youtube.com/watch?v=doJk4yPwJDk>.

degree of freedom, like a guided improvisation. The final sections of the movement instead require the synchronisation of the instruments: barlines are therefore reintroduced and the morphing procedure happens at another level, that of the pattern recognition/reaction on behalf of the performers.

4.4.1 Pitch bend

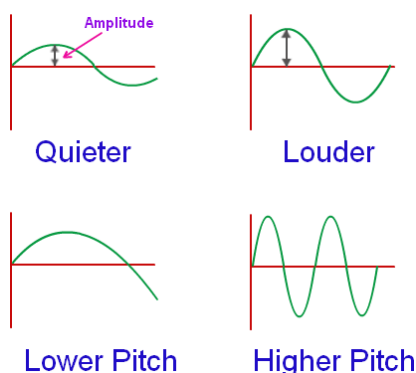


Figure 90: Sine wave

The interference between two pitches with very close frequencies creates the phenomenon of acoustic beats. Figure 90³³⁸ shows the graphical representation of a sine wave, a very regular type of wave that is representative of electronically generated pure sounds. In sound waves, the amplitude corresponds to the volume and is measured in decibels, whereas the number of oscillations per time unit defines the frequency, or pitch, measured in

hertz. When two sound waves meet, they generate a third wave (envelope wave) whose amplitude is the addition or subtraction of the original amplitudes. If, in a specific point in time, the waves are “in phase”, the amplitudes sum up and the envelope amplitude doubles (constructive interference); if they are in “counter phase” the amplitudes will cancel each other, resulting in a null, or effectively silent, amplitude.

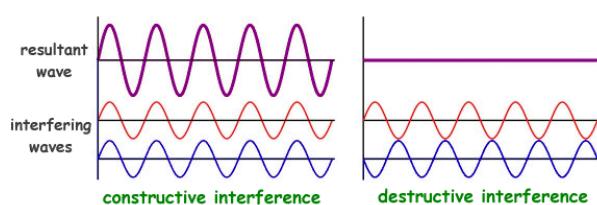


Figure 91: Interference

In figure 91³³⁹ the interference between waves with the same frequency is visualised. Different frequencies originate more complex envelopes, as the phase between the two original waves varies.

The following two figures³⁴⁰ provide an overview of the acoustical implications of wave interference, and graphically describe the envelope wave form resulting from two slightly different frequencies.

³³⁸ Retrieved from ‘What Is the Amplitude of Sound Waves?’, Quora, accessed 22 January 2022, <https://www.quora.com/What-is-the-amplitude-of-sound-waves>.

³³⁹ Retrieved from ‘Double Slit Experiment - Does Interference Take Place Only in Waves Parallel to Each Other?’, Physics Stack Exchange, accessed 22 January 2022, <https://physics.stackexchange.com/questions/107286/does-interference-take-place-only-in-waves-parallel-to-each-other>.

³⁴⁰ Retrieved from ‘Beats. From Physclips’, accessed 22 January 2022, <https://www.animations.physics.unsw.edu.au/jw/beats.htm>.

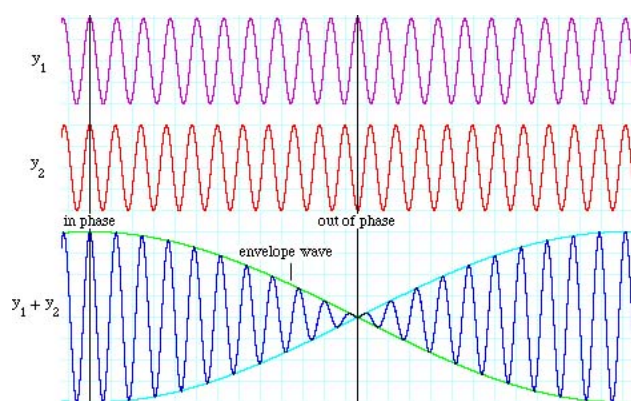


Figure 92: Acoustic beats, detail

As displayed in Figure 92, the envelope results in a wider oscillation (the green and turquoise lines) that reaches a moment of silence when y_1 and y_2 are in destructive interference. The unfolding of this event over a longer stretch of time is shown in Figure 93.

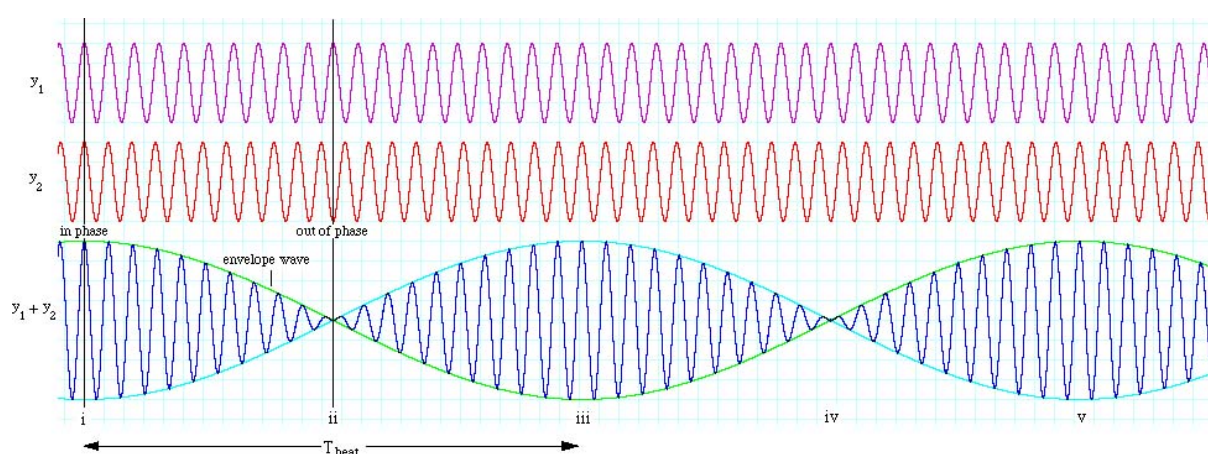


Figure 93: Acoustic beats

The envelope wave takes the shape of a broader undulation (the acoustic beat, T) whose repetition sonically reminds one of vibrato or tremolo effects. This principle was used since as early as the 16th century in building pipe organ stops that could imitate the undulation of the human voice (*vox humana*). One of the systems required a pipe row to be tuned slightly higher or lower than the general pitch in order to create the oscillating interference. Beats as the result of minimal pitch difference also constitute the basic principle used in the historical tuning of keyboard instruments, particularly organs, because of the possibility to sustain the sound: experienced tuners hold a reference key and tune other pipes using the number of beats per second as guidance, since all intervals in given temperaments have defined ratios, and therefore precise acoustic beat numbers. The [webpage](#) that hosts the figures above also provides sound examples for several ratios of beats per second, as well as for specific intervals of simultaneous notes (9:8 or major second, 6:5 or minor third, etc.).

Acoustic beats become more evident the closer and the purer (sine-like) the two soundwave shapes are. In other words, the closer and the cleaner the timbres of the instruments, the more audible the beats. In the following video example, I created three sine soundwaves with identical timbre and amplitude, but with different frequencies: from the top, the first is a g,³⁴¹ the second is a quarter-tone flat g, and the third is an f#. Video example 3 demonstrates the effect of all the possible superimpositions.

Video ex. 3: Acoustic beats

The very first section of *Telespringar* applies the bending principle described earlier to the pitch level, by means of a very long glissando in the viola part (Figure 94). A g on the IV string starts in unison with the corresponding g on the open II string and gradually reaches a quarter-tone flat g (first fermata), finally landing on an f# (second fermata), therefore producing acoustic beats with increasing undulation frequency.



Figure 94: *Telespringar*, Pitch bend

Meanwhile, the other instruments engage in other fluid and shimmering gestures such as glissandos, tremolos, and bow-vibratos, among which a transfigured quotation of the 7-note telespringar pattern is inserted (Figure 95).

³⁴¹ In Helmholtz pitch notation. This system is used in the present thesis for tuning descriptions and specific pitches, whereas generic pitch classes are written in capital letters (the note G, or D major). For a visual reference, see Mdcollins1984, *Graphic Detailing the Hermann von Helmholtz System of Musical Notation, Information in the Public Domain.*, 2 August 2007, 2 August 2007, Own work, https://commons.wikimedia.org/wiki/File:Helmholtz_pitch_notation.svg.

Audio ex. 61: *Telespringar* Beginning-A-B

Lento, senza misura (♩ = 60)
(note durations are indicative, dashed barlines are for reference)

The musical score is divided into two sections, A and B. Section A, marked 'ca. 10'', features Violin 1 and Violin 2 with a 'pizz.' (pizzicato) instruction and a 'ca. 10'' duration. The Viola and Cello parts also have 'pizz.' and 'ca. 10'' markings. Section B, marked 'ca. 30'', continues the piece with 'Lento' and 'Più calmo' markings. The Violin 1 and Violin 2 parts have 'arco' and 'gliss.' instructions, while the Viola and Cello parts have 'IIIc.' and 'pizz.' markings. The score includes various dynamic markings such as 'mf', 'p', 'mp', and 'leggiero', as well as performance instructions like 'at the tip', 'pont.', and 'p grotesque'.

Figure 95: *Telespringar* Beginning-A-B

4.4.2 Tempo fluctuation

Sections C, D, and E of *Telespringar* shift the focus onto the aspect of tempo, and gradually transform the bending of pitch (glissando→acoustic beats) in the stretching and shrinking of performing speed. The f#'-g'-a'-Bb' cluster that concluded section B, identifying the harmonic ambitus of a C Lydian dominant scale, is subsequently subjected to a bow vibrato gesture by the violins and the viola at the beginning of section C (Figure 96). After a series of melodic variations, the three instrument converge on a g' unison.

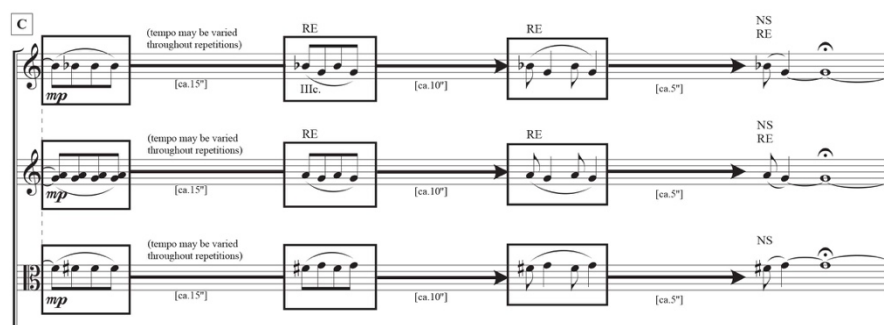


Figure 96: *Telespringar C*

The meaning of the signs and abbreviations used in the notation is clarified in the explanatory page of the score (Figure 97).

Abbreviations

- NS not in sync with anybody, independently
 RE "Ripple Effect": the player smoothly switches to the next pattern after hearing another player change their pattern, just as ripples propagate on the surface of water. One instrument acts as initiator of this process: the viola, for instance, at letters C and D, or the first violin from letter J to letter M.

Boxes

In a single instrumental part, two consecutive boxes connected by an arrow require a gradual change from one to the next. A simple horizontal line indicates simple repetition.

- Before letter G: A boxed pattern is to be started NS, unless it is connected to another box by a dashed vertical line. It is to be played and repeated in an individual tempo and NS
 From letter G: A tempo is established, boxes are vertically aligned and therefore synchronised
 From letter J: See the instructions for RE described above

Figure 97: *Telespringar, Explanations*

The procedure that governs the unfolding of the events is therefore largely improvised: players choose their own tempi and move to the next box at their individual will, which results in a texture of moving patterns and pitches, gradually aligning on one single pitch. The "ripple effect" (RE) can be seen as the translation of the wave interference phenomenon into gestures of propagation of a musical change. Audio example 62 displays the complete section C.

Audio ex. 62: *Telespringar C*

Section D transforms the beat undulation (bow vibrato) in patterns of shorter notes, inscribed in a general tempo bending (accelerando and rallentando); section E starts with the crystallisation of the musical gesture into patterns of four ostinato down-bow notes. These events feature only one pitch, the note G (Figure 98).

Audio ex. 63: Telespringar D

The musical score for Audio ex. 63: Telespringar D-E consists of four staves. The first three staves (treble and bass clefs) show a sequence of patterns labeled 'D' and 'E'. Pattern D is marked 'ca. 40'' and Pattern E is marked 'ca. 20'' and 'ca. 5''. The patterns are marked with dynamics: *mp*, *cresc. e acc.*, *f*, and *rall.*. The fourth staff shows a similar pattern marked *p* and *slow IVc.*. The patterns are marked with the note 'RE'.

Figure 98: Telespringar D-E

This repetitive pattern is expanded registrally and harmonically to cover the range of the C Lydian dominant scale (Figure 99). The function of this part is to gradually align all individual tempos to one speed (120 bpm), introduced by the viola and acquired by the other instruments according to the ripple effect.

Audio ex. 64: Telespringar E

The musical score for Audio ex. 64: Telespringar E consists of four staves. The first three staves (treble and bass clefs) show a sequence of patterns labeled 'E'. The patterns are marked with dynamics: *cresc.* and *A tempo = 120*. The fourth staff shows a similar pattern marked *cresc.*. The patterns are marked with the note 'RE'. The score includes instructions: 'Repeat the previous box in sequences of 3-4 patterns, choosing one note from this mode:', 'Keep the same tempo and note through the sequence; change both ad lib. every new sequence', and 'Gradually converge to V/a tempo = 120'. The score also includes a 'give cue' instruction.

Figure 99: Telespringar E

Now that the harmonic ambitus is established, and the bending procedure has been applied to frequency and speed, the more crucial rhythmic stretching/shrinking at the beat level starts taking shape in the next section.

4.4.3 Beat ratio manipulation

The F section joins the idea of interference with that of expansion and contraction of beat duration in asymmetrical springars, induced by micro-timing. In the first half of the section (Figure 100), the boxed pattern assigned to the second violin acts as a stable reference grid of three even beats against which an identical viola pattern gradually morphs from the initial rhythmic unison to an approximated telespringar medium-medium-short pattern. In a specular manner, the second half reverses roles and lets the stable telespringar pattern of the viola be the reference for the slow transformation of the other pattern.

Audio ex. 65: *Telespringar F*

Violin II (top staff): *mf* ① ② ③. Strictly keep a steady rhythm and the isochronous beat. $\text{♩} = \text{♩} (\text{♩} = 160)$. Without affecting the bar length, gradually prolong ① and ②, and shrink proportionally ③. $3:2:2$. *give cue*

Viola (bottom staff): *mf* ① ② ③. Without affecting the bar length, gradually prolong ①, and shrink proportionally ② and ③. With the same principle, prolong ②, and shrink ③ even more. $\text{♩} = \text{♩} (\text{♩} = 160)$. Strictly keep a steady rhythm and the asymmetrical beat. $3:2:2$.

Figure 100: *Telespringar F*

This passage addresses the “flexible groove” skills of the performers, who are required to apply an increasing amount of beat inflation/deflation until they reach the desired pattern. It also reiterates the concept of gradual interference, applying it to the increasing friction between two metrical structures, which go in and out of focus. Finally, it provides a possible sonic portrayal of the transformation of an isochronous pattern into an asymmetrical metre: the focus here, however, is more on the interferential side of the phenomenon, and there is no intention of suggesting that asymmetries originate as a deviation from a presupposed symmetrical structure, a hypothesis that has largely been discarded by the recent research described in previous sections of this chapter.

4.4.5 Rhythmic reshaping

The telespringar pattern formed throughout the F section is an approximated version of a common cadential formula featured, for example, in the tune *Kivlejenta* (Figure 101).³⁴²

Audio ex. 66: Buen, *Kivlejenta*



Figure 101: Buen, *Kivlejenta*

Once the rhythmic telespringar pattern is formed, the piece continues with a series of micro-variations that are inspired by Johansson's idea of rhythmic reshaping. As seen in paragraph 4.3.3, these variations mainly affect one of the most recurring rhythmic formulas in telespringars, namely triplets. An example of variations over an extremely long passage of triplets is mentioned by Johansson regarding Gunnulf Borgen's rendition of *Markensmondagen*:³⁴³

A striking feature of *Markensmondagen* is the very long series of triplets occurring three times in the performance (see fig. 62 below). [...]

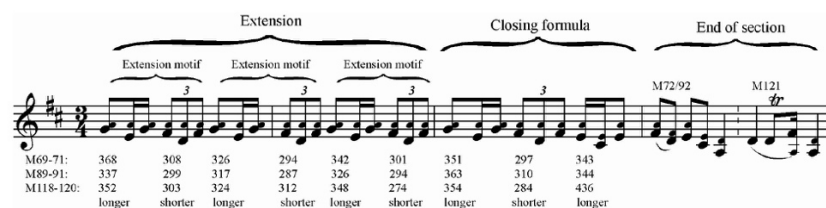


Figure 62. Beat duration pattern (ms) in extended cadential triplet formula (the notation of the last measure is simplified). Audio sample 6zh.

The additional six triplets (the first two measures in fig. 62) can be “taken out” without disturbing stylistic coherency. Moreover, although relatively unusual, this type of extended triplet formula also occurs in performances of other Tele-springar [sic] tunes, which contributes to its recognizability as a stylistically idiomatic element.³⁴⁴

Anund Roheim's interpretation of *Siklebekken* in Figure 102 features similar triplet sequences.³⁴⁵

³⁴² Audio example from Knut Buen - Topic, *Kivlejenta, Springar*, 2019, <https://www.youtube.com/watch?v=gdmhTjWBAvg>.

³⁴³ In Gunnulf Borgen and Halvor Borgen, *Gamle Meisterspelemenn På 78 Plater II* (Buen Kulturverkstad – BKMC16, 1988).

³⁴⁴ Op. cit., 172.

³⁴⁵ Audio example from Various Artists - Topic, *Siklebekken, Springar*, 2019, <https://www.youtube.com/watch?v=XT5tV5GQ4RA>. The track is included in VA, *Meisterspel* (Heilo – HCD7132, 1997).

Audio ex. 67: Roheim, *Siklebekken* (triplets)



Figure 102: Roheim, *Siklebekken* (triplets)

Knut Buen's version of *Nordfjorden* insists on triplets in cadential phrases (Figure 103).³⁴⁶

Audio ex. 68: Buen, *Nordfjorden*



Figure 103: Buen, *Nordfjorden*

Rhythmic reshaping is applied in this section of *Telespringar* both to triplets and to other short rhythms such as duplets. Letter G (Figure 104) marks a formal turning point with the introduction of measured rhythm: from now on the tempo and metre will stay constant and all the parts will be locked into vertical alignment.

G

A tempo ♩ = 160
On cue by V12

Figure 104: *Telespringar* G

The second violin and the viola engage in a succession of motivic variations, shown in Figure 105, that transform the 7-note pattern into one where all beats contain three notes (achieved at the beginning of H).

³⁴⁶ Audio example from Knut Buen - Topic, *Nordfjorden, Springar I Eiga Form*, 2019, <https://www.youtube.com/watch?v=0hKOpBH75ts>.



Figure 105: *Telespringar* G, Motif variations

At H, articulatory variations are added (slurs) and some micro-variations of the triplet rhythms applied (Figure 106).

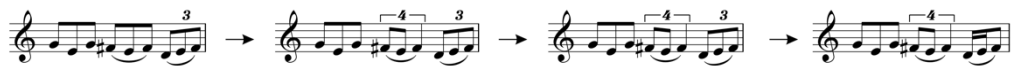


Figure 106: *Telespringar* H, Motif variations

From the third box of G, the second violin and viola are in a canon relation with each other, as the second violin follows the viola pattern changes at the distance of one box. The first violin and the cello enter the scene at G, reproducing the viola glissando at the beginning of the piece; once they reach the f#-g semitone, they underline the telespringar foot-tapping pattern (on beat 1 and 2) with soft inflections of the bow. The whole G–H–I episode is included in Audio example 69 (see the complete score in Appendix 1).

Audio ex. 69: *Telespringar* G–I

4.4.6 Pattern morphing

In the last part of *Telespringar* two morphing procedures take place, both using a modified version of the ripple effect system, this time involving the whole quartet. A process of progressive motivic micro-variation is heard at a cadential phrase in Per Anders Buen Garnås's live interpretation of *Markensmondagen*. The red notes in Figure 107 indicate the small differences between the variated motifs.³⁴⁷

³⁴⁷ Audio example from Maj-Lis Bogstrand Mogen, 8E8A1917, 2014, <https://www.youtube.com/watch?v=sdEv41LXypU>.

Audio ex. 70: Buen Garnås, *Markensmåndagen*

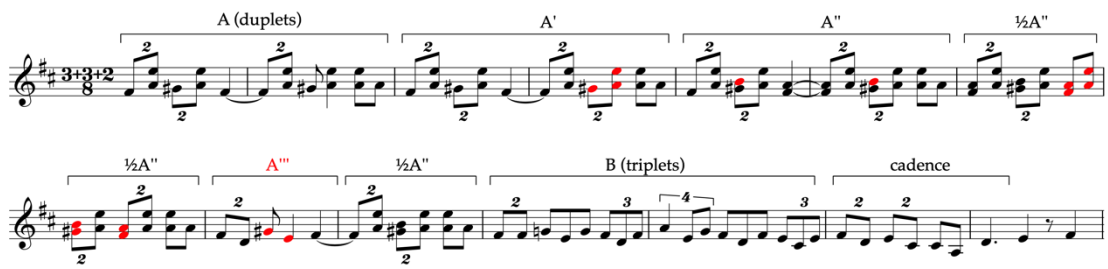


Figure 107: Buen Garnås, *Markensmåndagen*

A similar procedure transforms a simple 2-bar pattern at J into the all-triplet pattern at L (Figure 108).



Figure 108: *Telespringar* J-L, Patterns

Every step of the transformation is initiated by the first violin: when the whole quartet is safely locked onto the first 2-bar pattern at J, violin 1 moves to the next box (Figure 109).



Figure 109: *Telespringar* J, Frictions

The new pattern in the first violin creates slight frictions with the other instruments where the rhythmic figurations are different, framed in the dashed red rectangles in the picture. When the other players perceive the change, they individually and gradually transform their current pattern into the one in their respective next boxes. After some repetitions, the friction is resolved and the overall rhythmic alignment returns into focus, concluding a phasing procedure not dissimilar to the one applied by Reich in the above-mentioned pieces: this, and similar episodes, require a high level of interaction and

alertness on behalf of the players. When the first violin perceives that homorhythmic alignment is re-established, the mechanism starts over and is repeated twice through K and L (Figure 110), concluding the first morphing procedure with the formation of the all-triplet pattern.

K

L

Figure 110: *Telespringar* K-L

M

Figure 111: *Telespringar* M

To prepare the final climax, letter M (Figure 111) goes back to a duplet pattern, with a markedly ostinato character made thicker by the heavy use of repetition and open-string double stops. This reinforces a certain grotesque, “troll”-like tone that pervades the whole piece.

Listen to the whole episode from J to M in Audio example 71 (see the complete score in Appendix 1).

Audio ex. 71: *Telespringar* J-M

The second morphing procedure inserts an all-triplet linear pattern of two bars (Figure 112) into this texture of pounding rhythms.

N



Figure 112: *Telespringar* N, VI1

This type of formula is commonly found in telespringars towards the conclusion of a phrase or section, as is the case for “Siklebekken”, again presented here in Roheim’s interestingly very even interpretation (Figure 113).

Audio ex. 72: Roheim, *Siklebekken* (ending)



Figure 113: Roheim, *Siklebekken* (ending)



Figure 114: *Telespringar* N, VI2

The ripple effect used in this last *Telespringar* section is written out: letter N marks the appearance of the new phrase in the first violin, and it needs to be perceived by the

second violin at the latest within two bars from its occurrence, in order to be able to change to the respective pattern in time (Figure 114). From letter N the music proceeds with standard notation: the triplet phrase takes over one instrument every two bars, so that at letter O all instruments play the same line in parallel fourths. The repetitiveness, harmonic stasis, and the stacked fourths convey a general sense of vertigo, abruptly interrupted by a general pause. A last motto, mimicking the typical telespringar cadential figure (see “Kivlejenta”, ex. 67), concludes the piece. Figure 115 shows the complete sections N and O.

Audio ex. 73: Telespringar N-O

N

O

Figure 115: *Telespringar* N-O

VII

Figure 116: *Telespringar* Beginning, Motif V11

The 7-note melody first heard at the beginning of the piece in its free, indeterminate stage (Figure 116)

Vla

Figure 117: *Telespringar* F, Motif Vla

is then consolidated through the process that ends at F (Figure 117)

VII

Figure 118: *Telespringar* End, Motif V11

and finally quoted – almost as a jest – at the end (Figure 118).

4.4.7 Summary

The previous paragraphs have described how the concepts of rhythmic reshaping, flexible groove, and rhythmic flexibility are applied in *Telespringar*. All the formulaic material used in the piece has been borrowed from the telespringar tradition and subjected to variations at the level of micro-timing as well as motivic architecture: as a result, a telespringar pattern slowly emerges from pitch, tempo, and beat ratio manipulation, subsequently undergoing further transformation through the interferential process of the ripple effect.

These surface elements stem from deeper aspects of the piece that are worth summarising and expanding here. The realisation and perception of asymmetries rely on a sense of rhythmic tolerance derived from the conception of beats as areas rather than specific points (Danielsen); as observed by Johansson, this implies that there can be no objective metre in asymmetrical springars, in terms of a rigid, preconceived structure. The temporal reference therefore acquires a subjectivity that in *Telespringar* is manifested through the relevance granted to the individual freedom of the players and to their mutual reaction skills. Moreover, the absence of an absolute time unit (the sixteenth-note in *Udelt takt*) disintegrates the idea of a regular grid: temporality here almost literally grinds the well-calculated matrix into dust and rearranges it into a seamless line or stream. In a way, we are dealing with a grid so fine and infinitesimal that, to our blurred perception, it becomes a continuum.

This perspective is closely reminiscent of the microscopic observation of reality employed in many scientific disciplines. Seen through potent magnifying lenses or electronic sensors, things reveal structures that were hidden from the grossest layers of our senses: a solid-looking wooden surface exposes its airy molecular structure, a shapeless element such as water reveals its geometric design. Similarly, asymmetries and their irregularity open a world of “subatomic” fluidity that becomes clearer the closer we look into small details: however, they cannot be comprehended without taking into account the invisible forces that keep the particles aggregated and moving. In other words, we need to understand both the matter (motifs, beat ratio, articulation, etc.) and the *energy* that gives it life. *Telespringar* aims at identifying this energy with temporality: flowing in many directions and connecting all the different layers of the musical experience, this force works in a similar fashion as the ongoing mutual interaction between the top-down and bottom-up processes described by Johansson.

As the findings of modern physics suggest, energy is in a constant state of reaggregation and reorganisation; the scientific study of particle waves, fluid or sonic or of any other nature, indicates a view of reality as a continuous stream of energy in different forms of aggregation, a flux of information or material that undergoes changes in relation to itself and/or other elements. The idea of shrinking and stretching elements while keeping their volume intact reflects this property of matter and energy (entities that can even be conflated, according to the teachings of quantum mechanics).

Regarding the continuity of movement as an inherent quality of energy, the piece attempts to grant every element some degree of development and transformation, so that nothing is truly static, despite appearances. The modifications occur mainly at a micro-sonic level (acoustic beats, micro-timing, small motivic variations, etc.) but the large-scale result becomes audible at the musical surface as patterns morph into significantly different versions over a period of time. *Telespringar* also deals with the perception of rhythmic patterns and modifications on behalf of the performers: the ripple effect in the last section requires their full attention and real-time reaction. This draws from the concept, mentioned in the Introduction of this thesis, that music is “not primarily about structure but about process” (Haugen 2016; Keil 1995), so that a “participatory rhythm” can be produced as the negotiation of different individualities, an extension of Kaminsky’s notion of “total rhythm” or rhythm as a whole.

Things are not necessarily what they look like, and the ticking of time is not necessarily what it seems: in contrast with the previous movement, *Telespringar* aims at conveying a more finely ground essence of rhythm. Click on the link³⁴⁸ or scan the QR code below for the full performance of the movement (see the complete score in Appendix 1).

[II. Telespringar](#)



³⁴⁸ Krishna Nagaraja, *Stringar: II. Telespringar*, 2022, <https://www.youtube.com/watch?v=2XzQduyCAUM>.

5 Stringar III: Valdresspringar

Between 1891 and 1893, Einar Övergaard spent several months in the Norwegian central-southern district of Valdres, where he hoped the salubrious air of the mountainous regions would help him convalesce from an illness. As a momentous side effect of that cure, those visits provided the 20-year-old student from Göteborg with his very first contacts with folk music; his activity as folk tune collector started with the transcriptions he realised in the villages on the slopes near the village of Aurdal. In addition to notating the melodies, young Övergaard also wrote down his comments and impressions concerning the local playing style and musical life. One particularly suggestive description of a farmhouse dancing night is reported in his *Folkmusiksamling*, as introduction to a couple of tunes listed as *grålysingane* or “dawn tunes”:

There is dancing in a farmhouse. The springar and halling dances have succeeded one another, and the hour is past midnight. The guests, their bodies tired and their stomachs full, are now drowsy, and many are fast asleep. Only a few tireless couples remain on the dance floor, but the dancing still has the same energy as when the night was younger. Then, as the first light from the East announces the new day, the sound of the fiddler tuning his strings spreads through the hall. He strikes a chord, and that fairy-like tuning known as the “green tuning” is heard. The tired guests shake off their sleepiness with a start: they recognise those tones, the “Dawn Tune” is coming. The fiddler begins to play; the strange melody electrifies everyone. Nobody can sit still, not the old, not the young, not the old wives and old men who have long since withdrawn from the dance floor: everyone must now come forward and join. Never has the dance had such life as now. The playing grows more and more intense. Suddenly, a loud cry of joy bursts forth from the Valdresian fiddler. He stamps his foot strongly on the floor. Dust clouds float towards the ceiling; through their veil and the tobacco smoke, in the half-dimmed light of a lamp, one can see the spirited silhouettes moving in a swirling dance. The fiddler then falls silent. The wild, loud energy that had reigned earlier, summoned by the “Dawn Tune”, has now settled down. One after the other, the guests drag themselves home, and the dance is over.³⁴⁹

³⁴⁹ Övergaard, *Einar Övergaards folkmusiksamling*, 417. English translation by the author of this thesis. The original Swedish text: “Det är dans i en bondstuga. Den ena springdansen och hallingen har aflöst den andra och timman är öfver midnatt. Tröttheten af dansen i förening med en rikliga undfångnaden har gjort gästerna sömndruckna, många sofva den rättfardighes. På golfvet ser man blott några outtröttliga dansande par, men det är samma lif i dansen nu som det var på qväll[s]kvisten. Då, när den första lysningen i ost bådär en ny dag, hör man spelmannen stämma om sina stranger. Han knäpper ackordet och man hörer denna trolska stämning som fått namn af ‘den gröne stillingen’. Det går ett ryck genom de somndruckna gästerna. Det är kända toner, det är grålysingen som nu skall komma. Spelmannen börjar. Den egendomliga låten elektriserar alla. Ingen kan sitta stilla, nej, gamla och unga, gamla käringar och gubbar some för länge sedan lagt bort att dansa, alla måste nu fram för att tråda dansen. Aldrig går dansen med ett sådant lif som nu. Spelet växer i styrka. Då stammer valdrisen in i högljuda rop af glädje. Han sätter foten med kraft i golfvet. Dammet yr mot taket och genom tobaksröken och dammet I det halfdunkla skenet från en lampa ser man de kraftiga gestalterna röra sig i hvirvlande dans.

This passage mentions three elements that profoundly influenced the composition of the third and final movement of *Stringar*: the *grålysingane* tune type, the “green tuning” and a certain wild character of the Valdres style of playing. The next three sections offer an overview of each of these essential features.

5.1 *Grålysingane*

The Norwegian word *grålys* literally means “grey light” and refers to the particular moment of transition between night and morning when the faint sunlight pierces darkness and ushers in the new day. Social gatherings such as village dances were traditionally carried through the night until the crack of dawn, and the events witnessed by Övergaard in Valdres were no exception: a single Valdresian fiddler seemed to be able to manage an impressive number of tunes over an equally impressive amount of consecutive playing hours, usually from 8pm to 3 or 4am.

Övergaard’s account of the farmhouse dance vividly depicts the conclusion of a similar party. Especially at wedding celebrations, dance, food, and alcoholic beverages were offered in profusion, so that after many hours a mixture of fatigue and inebriation would seize the guests. According to local tales, this could sometimes lead to a loosening of restraint and made it easier to resort to disputes and fights, even at knifepoint; a *grålysing* tune was therefore used to divert people’s aggressive energy towards the dance. Folk dancer Magny Karlberg describes the character and supposed function of *grålysingane* in the NRK *Spela spelemann* episode about [Valdres](#), (minute 12:33 to 13:11):

When it got close to daybreak and people started to get really drunk and tired, scuffles would often break out. The fiddler would then tune the fiddle in the *grålysingstille* (“dawn tuning”), which had a certain stimulating and suggestive power that drew people away from the fight and into the dance. Everybody would become energised and, forgetful of their tiredness, they would keep dancing until morning.³⁵⁰

Immediately after Karlberg’s words, the fiddler Ola Bøe plays a *grålysing*, the well-known springar *Låtten hass Mikkjel Moe*.

Så tystnat spelmannen och det vilda larmande livvet som herskade, som Grålysingen förmådde frambringa, förstummas. Nu dragger den ene efter den andre af gästerna hem och dansen är öfver.”

³⁵⁰ ‘Dansar frå Numedal og Valdres’, *Spela spelemann, lat fela låte* (NRK1, 1971), <https://tv.nrk.no/serie/spela-spelemann-lat-fela-laata/1971/FOLA71000171/avspiller>. English transcript by Guro Hilmen.

Grålysingane are normally springars from Valdres with a marked repetitive and almost hypnotic character, suggestive of the power mentioned in the quotes above. A popular tune type during the traditional multiple-day wedding celebrations, “grey light” springars could also be used to wake up the guests and accompany their morning meal (*nøring*). With this function they are known as *nøringslåttar* in Voss, Hardanger, and Hordaland, although this category may include other tunes than springars.³⁵¹ The two grålysingane in Övergaard’s collection (op. cit., 426–27) are transcribed in Figures 119 and 120.

735. Grålysingadn No 1



Figure 119: Övergaard, Grålysingadn No 1

Listen to Håkon Asheim's interpretation [here](#).³⁵²

736. Grålysingadn No 2



Figure 120: Övergaard, Grålysingadn No 2

Another rendition by Asheim can be viewed [here](#).³⁵³

In both cases, Övergaard specifies that the required tuning is the *grøne stilling* or “green tuning”. Karlberg’s words also refer in the first place to the fiddle tuning, when explaining the ecstatic power of grålysingane: the *grålysingstille* she mentions is equivalent to a type of “fairy tuning” (*trollstille*) largely used in other Norwegian

³⁵¹ Cf. Arne Bjørndal and Brynjulf Alver, *-Og Fela Ho Lét: Norsk Spelemannstradisjon*, 2 ed. (Bergen: Universitetsforlaget, 1985), 86.

³⁵² In Håkon Asheim, *Ulrik – Musikken Etter Aurdalsspelemannen Ulrik i Jensestogun* (Heilo – HCD7075, 1992).

353 Ibid.

springars. Both the green and the fairy tuning form an integral part of the harmonic and melodic vocabulary in *Valdresspringar*, and will be described in the next section.

5.2 The Hardanger fiddle: tunings, multi-voicing and resonance

It is a known fact that different violin tunings bring out different tone qualities, or colours, from the instrument: its resonance changes, and the strings themselves behave differently if stretched or loosened beyond their normal tension. Moreover, the intervals between the open strings construct a sound world that becomes a very specific characteristic of the melodies played in that particular tuning. Apart from – and closely intertwined with – these sonic properties, the fiddle tuning influences the technical possibilities, and therefore the melodic and harmonic potential, since it dictates the fingerings that are easy or possible and those which are prohibitive or ineffective.

The open fifths of the standard violin tuning accommodate a vast range of timbral and technical features, as the whole history of the repertoire demonstrates both in Western art and in folk music. Both genres, however, present intriguing exceptions. One of the most effective examples of *scordatura* in baroque violin music is for instance the cycle of the *Rosenkrantz* sonatas by Henrich Ignaz Franz Biber (ca. 1644–1704). Inspired by the Catholic prayer of the rosary, each sonata is a musical meditation on an episode of the life of Jesus, depicting the Mystery not only with very suggestive music but also with the tuning itself: the symbolic and evocative power of intervals, modes, and tonalities was still very much present in the mind of baroque composers.³⁵⁴ An extreme example of *scordatura* is provided by the eleventh sonata, *The Resurrection*:³⁵⁵ the two middle strings are crossed between the bridge and the tailpiece so that an “X” is created, symbolising the Holy Cross, from which the Resurrection originates. Their placement on the fingerboard is switched, as can be seen in Figure 121.³⁵⁶

³⁵⁴ The idea that modes can affect moods and emotions is very ancient, and can be traced back to the music of the Greeks. It survived and mutated throughout the history of European art music, where especially before the predominance of equal temperament every tonality had a specific character and meaning. It is nowadays still present in folk musics from around the world.

³⁵⁵ See Arparla, *H.I.F. Biber Sonata XI, The Resurrection, Mystery Sonatas* - Arparla, 2020, <https://www.youtube.com/watch?v=KYanHHEDHhY>.

³⁵⁶ Image on the left retrieved at [https://s9.imslp.org/files/imglnks/usimg/4/4d/IMSLP69095-PMIP07754-BIBER-Rosenkranz-Sonaten_\(BSB_Mus_ms_4123\).pdf](https://s9.imslp.org/files/imglnks/usimg/4/4d/IMSLP69095-PMIP07754-BIBER-Rosenkranz-Sonaten_(BSB_Mus_ms_4123).pdf), 47; for reference, see ‘Mystery (Rosary) Sonatas (Biber, Heinrich Ignaz Franz von) - IMSLP: Free Sheet Music PDF Download’, accessed 3 February 2022, [https://imslp.org/wiki/Mystery_\(Rosary\)_Sonatas_\(Biber%2C_Heinrich_Ignaz_Franz_von\)](https://imslp.org/wiki/Mystery_(Rosary)_Sonatas_(Biber%2C_Heinrich_Ignaz_Franz_von)). Image on the right retrieved at ‘File:Biber Mysterien.jpg - Wikimedia Commons’, accessed 23 January 2022, https://commons.wikimedia.org/wiki/File:Biber_mysterien.jpg.

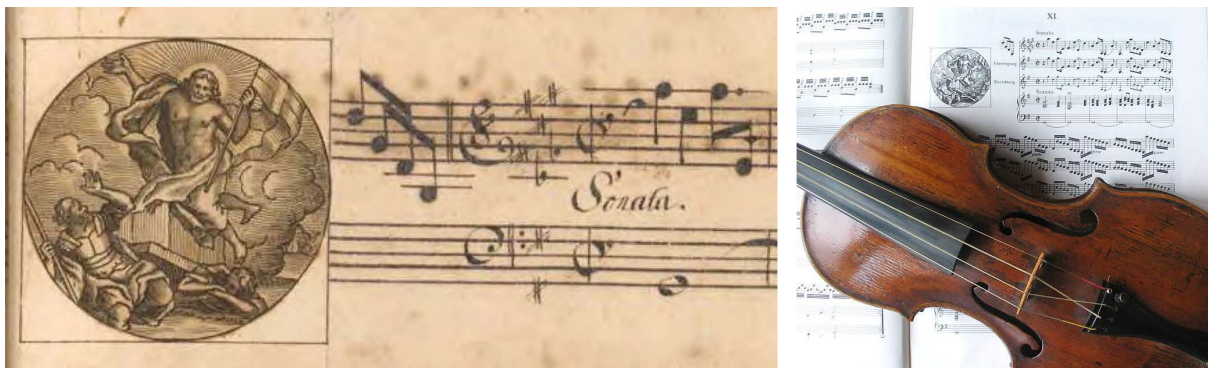


Figure 121: Biber, Sonata "The Resurrection"

The resulting tuning is $g-g'-d'-d''$,³⁵⁷ which gives every G and D in the melody an extra resonance due to the sympathetic vibration of the corresponding open string, and an amplification of the overall sound whenever the music covers a G major ambitus.

The relation between violin tuning and tonal/modal areas grows closer the further the scordatura is from the neutral open fifths of the standard tuning: the more it acquires intervals specific to a key, the more restricted to that particular area the harmonic resonance will be. In other words, the tuning, the resonance, the violin sound, and the music itself are all interlocking factors in the colouristic use of scordaturas. This is all the more evident in the case of a fiddle equipped with resonance strings such as the *hardingfele*, with a repertoire that counts on at least 29 different tunings.³⁵⁸ The span covered by these types is remarkable, ranging from the standard tuning ($a-d'-a'-e''$, favouring tunes in D major with a certain degree of flexibility and multi-modality in the upper register) to more exotic scordaturas that are only found in a handful of tunes ($g-c'-a'-c\sharp''$, $e-a-a'-c\sharp''$ for example). Three of these special tunings are featured in *Valdresspringar*.

5.2.1 *Grøntstille*: $g-d'-a'-b'$

The fact that the Valdresian *grøntstille* tuning, or *huldrastilling*, is used in just a few springars accounts for its recognisability, as noted by Övergaard when describing how quickly the tired guests at the farmhouse recover their desire to dance at the sound of the

³⁵⁷ Helmholtz pitch notation (see 4.4.1).

³⁵⁸ See 'Hardanger Fiddle Assoc. of America - A Guide to Tunings on the Hardingfele', accessed 23 January 2022, <https://www.hfaa.org/about-the-hardanger-fiddle/articles-on-the-hardanger-fiddle/a-guide-to-tunings-on-the-hardingfele>.

familiar notes. They associate the Gadd9 chord resulting from the tuning with the grålysing springars, and immediately assume, with delight and anticipation, that one of those “daybreak tunes” is about to be played. Here, therefore, the tuning identifies the tunes, which in turn exploit the specific potential of the inherent characteristics of the tuning. The most salient feature is the narrow interval of a tone between the two top strings, which enables:

- the use of the third of the chord (b') as a drone, creating unusual suspensions of the melodies on a normally instable degree of the scale (cf. for instance “[En grønn en tell](#)”);³⁵⁹
- the possibility of a tightly knit dialogue between motifs built on the a' and b' strings ([Den so styggen blistra ner'n begrov mor si](#)).³⁶⁰

5.2.2 Grålysingstille: a-e'-a'-c#"

In an article on tunings, Olav Sæta notes

how fiddle tunings can delimit or “control” the melodic variation possibilities. We see this clearly where groups of tunes in the same scordatura manifest a particularly close musical relationship.³⁶¹

He adds that sometimes a single term can define both a tune type and a tuning, which is the case for the grålysingstille/grålysingane relation. This particular tuning is known by other names in different areas other than Valdres, such as *trollstille* and *solungstille*. While the former reflects the fairy-like aura that surrounds melodies in this tuning, the latter might relate to a similar etymology as the term grålysingstille: that is, melodies played when the sun is young (*sol-ung*), namely at dawn. It might otherwise refer to fiddlers and tunes from Solør, very close to the Swedish border in eastern Gudbrandsdalen. The resonant, mesmerising qualities of this tight tuning (basically an A major chord, with the distance between the bottom and top string at its narrowest) will be clear after listening to of the pieces in Table 14.

³⁵⁹ In Jan Beitoaugen Granli, *På Beitoaugen* (Ta:lik – TA50CD, 2010).

³⁶⁰ See TALIKNORWAY, Jan Beitoaugen Granli - *Den so Styggen Blistra Ner'n Begrov Mor Si*, 2010, <https://www.youtube.com/watch?v=4rEQ3-Fv5eU>.

³⁶¹ Olav Sæta, 'Noe Om Felestiller, Spesielt Solungstillet', *Spelemannsbladet* 51, no. 3 (1992): 12–14.

Performer	Title	Album
Laura Ellestad	“Grålysing frå Slidre”	<i>Valdrespel i Amerika</i> (Ta:lik – TA127CD, 2014)
Ola Bøe	“Springar etter Per Haugset”	<i>Folkemusikk frå Oppland</i> (Grappa Musikkforlag – GRCD4065, 1995)
Torleiv Bolstad	“Bjøllelåttén”	<i>Feletona' Oppunde' Bitihødn</i> (Heilo – HCD7041, 1997)
Synnøve Bjørset	“Grålysingspringar”	<i>Soli</i> (Ta:lik – TA83CD, 2010)
Benedicte Maurseth	“Nøringen”	<i>Benedicte Maurseth</i> (Heilo – HCD7347, 2019)

Table 14: Grålysingspringars

5.2.3 Trollstille: a-d'-f#'-e''

This tuning splits the fiddle in two registers along the axis of the second string (f#'), as an effect of the minor-seventh gap between the two top strings, opposed to the smaller major-sixth interval that embraces the three lower strings. The f#', third of a D major chord, is used as a drone, both for melodies in the upper register, soaring on the e'' string, and for motifs on the d' string. This type of trollstille tuning consequently encourages a musical dialogue between the high and low register, separated by a drone that often acts like the reflecting surface of a mirror. This characteristic is especially evident in *lyarslått*s, namely tunes that are not meant to be danced but listened to, where the rhythm can be freer and the style more improvisatory and imaginative. A good example is provided by [Thomasklokkelåten](#),³⁶² a lyarslått whose name refers to the bells of a solitary mountain church in upper Valdres, also quoted by Edvard Grieg in *Norwegian Melodies* EG 108 no. 146 for piano.

The lyarslått category often overlaps with that of the “fairy tunes” or *huldrelått*, namely a special type of melody often displaying a similar slow, unmeasured rhythm. It is thought that some of them were once gangars or springars, which over time lost some of their rhythmic drive in favour of a more ethereal character that earned them the reference to the fairy world.³⁶³ The tune [“Huldrelått frå Vang”](#),³⁶⁴ from a nearby St. Thomas church in the Valdres area, and [“Huldreslått I & I”](#),³⁶⁵ are two other striking

³⁶² See Langsveien. no, *Henning Andersen Fremfører.*, 2010, <https://www.youtube.com/watch?v=jOSb4biqJFA>.

³⁶³ Cf. Benedicte Maurseth, *To Be Nothing: Conversations with Knut Hamre, Hardanger Fiddle Master*, trans. Bruce Thomson (Newark, NJ: Terra Nova Press, 2019), 244. “*Huldreslått* is a special genre in the Hardanger fiddle repertoire often connected with a *hulder*, a female forest creature. The name *hulder* derives from a root meaning ‘covered’ or ‘secret’. We don’t know much about the purpose of this genre, when or how it was used, but it seems there existed a larger repertoire in this style earlier that is forgotten today. A *Huldreslått* can have a steady pulse, but the atmosphere in these tunes tells us they must have been played for other special rituals or ceremonies rather than for dances. They are always played in unusual fiddle tunings, and are connected with stories of a fiddle player who falls asleep. He dreams of a *hulder* who sings a tune to him, and when he wakes up, he plays the tune given to him in his dream.”

³⁶⁴ In Laura Ellestad, *Valdrespel i Amerika* (Ta:lik – TA127CD, 2014).

³⁶⁵ In Benedicte Maurseth, *Benedicte Maurseth* (Heilo – HCD7347, 2019).

examples of the multi-voicing use of the hardingfele. The trollstille a-d'-f#'-e'' tuning is also featured in some springar melodies, as is the case in "[Låtten Hennar Bjørg-Gudrun](#)".³⁶⁶

5.2.4 Modal fluctuations and polyphony in hardingfele playing

Since the intervals between the strings encourage certain fingerings and prevent others, the peculiarity of these tunings is also reflected in the way melodies unfold and in the resulting characteristics of the playing style. Both the grålysingstille and the trollstille tunings contain the interval of a major third between adjacent strings, a'/c#" and d'/f#" respectively. This makes it easy for the first finger of the fiddler to play parallel major thirds, therefore adding an augmented, Lydian fourth to the modal colour of the tune: oscillations such as a'/c#"↔b'/d#" and d'/f#"↔e'/g#" are fairly frequent in springars in those tunings, as the above-mentioned "[Grålysing frå Slidre](#)" played by Laura Ellestad demonstrates. If the reiterations a'/c#"↔b'/d#" allow enough space to the second major third, a sense of double modal root is suggested, swaying between A major and B major, as displayed in this excerpt from the well-known grålysingspringar "[Bjøllelåtten](#)".³⁶⁷ The melody lingers decisively on the second degree of the mode, used here as a drone, condensing at the end of the phrase into shorter, repetitive oscillations. The more the new transposition of the mode is explored, the more the melody will convey a feeling of *modalt utsving* (modal fluctuation),³⁶⁸ or rather of a transposition of the same mode, often switching abruptly between the two polarities. The alternance of the first and second degree of the scale as modal roots is a recurring feature in Hardanger fiddle springars, where it causes characteristic harmonic tensions and gives the music a certain angular quality.

³⁶⁶ In Jan Beitohaugen Granli, *Lite Nemmar* (Ta:lik – TA5CD, 2003).

³⁶⁷ In Torleiv Bolstad, *Feletona' Oppunde' Bitihødn* (Heilo – HCD7041, 1997).

³⁶⁸ The expression *tonalt utsving* is often used in Norwegian jazz harmony theory. Given the harmonic system of most springars, here "tonal" has been replaced with "modal". The concept of modal fluctuation proposed here differs from a proper modulation in that it consists of a simple digression, not a complete departure. Already in the late 18th century, German theorist and composer Heinrich Christoph Koch, in his *Versuch einer Anleitung zur Composition* (Leipzig 1782–1793), refers to similar ideas in the context of tonal modulations, differentiating between three "varieties of *Ausweichung*: 'incidental', or 'arbitrary', involving brief chromaticism, 'passing', involving longer references to the new key but no cadence, and 'formal', requiring the cadence in the new key." See Janna Saslaw, 'Modulation', in *Dictionary of Music and Musicians: The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (Oxford et al.: Oxford University Press, 2001), 16:877.

In the tune “[Okshovdspringar på låg bas](#)”,³⁶⁹ as played by Jan Beitoaugen Granli, the fiddle is tuned g-d'-a'-e". The first 5-bar phrase starts in A major on the two top strings, and cadences in G major on the two lower strings. The repetition of the phrase (four times) enhances the juxtaposition of the two modal roots and the harmonic uncertainty. The alternance is even quicker in the following phrase, where a bar in G major is immediately followed by a very similar motif in A major; the pair is repeated two more times. In “[Huldreslått](#)”,³⁷⁰ (tuning: a-e'-a'-b') played by Benedicte Maurseth in the version of Olav Håstabø, the harmonic tension is achieved by initially playing the plain motif in B major without accompaniment on the first string, and then adding the second string as an A drone, subsequently also touching the lower a-e' strings to complete the direct friction between the plane of the melody in B and that of the open strings in A. Another huldreslått, the “[Huldreslått I & I](#)”³⁷¹ in trollstille mentioned above, also played by Maurseth in the version of Eirik Medås, manages to bring an unexpected harmonic turn to the middle of a rather hypnotic repetition of a short motif (Figure 122).



Figure 122: Maurseth, “Huldreslått I & I”

In addition to modal fluctuations, which also occur in springars in standard tuning, another distinct feature of hardingfele playing can also be partly related to special tunings, namely the polyphonic use of the instrument. Single-string bowing is rather uncommon in hardingfele playing due to its flat bridge, so that double stops and multi-voicing are already inherent features of the fiddle; moreover, its prevailingly soloistic role has determined the necessity for a fiddle that can accompany itself, structurally designed as it is to pair a melody with another voice that can acquire the form of the characteristic drone (fingered or open-stringed) or of an articulated second line.

³⁶⁹ Beitoaugen Granli, *På Beitoaugen*.

³⁷⁰ Maurseth, *Benedicte Maurseth*.

³⁷¹ *Ibid.*

Tunings can add even further emphasis on this feature, especially those which create large registral gaps between strings and therefore divide the fiddle range into several areas where separate voices can engage in musical conversations. One example is the a-d'-f#'-e'' trollstille tuning analysed in 5.2.3, delineating a bass domain in the low A string region, a tenor-alto area in the middle strings and a soprano range soaring from the E'' upwards. A dialogue between an upper and a lower voice, with occasional open-string commentaries from the bass, is clearly audible at the beginning of the above-mentioned "[Huldreslått frå Vang](#)" played by Laura Ellestad. Voice interplay however also occurs in other tunings, including the standard a-d'-a'-e'', with less registral differentiation and therefore a more closely knit type of imitations, as is the case of the valdresspringar "[Svein i Sy'garde](#)"³⁷² played by Torleiv Bolstad. Here, the initial soprano phrase on the first string is soon answered by the alto on the second string in a strict dialogue where the tenor subsequently jumps in on the third string. The tune is then concluded by a cadence in the bass region after several reiterations and evolutions of the conversation. Both the modal fluctuation and the polyphonic hardingfele style constitute an integral part of the third movement of *Stringar*, as will be later explained.

5.2.5 Resonance strings

After the overview of grålysings and tunings, and before describing the playing style and the characteristics of the springars from Valdres, a digression is now needed to shed light on some historical and organological traits of the hardingfele itself; the acoustic properties of the fiddle are strictly connected to its idiomatic repertoire, so that the tunes, the tunings, and the instrument form an organic entity whose parts are in mutual dependence.

One of the first elements to attract attention while listening to – or even looking at – a Hardanger fiddle is the presence of sympathetic resonance strings running under the fingerboard, across the bridge, and attached to the tailpiece (Figure 123).³⁷³

³⁷² In Bolstad, *Feletona' Oppunde' Bitihødn*.

³⁷³ Image retrieved at Kantor, *Deutsch: Details Einer Hardangerfiedel*, 22 July 2006, 22 July 2006, selbst erstellt 7/2006 durch Kantor Hæ? 09:42, 22. Jul 2006 (CEST), https://commons.wikimedia.org/wiki/File:Hardanger_fiddle_detail_Bridge.jpg.



Figure 123: Hardangfele bridge

As mentioned in 2.3, the oldest known hardangfele specimens date to as early as 1651 (the [Jaastadfela](#),³⁷⁴ built in the Hardanger region by Ole Jonsen Jaastad and preserved at the Historical Museum of Bergen University), and the middle of the 18th century (fiddles by [Isak](#)³⁷⁵ and [Trond](#)³⁷⁶ Botnen). Early models only had two or three resonance strings, whereas modern instruments normally have four or five. The question of whether sympathetic strings were simply added to pre-existing instruments related to the violin, or whether they belonged to an original Norwegian concept of a “resonating violin”, is still under debate.³⁷⁷ Until the early 20th century, the prevailing opinion considered the Hardanger fiddle an invention of Isak Botnen, who had modified the European violin and added sympathetic strings, probably under the influence of the viola d’amore. As investigations continued, some researchers advanced a different hypothesis, suggesting a possible relation of the Hardanger fiddle to instruments that predated the violin, such as the medieval *fidla* and *gigja*.³⁷⁸ In 1914, Norwegian teacher and composer Erik Eggen wrote that

³⁷⁴ See ‘Universitetsmuseet i Bergen on Instagram: “Jaastadfela. Eldste Kjente #hardangfele Laget Av Lensmann Ole Johnsen Jaastad i #Ullensvang #Hardanger i År #1651. Foto: Svein Skare,...”’, Instagram, accessed 3 February 2022, <https://www.instagram.com/p/xymHmAR8nY/>.

³⁷⁵ See ‘Isak Nielsen (Skaar) Botnen | Hardanger Fiddle | Norwegian’, The Metropolitan Museum of Art, accessed 3 February 2022, <https://www.metmuseum.org/art/collection/search/503795>.

³⁷⁶ See ‘Hardangfele - Telemark Museum / DigitaltMuseum’, accessed 3 February 2022, <https://digitaltmuseum.no/011025270368/hardangfele>.

³⁷⁷ For a publication on the history and development of the hardangfele, see Aksdal, *Hardangfela*. In 1993 Aksdal collaborated with the *Hardanger fiddle project*, launched by the Ole Bull Academy, the Hardanger Folk Museum, and the Bergen Museum, leading a group of researchers which also included other scholars such as Jan-Petter Blom and fiddle makers such as Sigvald Rørlien. The project studied the existing historical hardangfeles in detail and uncovered new knowledge about the instrument, much of which is contained in the book *Hardangfela*.

³⁷⁸ For a publication on the connection between hardangfele and medieval instruments, cf. Gaver, ‘The (Re)Construction of Music for Bowed Stringed Instruments in Norway in the Middle Ages’.

when the Italian *violino* came here to Norway it battled with the old Norwegian fiddle. The foreign instrument won entrance into the cities, and thereby also the foreign name, preferably pronounced in German: *fiolin*. But out in the country, especially in Vestlandet, it appeared that the cultural roots were more tenacious. Here people stuck with the 'home-fiddle', that was both in name and usage descended from the old Norse *fidla*. Slowly but surely the Norwegian fiddle was transformed according to foreign models.³⁷⁹

The theory of the hardingfele as the modification of a pre-existing instrument gained more supporters during the 20th century, while a contrary group held on to the belief in an original Norwegian invention, a national attempt to modify of the European violin. Aksdal argues that "most who supported such an argument possibly had an academic long-distance relationship to folk culture, or they regarded the culture from the standpoint of art music."³⁸⁰ His conclusions are in agreement with Jan-Petter Blom's observations on the matter, which he sums up in the same article:

It is unreasonable to imply that Norwegians – who demonstrably received a number of cultural influences from the outside world – did not also have knowledge of late medieval and later instruments. If the Hardanger fiddle was a random attempt in rural areas to imitate the violin, why was it so sought after? Blom thinks rather that the early Norwegian Hardanger fiddle must reflect a stage of development that precedes the violin, and it must have arisen as a combination of domestic tradition and outside influences.³⁸¹

As for the reason why resonance strings were added, Chris Goertzen³⁸² suggests that it might have been a strategy to gain sound amplification in a performance context where the fiddler was traditionally sitting alone amidst a circle of dancers, surrounded by the noise of their physical movements. He also relates this need for extra volume to a playing style that favours drone playing and double stops, both enhanced by the very flat curve of the fiddle bridge; insisting on an open string drone, for example, immediately increases volume and enriches the timbre. Since resonance strings vibrate the most when open strings are played, and combinations of open strings define specific tunings, it is evident that sympathetic strings need to be tuned accordingly. In this sense, the combination of resonance, tuning, and drone playing constitutes a self-feeding mechanism that grants the hardingfele its unique, emblematic voice.

³⁷⁹ Eggen's article for *Norsk toneblad* is quoted in Bjørn Aksdal, 'The Hardanger Fiddle: Symbol and Research Subject – Part 2', *Sound Post* 37, no. 1 (2020): 14.

³⁸⁰ *Ibid.*, 15.

³⁸¹ *Ibid.*, 19.

³⁸² Chris Goertzen, *Fiddling for Norway: Revival and Identity*. (Chicago: The University of Chicago Press, 2007), 138.

5.3 Springars from Valdres

In the NRK programme mentioned in 5.1, the TV host Hallgrim Berg describes the springars from Valdres from the point of view of the dance and their musical character. At minute 5:42 to 7:17, the [video](#) features a couple dancing to a springar in regular tuning played by Ola Bøe: the dancers' steps show, as Berg explains, a heavy accentuation on the third beat of the bar. In Hallingdal, he adds, "the heaviest step lies on the first beat, whereas in Telemark it is on the second: the origin of these differences in the rhythmic accent is one of the unsolved riddles of Norwegian folk music".³⁸³

The accentuations of the dance steps can be traced graphically using Blom's libration curves, mentioned in 4.2.4 regarding telespringars, which somehow correct and complete Berg's rhythmic description. The valdresspringar libration pattern in Figure

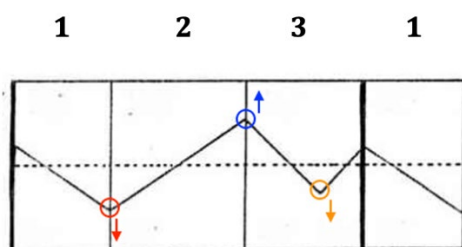


Figure 124: Blom, Valdresspringar libration curve

124 (adopted by Johansson)³⁸⁴ displays two heavier steps in the area of the first and third beat, and one uplifting step on the second beat. However, Blom adds that dance and musical accentuation do not always coincide.³⁸⁵ The musical phrase can sometimes "have contrasting functions in relation to dance metre", so that the musical metre marked by

the fiddler's foot tapping might be slightly different. In general, though, the foot beating accompaniment in the Valdres tradition is similar to the libration curve shown above, namely: heavy-light-heavy. The asymmetrical beat ratio is short-long-average, as opposed to the long-average-short telespringar pattern. The Valdres fiddling style is described by Blom as faster and more flowing than that of Telemark; he advises fiddlers to "make the impression of a strong and springy movement in connection with the first arsis of the period (second beat of the measure)." These instructions are included in the explanatory page of *Valdresspringar*.

In addition to these rhythmic characteristics, *Valdresspringar* focuses on a stylistic trait mentioned in their descriptions both by Övergaard and by Berg: the wild quality of springars from Valdres. Comparing them with other types of springar, Berg says that the music is "wilder, mirroring the character of the people from old, as it is claimed". In

³⁸³ English transcript by Solmund Nystabakk.

³⁸⁴ Johansson, 'Rhythm into Style', 59.

³⁸⁵ See Blom, 'The Dancing Fiddle. On the Expression of Rhythm in Hardingfele Slåtter', 6.

commentaries on the Valdres section of his folk music collection, Övergaard gives details regarding how such intensity is reached during a fiddler's performance:

A good fiddler does not play the same tune over and over again. He begins with the most famous melodies, the ones that the everybody knows note by note. But as time goes on, one old tune after another begins to come to his memory, often a tune he has perhaps not played in many years. The playing gets wilder and wilder, and so does the dance; when the ecstasy has reached its [peak] then it is like in the old days, when the knife sat loose in the mountain farmer's knife-sheath.³⁸⁶

Though perhaps not immediately clear, the last metaphorical statement refers to the liberating power of valdresspringars, which accumulate the tension over long sequences of repeated motifs and then release it in cathartic outbursts of energy, as could have been the case in those mountain villages when loosened inhibitions might have encouraged hot-tempered farmers to make a gratuitous use of their knives.

Motif repetition is a salient aspect of tune structuring in the Valdres style, one that enhances steadily rising crescendos until “the excitement in the atmosphere becomes storming and vigorous” (op. cit., 414). According to Övergaard's account, fiddlers say that the tune then becomes “brave”, and the musician is completely absorbed by its energy. The player “personifies the tune: the melody becomes something that acquires a life of its own, independently of the player” (ibid., 414). The excited atmosphere embraces the music, the fiddler, and the dancers in a unique bond: as Berg notes observing the couple dancing to Ola Bøe's springar, they “follow the music well, that is, they speed up and slow down the dancing according to the structure of the tune and the power of the bow stroke of the fiddler.” This [example](#)³⁸⁷ from a Norwegian national competition (*kappleik*) is a good example of the energy increase that connects the fiddler to the dancing couple and ultimately to the audience itself, especially galvanised by the acrobatic gestures of the male dancer and the elegant, intense, and humorous attitude of his female partner.

5.4 *Valdresspringar*: musical study

Several key elements of Valdres springar tunes and of hardingfele playing in general lie at the basis of the last movement of *Stringar*. To summarise the aspects that were described in the previous sections:

³⁸⁶ Övergaard, Einar Övergaards folkmusiksamling, 413.

³⁸⁷ Video quoted in 4.1.2: see Agurkmix07, *Valdresspringar*, 2013, <https://www.youtube.com/watch?v=QBdyC5JXthA>.

- Grålysing springars: a wild character, a suggestive power that drives dancers through a trajectory of accumulation, explosion, and conclusive dispersion of energy
- Tunings: the “green”, “dawn”, and “fairy” tunings and their implications
- Modal fluctuations: oscillations between the resident modal root and its secondary counterpart on the second degree
- Polyphony: interplay between different ranges and voices
- Drone-playing: double-string bowing where the main line is accompanied by an adjacent, steady note
- Resonance: the sympathetic vibration of the understrings, creating a characteristic halo of sound

Elements taken from this springar tradition have provided the composition with substantial material, both in terms of melodic/rhythmic ideas and of their treatment:

- Melodic formulas: recurring motifs, cadential closures widely used in springars from Valdres
- Rhythms: in addition to the above-mentioned short-long-medium metre typical of valdresspringars, rhythmic patterns and micro-variations borrowed from reference traditional tunes
- Repetition: a feature largely employed in grålysingane tunes, especially when obsessive reiteration of short motifs accumulates tension

Valdrespringar is based on a long springar melody that has been modelled after reference tunes from the Valdres hardingfele tradition. One constituting principle of the general orchestration and arrangement is to bring the self-accompanying features of hardingfele playing into the context of a four-part score. The quartet is conceived as an enlarged version of a Hardanger fiddle: each string or function of the fiddle is ideally assigned to one of the four instruments, exploiting the polyphonic and multi-functional hardingfele properties mentioned previously. According to this principle, each of the A, B, C, and D sections of the long springar melody feature one of the four instruments as leading voice; section E reunites the quartet into a single body of sound, wavering, swelling, and then bursting with the intensifying rhythm; section F restores a more granular instrumentation and leads to the conclusion of the piece. Table 15 shows how each part reflects the characteristics of a particular tuning, or tune, or both.

Letter	Instrument	Tuning	Reference tunes
A	Viola	Grøntstille (g-d'-a'-b')	" Den so styggen blistra ner'n begrov mor si " ³⁸⁸
B	Cello		" En grønn en tell " ³⁸⁹
C	Violin 2	Grålysingstille (g-d'-g'-b')	" Bjøllelåtten " ³⁹⁰ " Springar etter Per Haugset " ³⁹¹
D	Violin 1	Trollstille (d'-g'-b'-a'')	" Låtten Hennar Bjørg-Gudrun " ³⁹²
E-F	All	Various	" Heksedansen " ³⁹³ " Springar etter Jørn Røn " ³⁹⁴ " Låtten Hass Mikkjel Moe " ³⁹⁵ " Asle Myro " ³⁹⁶

Table 15: *Valdresspringar*, Reference tunes

Two sections enclose the springar melody at the beginning and the end of the piece: an Introduction (preceding section A) and a Coda (section G), that respectively guide the listener into the atmosphere of the green tuning and dissipate the energy of the last section. The complete score of the melody is available in Appendix 2, adapted from the full quartet score.

5.4.1 Introduction: "green tuning"

The Introduction aims at evoking the atmosphere of awakening and anticipation that seems to seize the guests at the farmhouse dancing party described by Övergaard and mentioned in chapter 5:

Then, as the first light from the East announces the new day, the sound of the fiddler tuning his strings spreads through the hall. He strikes a chord and that fairy-like tuning known as the "green tuning" is heard. The tired guests shake off their sleepiness with a start: they recognise those tones, the "Dawn Tune" is coming.³⁹⁷

The first 10 bars quote the four resonance strings of the hardingfele tuned in grøntstille, starting with the G (held by the viola from the previous movement), paired then with the A and followed by D and E. Cross-fades with *dal niente* crescendos make sure that the

³⁸⁸ In Beitohaugen Granli, *På Beitohaugen*.

³⁸⁹ Ibid.

³⁹⁰ In Bolstad, *Feletona' Oppunde' Bitihødn*.

³⁹¹ In VA, *Folkemusikk Frå Oppland* (Grappa Musikkforlag – GRCD4065, 1995).

³⁹² In Beitohaugen Granli, *Lite Nemmar*.

³⁹³ In Ola Bøe, *Hardingfelespel Frå Vestre Slidre* (Grappa Musikkforlag, 1999).

³⁹⁴ Ibid.

³⁹⁵ In Beitohaugen Granli, *På Beitohaugen*.

³⁹⁶ In Olav Luksengård Mjelva, *Fele/Hardingfele, Røros/Hallingdal* (Etnisk Musikkklubb – EM40, 2009).

³⁹⁷ Övergaard, *Einar Övergaards folkmusiksamling*, 417.

sounds are alternated or superimposed with the smoothness and continuity of a ray of grey light penetrating into a dimly lit room. These crescendos are applied to notes that grow out of pitches that are already being played by another instrument; in these pairs (blue dashed arrows in Figure 125), the first note is a natural harmonic and the second (unison or octave) is fingered. Intervals of major second (and major ninth, by inversion) are privileged and marked in red.

Figure 125: Valdrespringar 1-9

The complete chord D-E-G-A is reached by accumulation in bars 11-13, as shown in Figure 126. The following bars delay the appearance of the key-note B (which completes the G add9 chord, the essence of the green tuning) until the third to last bar.

Figure 126: Valdrespringar 10-19

The complete Introduction (1–19, see the complete score in Appendix 1) is included in Audio example 74.

Audio ex. 74: *Valdresspringar* 1–19

5.4.2 A: “green springar”, part 1

The first episode (rehearsal letter A) of the long springar melody displays the 1-bar motivic structure typical of hardingfele springars and especially common in Valdres. Each motif can be repeated, varied, and mixed to form longer phrases separated by semi-cadential or cadential formulas. The four main motifs (a, b, c, d) and the two semi-cadential formulas (e, f) are notated in Figure 127.



Figure 127: *Valdresspringar* A, Green springar (motifs)

The episode in Figure 128 is a combination of the a, b, c, d motifs and their variations, punctuated by the semi-cadential formulas and concluded by a full cadence (f-g).

Audio ex. 75: *Valdresspringar*, Green Springar A

Valdresspringar

Krishna Nagaraja

A Allegro calmo (♩ = 120)

Figure 128: *Valdresspringar* A, Green springar

A similar treatment of motivic material can be seen in the springar “[Den so styggen blistra ner'n begrov mor si](#)”, transcribed in Figure 129.

Den so Styggen Blistra Ner'n Begrov Mor Si
as played by Jan Beitoaugen Granli after Harald Røine

Trad. Norwegian

Figure 129: Beitoaugen Granli, "Den so' Styggen"

The springar melody at A also draws from this tune in other aspects, such as

- the melodic level: motifs a, b, f in *Valdresspringar* correspond to motifs d, f, g' in *Den so Styggen*;
- the harmonic level: the VI degree of the scale (the note E) is repeatedly stressed, a recurring feature in grøntstille springars;
- the rhythmic level: the largely used pattern in motifs b, c and their variants in *Valdresspringar*, comes from motifs c', d' and similar in *Den so Styggen*.

Delving more into the rhythmic aspect, it can be noted that the *Valdresspringar* melody is based on a similar rhythmic reshaping procedure to that which was described in 4.4.5

concerning telespringars. Here, the basic valdresspringar pattern is morphed and varied in several forms (Figure 130).



Figure 130: *Valdressedpringar*, Pattern morphing

This highly flexible way of varying rhythms around the main perceived metre has the effect of an elastic rhythmic line that is contracted and extended, much like in the locomotion of animals such as [earthworms](#),³⁹⁸ whose body length is seamlessly varied through the movement thanks to the use of circular and longitudinal muscles, and which can also make segments of the body thicker or thinner in a wave-like fashion as needed. In each of the pattern variants shown above, for instance, an area with more concentration of rhythmic activity can be detected in the first, short beat; the second is generally the consequent relaxation of the previous tension; finally, the third beat sets the rhythmic body in motion again, towards the next downbeat. Each area may be subdivided differently within motifs and variants, to the fiddler's taste: this represents yet another declination of the principles of rhythmic flexibility analysed in chapter 4.

While the green springar gradually takes the scene through the voice of the viola at letter A, the other instruments fulfil the idea of enlarged hardingfele by acquiring one of the following functions: resonance string, drone string, or melodic commentary of the lead melody. The resonance notes underline and prolong the corresponding pitches in the lead melody; in order to imitate the shape of the real sympathetic sounds, their attack is hidden within the main note and their decay is marked by a decrescendo. See for instance the first system of the A section in the full score in Figure 131.

³⁹⁸ See Carl Barrentine, *Earthworm (Lumbricus) Locomotion*, 2011, <https://www.youtube.com/watch?v=0Texxu3p7l8>.

Audio ex. 76: *Valdresspringar* 20–27

A Allegro calmo (♩. = 120)

Figure 131: *Valdresspringar* 20–27

There is only one occurrence of drone notes in this section, and that is a D assigned to the cello with the marking “piano tenuto” (Figure 132).

Audio ex. 77: *Valdresspringar* 41–46

41

Figure 132: *Valdresspringar* 41–46

Thirdly, the A section introduces the dialogue between the main melody and the other voices through brief imitations, variations, or repetitions of short motifs (Figure 133).

A Allegro calmo (♩. = 120)

Figure 133: Valdrespringar 20-27, Dialogue

More examples are given in Figure 134.

Figure 134: Valdrespringar 37-51, Dialogue

5.4.3 B: “green springar”, part 2

The Valdresspringar pattern



is presented again, mostly in its basic form, in the continuation of the “green springar” unfolding at letter B (Figure 135). The structure here is more discursive than in the previous springar part, and the melody reaches more modal areas, marked by the circled notes in the excerpt below: the note C# is introduced more persistently, at first as the augmented fourth of the key (blue colour) and then as a pivot to modulate momentarily to the dominant key (red colour). The area of the VI degree (note E), typical of green springars, is also briefly touched. Cadential motifs f and g are borrowed from the previous part, for punctuation.

Audio ex. 78: *Valdresspringar*, Green springar B



Figure 135: *Valdresspringar* B, Green springar

The reference tune “[En grønn en tell](#)”, transcribed in Figure 136, presents elements similar to the ones described so far, namely the 1-bar motivic structure, the rhythmic reshaping of the valdresspringar pattern, and the insistence on the VI degree which, with the repetition and variation of a 2-bar phrase (f), occupies the entire third and fourth system of the score, namely half of the tune.



Figure 136: Beitothaugen Granli, "En grønn en tell"

In the B section, the role of the instruments accompanying the cello favours the presence of drone notes at the expense of resonance notes, with the effect of augmenting the fullness of the total sound. For a similar purpose, a stepwise increase of musical activation is initiated here, with a stricter and more frequent melodic interplay between voices, to be continued throughout the whole movement. The whole A–B episode (see the complete score in Appendix 1) is presented in Audio example 79.

Audio ex. 79: Valdresspringar 20–92

5.4.4 C: grålysingspringar

The grålysing tuning and springar type is featured in the following C section. Figure 137 displays the melody adapted from the score.



Figure 137: Valdresspringar, Grålysingspringar

Played by the second violin, the melody contains motifs and structures modelled after grålysingspringars such as the iconic *Bjøllelåtten*. The opening phrase, for instance, is shown in Figure 138.



Figure 138: *Valdresspringar* 23–28, V12

The first two bars are taken from a section of “[Bjøllelåtten](#)”, although in this tune the borrowed motifs (a, a’) start at a different beat of the bar (please note that the transcription in Figure 139 simplifies the rhythms and ignores the drone notes).



Figure 139: Bøe, “Bjøllelåtten”

The circled notes highlight the insistence of the melody on the III degree of the mode, C# here and B in *Valdresspringar*, a note that is frequently touched as open string in the a-e’-a’-c#’’ (g-d’-g’-b’’) tuning. In the quartet movement, the second violin exposes repetitions and variations of the motif that increase rhythmic and melodic intensity, revolving around the B drone of the first violin (Figure 140).



Figure 140: *Valdresspringar* 93–101

The latter soon starts to break free from the steady note with small imitations that echo the second violin (bars 103–117), until the two instruments become equally active; the

intensification is also enhanced by the viola and cello, whose drone-like notes become more continuous and insistent. This section also develops the elements of modal fluctuation introduced with the C# in section B. The initial C natural in the second violin line becomes irreversibly sharp at bar 103, consolidating the idea of a Lydian modal area with the augmented IV degree. The red stripes in Figure 141 underline the reiterations of this note happening in bars 103–108, and the increasingly long suspensions in A Major in bars 110–111 and similar. The harmonic texture is therefore pulled back and forth between the home and the secondary root, as will be further explored in the upcoming sections of the piece.

The musical score for Valdrespringar, measures 102-117, is presented in a four-staff format. The key signature is G major (one sharp). The score includes various musical notations such as notes, rests, and accidentals. Red horizontal bars are placed above certain notes in the Violin I and II staves, indicating specific reiterations of a note. Dynamics like *p*, *p ten.*, *mf*, and *mp* are used throughout. Performance markings such as *poco a poco intensificando* and *mf* are also present.

Figure 141: *Valdrespringar* 102–117

Audio example 80 includes the whole passage from bar 93 to 117.

Audio ex. 80: *Valdrespringar* 93–117

The section ends with a crescendo based on the obsessive and intensified repetition of short motifs, in the fashion displayed by another grålysingspringar, “[Springar nr. 1 etter Per Haugseth](#)” (Figure 142).

Springar etter Per Haugseth
as played by Ola Bøe



Figure 142: 142 Bøe, "Springar etter Haugseth"

The boxes in Figure 142 enclose the alternation of the two major thirds B/D# and A/C#, which increases as the phrase unfolds and outlines the typical Lydian tritone tetrachord (cf. 5.2.4). Several versions of this basic alternation are displayed, with motif a''' as plain repetition of the two major thirds, easily attainable with the first finger on the fiddle due to the grålysingstille (a'-c#'' in the top strings). In *Valdresspringar*, the thirds are split between the two violins, while viola and cello provide rhythmic patterns built largely on open strings (Figure 143).

Audio ex. 81: *Valdresspringar* 118–127



Figure 143: *Valdresspringar* 118–127

The musical intensity accumulates here at a higher degree than at the end of the B section, laying a second step in the progression of energy that will eventually reach the climactic peak later in the piece, prepared by the D and E section.

5.4.5 D: *huldrespringar*

The third part of the long melody spanning throughout *Valdresspringar* is a *huldrespringar*, or springar in *huldrestille* (another name for the trollstille or fairy tuning), presented by the first violin at letter D. As previously explained, this a-d'-f#'-e'' tuning allows for a dialogue between a high voice on the first string and a low voice on the third and fourth string, separated by the second string used as a drone, which alternately becomes an upper or lower drone depending on which voice it is accompanying.

The springar "[Låtten hennar Bjørg-Gudrun](#)", transcribed in Figure 144, is composed and performed by Jan Beitoaugen Granli. The upper line consists in a motif of descending thirds (a), repeated and varied several times, to which the lower voice replies with the alternation of two cadential motifs: a sequence of triplets (motif b, also based on descending thirds, with a colourful G natural instead of G#) followed by motif c, revolving around the root note D.

Låtten hennar Bjørg-Gudrun

Jan Beitoaugen Granli

The musical score is written in treble clef, key of D major (one sharp), and 2/4 time. It consists of four staves. The first staff begins with a 16-measure rest, then a triplet of eighth notes (D, E, F#), followed by a series of descending thirds (A-G#, F#-E, E-D, D-C#, C#-B, B-A, A-G#). The second staff continues this pattern with more descending thirds and triplet variations. The third staff introduces two new motifs: 'b', which is a triplet of eighth notes (D, E, F#), and 'c', which is a triplet of eighth notes (D, E, F#) followed by a descending third (A-G#). The fourth staff alternates between motifs 'b' and 'c'.

Figure 144: Beitoaugen Granli, "Låtten hennar Bjørg-Gudrun"

The emphasis on the VI degree of the mode (the note B) is particularly evident in motif a, since it hangs on the top of the descending passage. In a similar fashion (Figure 145), the whole first phrase of the *huldrespringar* in *Valdresspringar* insists on a high E, the VI degree from the root G, repeating motif a in a series of four micro-variations. The phrase is then followed by a reply two octaves below.

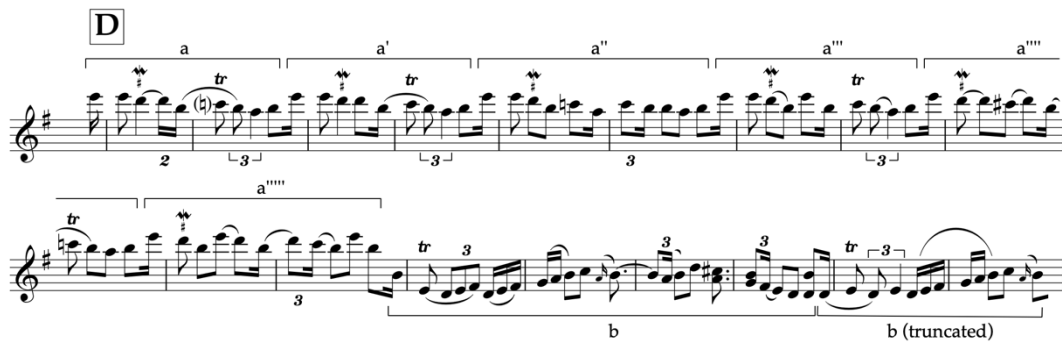


Figure 145: Valdrespringar, Huldrespringar

Figure 146 shows how the passage is orchestrated in the full quartet score.

Audio ex. 82: Valdrespringar 127–148

Figure 146: Valdrespringar 127–148

The question-and-answer scheme continues with five other episodes, where the interplay becomes gradually tighter and the musical activity in both voices increases. Audio example 83 includes the passage between bars 149 and 187 (see the complete score in Appendix 1).

Audio ex. 83: Valdrespringar 149–187

At the last of these instances in bar 188 (see Figure 147), the first violin insists on short 1-bar motifs which soon spread into the other instrumental parts. The C natural definitively disappears in favour of C#, as clearly uttered by V11 in bars 195–196 and V12, in imitation, in bars 197–198. These motifs closely resemble the alternation of major thirds found in the *Springar etter Per Haugseth*, and provide a similar function to that of the analogous closing phrase of the previous section C (bars 118ff.) The Lydian mode and its augmented IV degree is here incontrovertibly established, preparing the ground for further and wider modal fluctuations in the upcoming section E. In conjunction with a rhythmic and dynamic intensification, this constitutes the third stepwise stage of the long crescendo of energy and sound started at section A, which in the next parts will reach the peak in an almost straight, uninterrupted ascent.

Audio ex. 84: Valdrespringar 187–198

The image displays a musical score for the piece 'Valdrespringar' from measures 187 to 198. It consists of four staves. The first staff (Violin I) begins at measure 187 with a *mf* dynamic and a crescendo. A red box highlights a short 1-bar motif in measure 188. The second staff (Violin II) starts at *mp* and also features a crescendo, with a blue box highlighting a similar motif in measure 188. The third staff (Viola) begins at *mp* and includes a *mf cresc.* marking. The fourth staff (Cello/Double Bass) starts at *mp* and includes a *cresc.* marking. The score is written in G major (one sharp) and 2/4 time. Various musical notations such as slurs, ties, and dynamic markings are present throughout the passage.

Figure 147: Valdrespringar 187–198

5.4.6 E: *heksedansen*

The motivic development in section E relies on the principle of obsessive repetition of a motif, with or without small variations, spiralling into a kind of musical hypnosis: the tendency of Valdres springars to insist on short melodic fragments has been underlined before. Emblematic of this is the case of *Heksedansen* (literally “The witch dance”), where the musical bewitchment is cast by mean of repetition and micro-variation of the same bar, which undergoes a slow and almost unnoticeable process of transformation. This is demonstrated by the ending phrase of “[Heksedansen](#)” as played by Ola Bøe (Figure 148).



Figure 148: Bøe, "Heksedansen" (micro-variations)

The beginning of "[Springar etter Jørn Røn](#)" provides another example of repetition combined with gradual variations of a motif. It also introduces a second musical idea featured in *Valdresspringar*, namely the convergence, throughout the succession of variations, onto a single segment of the motif, similar to a process of coagulation or condensation of material around its core. In this tune (Figure 149), the first two bars are repeated four times, after which the fiddler concentrates only on the second bar, exploring its possible transformations; towards the end of the phrase, the bar is paired with its triplet variations, forming another 2-bar unit that is repeated until the cadence on the dominant.

Springar etter Jørn Røn

as played by Ola Bøe



Figure 149: Bøe, "Springar etter Jørn Røn" (coagulation)

Both *Heksedansen* and the *Springar etter Jørn Røn* are in the normal a-d'-a'-e" tuning, but the mode still sounds clearly Lydian due to the strong emphasis on the augmented IV degree (G#). *Låtten Hass Mikkjel Moe*, another well-known folk tune mentioned in 5.1, confirms the diffusion of the Lydian mode among Norwegian springars regardless of the fiddle tuning, which in this case is the *ljøsblått* tuning, or "light blue" (g-d'-a'-d"). This tune also provides an excellent example of motivic coagulation, allowing fiddlers to target and variate one or few specific bars of music. In his [interpretation](#), Jan Beitohaugen Granli condenses rhythmic patterns around a cadential motif, conjuring a very powerful drive that has been of great inspiration for section E in *Valdresspringar* (Figure 150).

Låtten Hass Mikkjel Moe
as played by Jan Beithaugen Granli



Figure 150: Beithaugen Granli, "Låtten Hass Mikkjel Moe"

Motif a' presents a very common pattern in Valdres springars, namely a rhythmic bow ornamentation that places a short triplet note between two consecutive *ribattuto* notes, as displayed in Figure 151.

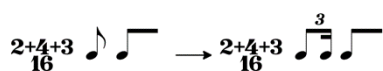


Figure 151: Valdres springar, Ribattuto triplet

Section E relaunches the motif heard at the end of D, the fragment derived from the alternance of two major thirds in the Valdres springar rhythmic pattern. The element is



Figure 152: Valdres springar E, Motifs

the building unit for most of this section; it is used both in G and in A Lydian and undergoes micro-variations and rhythmic reshaping. Figure 152 shows its basic form in both modes, paired with its most salient variant. This motif (type "a" in

Figure 153) recurs throughout the entire section and is aggregated into longer passages, briefly separated by other motifs. The whole melodic arch can be divided into three main phrases of increasing length, insistence, and rhythmic activity.



Figure 153: *Valdresspringar E, Heksedansen*

The long, hyperbolic sequence of ten a-type motifs in the third phrase coagulates the melody around a single fragment, and charges the spring for the final burst of energy, released at letter F. The motivic development is one of the functional forces steering the energy towards its climax; other fundamental elements are the orchestration and the harmonic treatment of the section according to the principles of modal fluctuations. While the first violin performs the melody shown above (one octave higher), the three other instruments become increasingly activated, engaging in rhythms that slowly align homorhythmically with the first violin. Figure 154 displays the whole E section: the coloured rectangles mark the arrival points of each phrase, each characterised by a different dynamic event (a *sf*, a *>*, and a *sfz* respectively).

Audio ex. 85: *Valdresspringar* 199–225

The image displays a musical score for 'Valdresspringar' 199–225, consisting of three systems of music. Each system is written for four staves (treble and bass clef for both hands). The key signature is one sharp (F#). The score includes various musical notations such as triplets, crescendo markings, and dynamic markings like *f* (forte) and *ff* (fortissimo). Three specific sections are highlighted with colored boxes and numbered:

- Section 1:** A red box highlights a measure in the first system, marked with a red '1'.
- Section 2:** A blue box highlights a measure in the second system, marked with a blue '2'.
- Section 3:** A green box highlights a measure in the third system, marked with a green '3'.

Figure 154: *Valdresspringar* 199–225

From the melodic and rhythmic perspective, the point of maximum condensation and hypnotic reiteration is the passage 221–224, when all four instruments homorhythmically repeat the ribattuto-triplet pattern, each part alternating between two notes only. The harmonic aspect, as mentioned above, is also crucially functional to the increase of tension that spans this section, and indeed the whole piece; it therefore deserves a detailed description, since it deeply impacts the trajectory of the musical narrative, modelled after Övergaard’s evocative recount.

The occurrences of the modal fluctuation between the primary mode root G and the secondary A found in previous sections can be recapitulated as follows:

- Section A: the augmented IV degree (C#) appears sparsely in the viola melody.
- Section B: the second part of the green springar emphasises the C# more frequently, still as a passing note but with an added modulative function (excursions towards D Major).
- Section C: the C# in the second violin line loses its role as a passing note and drives the melody to linger in A-Major areas of increasing length; the ending phrase is based on the Lydian alternance between major thirds (G-B and A-C#).
- Section D: the C natural is initially reintroduced in the first violin melody, so that the harmonic texture momentarily reverts to G Major; towards the end, it is supplanted by C#, permanently establishing the G Lydian mode.

Section E develops the affirmation of the G Lydian mode, firstly with the modal ambiguity

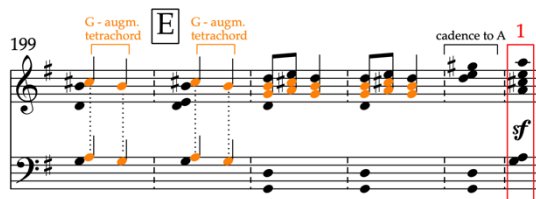


Figure 155: *Valdrespringar* 199-203, Harmonic reduction

between the primary root G and the secondary root A schematised in the harmonic reduction of phrase 1 in Figure 155.³⁹⁹ The alternation of consecutive major thirds generates the augmented tetrachord G-A-B-C# (orange notes), and culminates in the first real cadence

to A Major of the piece: the A-area of the upper part is juxtaposed with the G-area of the bass, turning the modal ambiguity of the previous bars (more melodic, horizontal) into a collision between the G and the A planes, accentuated by a *sforzato* sign and reached simultaneously by all instruments with a markedly vertical, harmonic gesture. The chord in the rectangle marked as 1, as mentioned above, is therefore a pivotal point in the piece, since it condenses the modal fluctuations that have occurred so far and lays the ground for further harmonic developments.

Phrase 2 of the section introduces the D# as a new key-note: although melodically it is treated as a passing note in the second violin line, harmonically it represents the augmented IV degree of A Lydian, and completes the affirmation of the mode with its full set of characteristics. The two mode roots G and A have now reached equal status and

³⁹⁹ In this and the following reductions, rhythmic durations and barlines are only approximated references, as the main purpose is the skeletal harmonic sequence of the section.

identity, so that their compresence can no longer be considered as a mere modal fluctuation or ambiguity, but as an occurrence close to polymodality.

The reduction in Figure 156 shows how the augmented tetrachord in A (purple) is presented, repeated, and superimposed on the pre-existing G Lydian; the bichord A-C# serves as common element between the two modes. The final cadence of the phrase

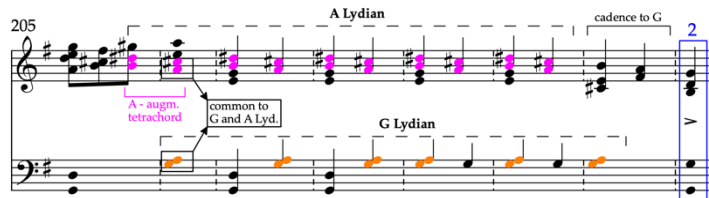


Figure 156: *Valdrespringar* 205-211, Harmonic reduction

concludes the polymodal passage and temporarily brings the harmony back to G (accented chord in the blue rectangle). The momentary regression into the G-area prepares and extends the

run-up before the bigger harmonic leap that occupies the third phrase (Figure 157).



Figure 157: *Valdrespringar* 212-225, Harmonic reduction

Once engaged at bar 215, the obsessive repetition of the two augmented tetrachords does not stop until the end of the phrase, creating the impression of a whole-tone pentachord as a result of the harmonic sum of the two tetrachords:

$$[G-A-B-C\#]+[A-B-C\#-D\#]=[G-A-B-C\#-D\#]$$

This thick texture, a climactic summary of all harmonic developments in the piece, is frantically expressed by the hammering homorhythm of bars 222-225, where all instruments converge to the maximum concentration of energy coinciding with the sudden halt, suspension, and landing in bar 225 (Figure 158).

Audio ex. 86: Valdresspringar 222–226

The image shows a musical score for four staves, likely for a string quartet. The music is in 2/4 time and G major. The first three staves (treble and bass clefs) feature a continuous eighth-note pattern with triplets, marked *ff*. The fourth staff (bass clef) has a similar pattern. A red box highlights a passage starting at measure 225, where the first three staves have a chord marked *ff*, followed by a natural harmonic chord marked *sfz*, and then a landing G chord marked *sfz*. Red arrows point from the first three staves to the highlighted passage. The score ends with a final chord marked *f*.

Figure 158: Valdresspringar 222–226

The gesture at 225 is made even more dramatic by the registral and timbral leap between the chord on the downbeat, the natural harmonic chord and the landing G chord marked *sforzatissimo*. It represents the “loud cry of joy” of the Valdresian fiddler in Övergaard’s tale, as he “stamps his foot strongly on the floor”. According to the narration, the dancing couples have now all gathered again and reached the peak of their amusement to the sound of the green and dawn tunes. The whirlwind of dance and music summoned by the *heksedans* has seized all the guests, and the fiddler is playing as if in a trance (the tune “acquires a life of its own”). The episode concludes the last leg of the long crescendo of intensity that runs through the entire piece: the time has come for a last electrifying dance, in order to release the accumulated energy until it dissipates and sends everybody home.

5.4.7 F: last dance

Section F functions as a long, distilled cadence that cools off the vibrant energy accumulated since section A. For convenience’s sake, it is worth recalling the final lines of Övergaard’s farmhouse dancing description which inspired this section of *Valdresspringar*:

Suddenly, a loud cry of joy bursts forth from the Valdresian fiddler. He stamps his foot strongly on the floor. Dust clouds float towards the ceiling; through their veil and the tobacco smoke, in the half-dimmed light of a lamp, one can see the spirited silhouettes moving in a swirling dance. The fiddler then falls silent. The wild, loud energy that had reigned earlier, summoned by the “Dawn

Tune”, has now settled down. One after the other, the guests drag themselves home, and the dance is over.⁴⁰⁰

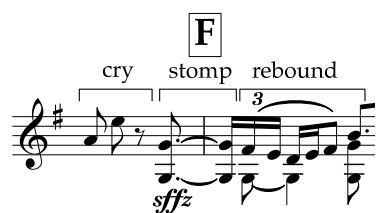


Figure 159: *Valdrespringar* 225–226, Fiddler’s cry

The fiddler’s joyful cry, followed by his heavy stomp, throws dust clouds in the air (Figure 159), which we imagine falling back slowly to the ground as the liveliness of the dance fades. Both the melody and the harmony in the F section contribute to the depiction of the scene, with a progressive decrease of activity throughout the episode.

The main melodic line is structured in five phrases (Figure 160) and portrays an increasing sense of cadence and conclusion. Each phrase contains both modal fluctuations (red notes in the score below indicate pulls towards A Lydian) and cadential formulas, except the fourth phrase, which is entirely cadential.

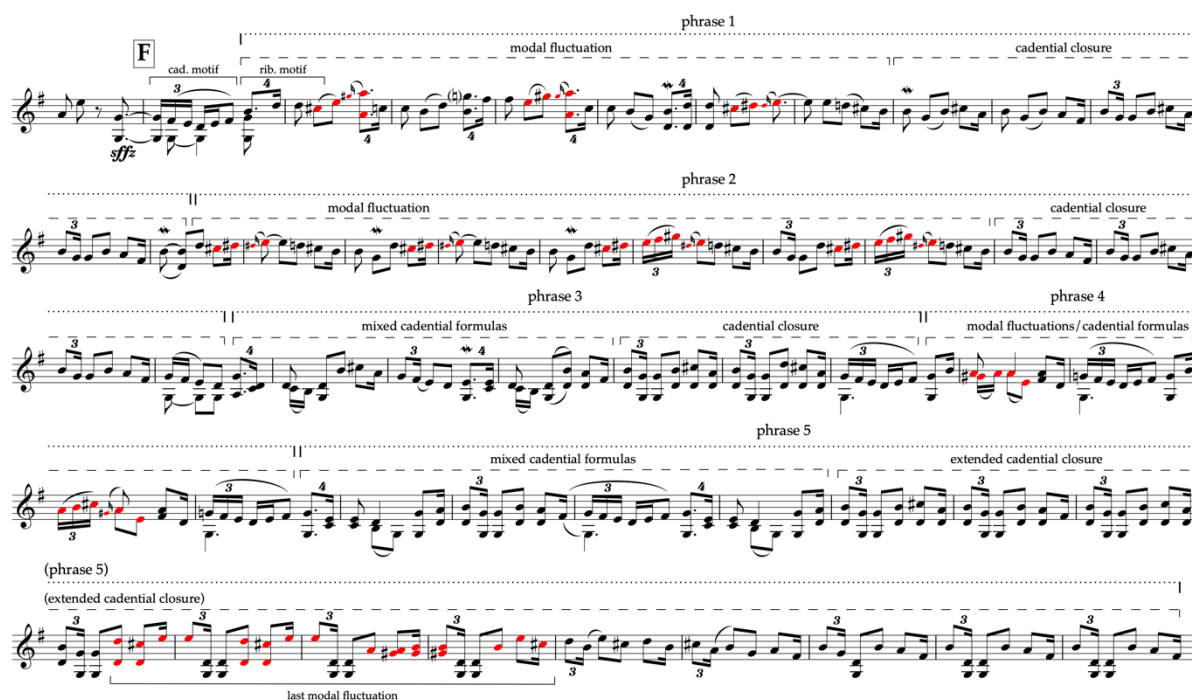


Figure 160: *Valdrespringar* F, Heksedansen

⁴⁰⁰ Övergaard, *Einar Övergaards folkmusiksamling*, 417.

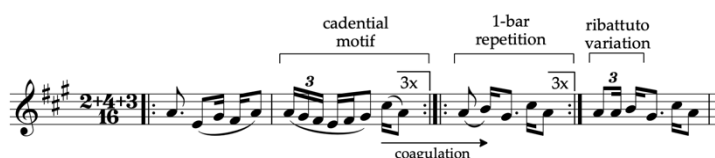


Figure 161: Luksengård Mjelva, "Asle Myro"

"Asle Myro" transcribed in Figure 161, Olav Luksengård Mjelva uses it in the conclusive repetition of 2-bar groups (note the subsequent cadence coagulating into a 1-bar segment). The passage is repeated twice and then varied to lead into the following section. The ribattuto-triplet in the last bar is a typical feature of the Hallingdal and Valdres springar style (as described regarding *Låtten Hass Mikkjel Moe* in 5.4.6). The motif is quoted in phrase 5 of section F in the *Valdresspringar* melody, and also in its dotted 4-tuplet variant appearing at the beginning of phrase 1 and marked as "rib.(attuto) motif" in Figure 160.

The alternation of two Lydian major thirds (orange and purple notes in Figure 162), and a minor third (blue notes) forms the basis for the fundamental melodic building unit of the section, namely the cadential closure introduced at the end of phrase 1 and



Figure 162: *Valdresspringar* 233-236, Cadential closure

subsequently quoted and varied until the end. The third and fourth bar feature the triplet-ribattuto pattern as variation.

Audio ex. 87: *Valdresspringar* 232-236

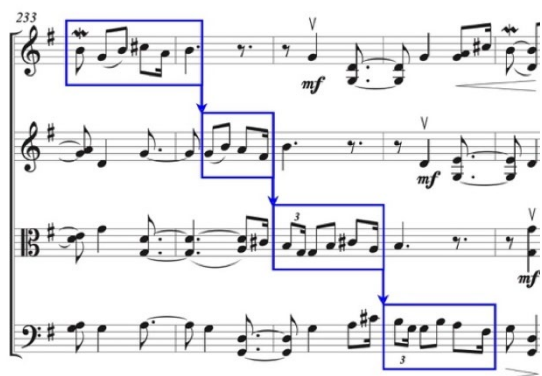


Figure 163: *Valdresspringar* 233-236

of section E. The musical figures remind one of the swirling, dancing silhouettes that Övergaard could see in the faint light of the late-night lanterns in the dancing hall, through the smoke and the dust.

Another aspect of the orchestration contributing to the decrease of tension is the reassignment of the cello line to the role of static drone around the note G, in bichords and rhythms that recall the initial sections of the piece, when the atmosphere was still calmer. Similarly, the viola occupies the middle frequencies mostly with G and D, except for occasional motifs in imitation of the violins. On top of this stable low-end layer of the quartet sound, the higher voices engage in dialogues that still retain a certain degree of the recent energy, however diluted and with more space between interventions. See for example the full score of phrase 2 in Figure 164, where the blue stripes underline static harmonies and the red boxes connected by arrows display a close dialogue between motifs with a rough and somewhat savage character, pulling the harmonies towards A Lydian.

Audio ex. 88: *Valdrespringar* 237–248

The image shows a musical score for the piece 'Valdrespringar' from measures 237 to 248. It consists of four staves: Violin I (top), Violin II, Viola, and Cello (bottom). The Cello staff is marked with blue horizontal stripes, indicating static harmonies. The upper staves (Violin I, Violin II, and Viola) contain several motifs highlighted by red boxes and connected by arrows, suggesting a close dialogue between these instruments. Dynamic markings such as *f*, *ten*, *mf*, and *f* are present throughout the score. The key signature is one sharp (F#), and the time signature is 3/4.

Figure 164: *Valdrespringar* 237–248

The sudden gust of wild Valdresian energy, magnified by the marked modal fluctuation, is calmed down by the split cadential closure at bars 245–248, whose appeasing effect is continued by a phrase entirely made of cadential formulas (phrase 3). In phrase 4, a dialogue between the second violin and the viola suggests another modal fluctuation, though weaker and shorter. The two phrases are shown in Figure 165.

Audio ex. 89: *Valdresspringar* 248–257

The musical score for *Valdresspringar* 248–257 is presented in four staves. The first two staves are in treble clef, and the last two are in bass clef. The key signature has one sharp (F#). The score is divided into two main sections: 'Phrase 3' (measures 248–256) and 'Phrase 4' (measures 257–266). Various musical phrases are highlighted with blue and red boxes, and arrows indicate cross-staff relationships between the staves.

Figure 165: *Valdresspringar* 248–257

The harmonic stability is affirmed at the beginning of the last, conclusive phrase of the section, with insistent repetitions of cadential formulas that lead all the instruments – save the first violin – to a resting position in bar 266. The cadence in the central green rectangle in Figure 166 (bars 261–62) acquires a particular relevance in this process, as it is stated and harmonised by all four instruments homorhythmically, a unifying gesture that collects every player’s line and carries it towards its final stretch.

Audio ex. 90: *Valdresspringar* 258–266

The musical score for *Valdresspringar* 258–266 is presented in four staves. The first two staves are in treble clef, and the last two are in bass clef. The key signature has one sharp (F#). The score is divided into 'Phrase 5' (measures 258–266). Various musical phrases are highlighted with green and blue boxes.

Figure 166: *Valdresspringar* 258–266

The three lower voices’ recession into stasis paints the picture of the farmhouse guests who, exhausted after a night of dancing, finally draw their breath and stand still, next to each other, gazing at the fiddler (the first violin) who launches into his definitive virtuosic

gesture: a leap into the high register, a last fluctuation in A Lydian, and then a descent to the sudden halt that puts an end to the dance (Figure 167).

Audio ex. 91: *Valdresspringar* 266–274



Figure 167: *Valdresspringar* 266–274

5.4.8 G: dawn

In the last three bars of section F (see excerpt above), violin 2, viola, and cello slide back from the rests into the soundscape by almost inaudibly holding three notes that the first violin melody touches on the way to its abrupt conclusion. These long notes seem to appear out of thin air, and musically depict the image of the first ray of daylight penetrating the farmhouse hall at the end of the ecstatic dance. The three suspended notes D, G, and A, immediately suggest the green tuning aura from where *Valdresspringar* had started, completed and confirmed as soon as the first violin adds the key-note B.

The beginning of section G specularly reflects the end of the Introduction, of which the whole part is in fact a reversed version. As the Introduction had consisted of the gradual appearance of the green chord G-D-A-B, section G opens with the restatement of those notes (green box in Figure 168), followed by intersecting streams of sound occasionally perturbed by C# (red circles, echoes of G Lydian), and concluded with a gradual elevation of the texture through the introduction of a few harmonic sounds.

Audio ex. 92: Valdrespringar 275–284

Figure 168: Valdrespringar 275–284

The return of the green tuning restores a placid atmosphere, only fleetingly stirred as the following bars conjure a passing stream of sound aggregating around the initial G of the viola (echo of the G by the same instrument at the very beginning of the Introduction). The process starts from the low register and slowly ascends towards the heights of the natural harmonics (Figure 169).

Audio ex. 93: Valdrespringar 285–293

Figure 169: Valdrespringar 285–293

Figure 170: Valdrespringar 285–288, Lydian mode

The total of pitches included in bars 285–288 (Figure 170), before the harmonics reappear, coincides with the notes of the full G Lydian scale.

The passage evokes images of floating clouds similar to those provoked by the Valdresian fiddler's powerful foot stamp, in a sort of slow-motion reminiscence of that gesture. These rolling clouds of different tonal colours gently vanish as the faint sunbeams (four long harmonics) dissipate into the air; the last note to be uttered is once again the key-note B, transfigured into a harmonic that is the highest note of the entire *Stringar* piece. After that, a motto formed by four bell-like pizzicatos on the open strings concludes the piece as “the guests drag themselves home”: the dance is over (Figure 171).

Audio ex. 94: *Valdresspringar* 294–299

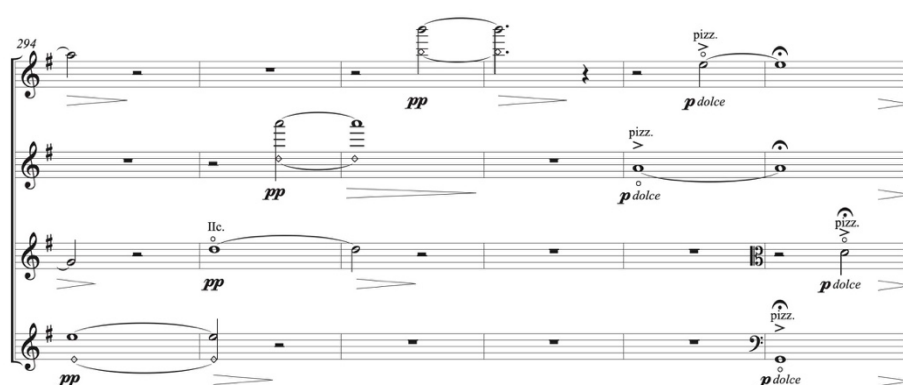


Figure 171: *Valdresspringar* 294–299

5.4.9 Summary

While the rhythmic aspect and its treatment predominates in *Udelt takt* and *Telespringar*, *Valdresspringar* privileges the general character of the tunes from Valdres, intended as the sum of the musical and meta-musical qualities that make their essence recognisable. As mentioned before, tunes from Valdres are often perceived as wild, obsessive to an almost hypnotic point. Furthermore, as dancer Kalberg describes, the grålysing springars are believed to possess a cathartic property able to channel people's aggressiveness into a lively, energetic dance with the power to divert them from violent fights. In the latter sense, the loud cry of the fiddler in Einar Övergaard's tale symbolises a long-awaited outburst of joy and freedom, piercing the night at the peak of its energy. *Valdresspringar* focuses precisely on this energy, which as explained by the same author seems to diffuse from the tune itself, alight with a life of its own, binding both the fiddler and the dancers/listeners to a common spell.

The energy of the tune is a cause and effect of its character; a similar two-way relation is maintained between all other elements in the tune and its energy. The way the

fiddle is tuned, for example, evokes unique sound worlds and therefore informs the tonal colour, setting the scene for the story the tune wishes to tell: the impact on the feeling or mood of the tune, and ultimately on the energy and/or character, is thus very significant. All the forces at play in a successful Norwegian folk dance evening are interconnectedly related to this energy: the Hardanger fiddle and its inherent properties, the fiddler's ability to mesmerise the listeners with the treatment of the tune, the tune itself with its melodic and rhythmic features, the motion of the dancing bodies, all concur in creating an curve of energy whose trajectory is in a constant and flexible flux. It is therefore useful to refer the entire variety of the individual aspects analysed in the previous paragraphs to their influence on the overall dramatic curve of the piece.

The graph in Figure 172 maps *Valdresspringar* showing how the intensity of the curve, especially at the level of dynamics, progresses through the several sections.

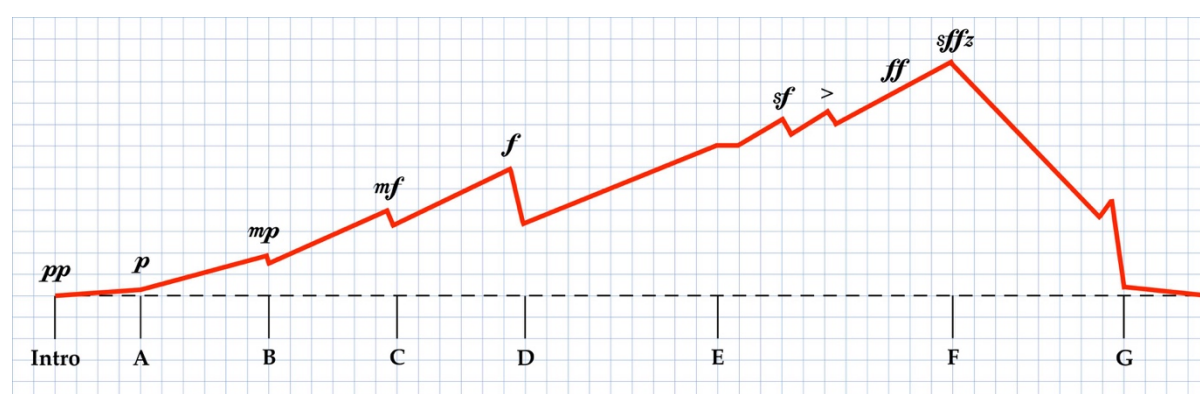


Figure 172: *Valdresspringar*, Energy graph

The mountain-like shape is not achieved through a straight ascending line but with a stepwise motion, to which the melodic, harmonic, rhythmic, and formal aspects mentioned in the description of each section are functional. Here follows a summary of how this contribution is realised.

The built-in properties of the Hardanger fiddle such as its resonance, flat bridge (with the consequent drone-based and polyphonic style of playing), and scordatura possibilities, constitute an inseparable unit with the tune and its character. *Valdresspringar* transfers these elements into the four-part texture of the string quartet, conceived of as an “enlarged” hardingfele. The melody line is often split between the instruments, but in other salient points they join forces to participate homorhythmically in the increase of energy: see for example the end of sections C (bars 121–127) and D

(195–198), and almost the whole E section. The orchestration applies the techniques of aggregation/disaggregation in order to accumulate/dissipate energy.

As a direct consequence of certain tunings such as grålysingstille and trollstille, the augmented IV degree and the major-third repetition unambiguously denote the distinct sound world of Lydian modes and tetrachords, whose suggestive power is a reminder that modes and harmonies may have deep effects on musical perception, and subsequently on the listener's state of mind. It has been shown how in *Valdresspringar* the introduction of key-notes steers the harmonic unfolding of events, as is the case for the C#'s in the cello and second violin melodies (sections B and C). Similarly, modal fluctuations based on those notes create the impression of a double modal root which sometimes results in the coexistence of two harmonic planes, as is the case of the build-up in section E culminating in the bi-modality of bars 217–224. These are some of the harmonic tools used to direct the energy trajectory through tensions and relaxations.

At the motivic level, several elements were borrowed from folk traditions and used in the composition to draw the overarching contour. The most prominent is certainly repetition, both as a plain reiteration and as a series of micro-variations. Springars like *Heksendansen* and *Låtten Hass Mikkjel Moe* inspired the material in section E in their obsessive characters; *En grønn en tell* provided useful examples of varied repetition for the green springar in sections A and B. The piece also uses the concept of cadential coagulation, namely the tendency of Valdres tunes and/or fiddlers to repeat short motifs for a long time and focus the repetition on an even shorter fragment towards the end of the phrase, which often also coincides with the end of the section. Both techniques are widely featured in *Valdresspringar*, in order to create a spiralling sense of musical intensification, which somehow squeezes the energy out of the melody and concentrates it around one particular point in time.

The punctuation of the melodic discourse is realised above all with cadential formulas and other figures adopted from springars such as *Asle Myro*, quoted in a motif that recurs in sections A, B, F. Similarly, several melodic ideas are taken from folk tunes, such as *Den so styggen blistra ner'n begrov mor si* for the green springar at section A and *Bjøllelåtten* for the grålysingspringar at C. The distinctive Lydian alternance displayed by the *Springar etter Per Haugseth* confers its hypnotic drive to many passages in sections C (118–127), D (180–198), E (199–202, 207–211, 215–224), and is also used for short cadential motifs in sections D (152–153, 166–167), F (233–234 and similar).

Rhythmic patterns and reshaping techniques are also derived from folk tunes: the morphing of the typical *valdresspringar* pattern described in 5.4.2 is a fitting example. The use of direct or indirect quotes from the folk tradition stems from the intention to stay as close as possible to the essence of the targeted springar types; literal or functional as it may be, the reference to the tune is a crucial moment in the embedding of folk objects into the context of new musical creations, which relates directly to the research question of my artistic project. An array of folk elements therefore lies at the basis of *Valdresspringar*:

- Instrumental characteristics
 - Tunings
 - Resonance strings
 - Flat bridge (drone-playing, multi-voice playing)
- Tune characteristics
 - Motif excerpts
 - Cadential formulas
 - Rhythmic patterns
 - Repetition
 - Micro-variation
 - Coagulation
- Springar type characteristics
 - Wild
 - Obsessive, hypnotic
 - Cathartic, explosive

One of the main goals in the composition of *Valdresspringar* was to capture the unifying essence of all these items and to address the Norwegian folk tradition at a more holistic – perhaps also emotional – level than in the preceding two movements. The aim was to create new music inspired not simply by technical elements, but mainly by the affect, or emotive charge of a tune. The adherence to reference tunes has provided the ideal vehicle for the transmission of the original character from the folk source to the new composition: the scope of this whole musical study is to show how, in the case of *Valdresspringar* in particular and *Stringar* in general, such a process has unfolded. This strikes the innermost strings of the *Polska Travels* research project, animated by the

intention of drawing from a collective body of knowledge such as a musical tradition for the creation of new artworks that at the same time respect the source and venture beyond. Before the final chapter of this essay, where conclusions regarding these and other underpinning topics are formulated and reflected upon, a complete version of the third movement is provided here at the following link⁴⁰¹ or QR code (see the complete score in Appendix 1).

[III. Valdresspringar](#)



⁴⁰¹ See Krishna Nagaraja, *Stringar: III. Valdresspringar*, 2022, <https://www.youtube.com/watch?v=N8ARntjxeGw>.

6 Conclusions

This thesis provides a study of my last doctoral composition *Stringar* and contextualises it within the framing of the *Polska Travels* artistic research project, pursued in the Folk Music Department at the Sibelius Academy in Helsinki between the years 2016 and 2022. It constitutes a written companion to a series of four concerts and one CD recording, revolving around the history and development of polska tunes and using it as the basis for compositions and arrangements where Finnish, Swedish, and Norwegian folk music is put in contact with external elements, in the quest for a personal musical language where initial identities are respected and at the same time transcended. The research question directly addresses the issue of “composing (at) the crossroads”, suggesting the use of composition as a method to explore interstitial spaces between disciplines and genres where a mutual dialogue can be established, and the creation of new knowledge facilitated.

Borgdorff’s (2006) tripartite model of artistic research is reflected in the different layers included in my studies: the historical and musicological investigation of the polska tune family provided a scholarly groundwork (research *on* art) which, with the use of skills crafted throughout the process (research *through* art), informed the composition of folk-inspired new music, fusing research with researcher, subject with object, in a self-reflective artistic practice (research *in* art). In addition to using composition as a central practice, tools from disciplines such as music history and theory, notation, musicology, ethnomusicology, baroque music performance practice were applied to gather and articulate the necessary knowledge for an informed approach to musical hybridisation. A four-step strategy consisting of a historical-musicological contextualisation, a stylistic study of the polska types, a review of pre-existing compositions inspired by folk music, and the actual compositional practice was therefore devised as a methodological framework, in which the research phases were often overlapping and interacting.

Over the course of these doctoral studies, my research focus and role were adapted to the increasing value attributed to composition, shifting throughout the arch of the four concerts from a folk/baroque/contemporary approach to a fully-fledged contemporary standpoint, from the production of arranged/composed pieces to compositions alone, and ultimately from performer/composer to composer. The string quartet *Stringar* was selected as the doctoral outcome possessing the widest and most in-

depth array of tools to articulate and propose possible answers to the research question of how to use composition to construct an interstitial “musical home” between different genres and influences. For this reason, the thesis analyses it as a case study, describing the reasons behind its compositional choices and thus displaying how the quest for the research answer was translated into actual music.

Since my point of departure was rooted in Western “art” music, but my research primarily focused on “folk” music, a reflection on these terms and the complex processes leading to their formation was deemed necessary. A literature review, largely drawing from Matthew Gelbart’s *The Invention of “Folk” and “Art” music* (2007), shows how these categories emerged from the intellectual discussion in Europe between the early 18th and the mid-19th centuries, when new philosophical ideas and socio-political forces shaped the musical discourse and produced the categorisations we use today. Folk and art music (with popular music as a third factor from the late 19th century) only established themselves in relation to each other: the genre of an ideally “natural” music (also termed “national”, attached as it was to the identitarian claims of the rising nationalistic movements), later to become the “music of the folk”, was developed when nature and society started drifting apart throughout the 18th and 19th centuries as an effect of urbanisation and industrialisation, and was opposed to the “music as art(ifice)” of the cultivated modernity. The creation of the folk music genre implied very little – if any – agency of the actual folk; research on musical traditions as an autonomous, dignified cultural phenomena only slowly acquired more systematic and objective criteria starting from the early 19th century. Folk music was commonly regarded by art music as a symbolic, exotic “Other” to draw from, in order to resolve its own inner conflicts. The romantic genius artist – a vehicle of beauty unto humanity – reconciled society with nature and modernity with the past by tapping into local folk traditions and making them universal through his pan-national, synthetic *work of art*. The idea of art music as a “classical canon” of high, elevated music was in place by the 1850s.

The pioneering collection of eastern European peasant songs realised by Béla Bartók and Zoltán Kodály in the early 1900s contributed to the reorientation of folk music research and the foundation of modern ethnomusicology. Despite a certain degree of controversy surfacing over his essays on folk music, Bartók’s work as a researcher and composer was extremely influential in the relationship between art and folk music in the 20th century. Folk revivals, paired with newer and more critical positions regarding the

idea of tradition, purity, and contextualisation in folk music research shaped the discussion in the second part of the century and paved the way for a modern approach to musical genres that takes into account the globalisation and complexity of the current world. A contemporary type of folk musicianship (Kõmmus 2019), inclusive of non-autochthonous musical influences, spread across areas such as the Nordic countries, where the expression still animates debates but nevertheless offers new generations of folk music practitioners and students a stimulus to incorporate external elements into their own interpretation of the tradition.

Conscious of the cultural constructs behind the charged and elusive terms of folk, art, and traditional music, I move forward in the thesis providing a brief summary of the practices and processes that caused the evolution of late renaissance and early baroque “Polish dances” into the polska tunes we enjoy today. The “Polish proportion”, a way of deriving a triple time tune from a duple time walking dance, is proposed by some scholars (Dahlig-Turek 2003) as one of the possible origins of the salient rhythmic characteristics of the polska, along with the supposed influence of actual Polish folk tunes such as the *mazurek*. The polska forerunners were exported through cultural and trade exchanges from areas of central Europe to northern latitudes, most likely via Sweden during the joint Polish-Swedish kingdom of Sigismund III Wasa (1529–1599); from there they subsequently reached Finland and Norway. In the latter, they met with a pre-existing musical layer of probable late medieval descent, developing into the “village dance” (*bygdedans*) tunes that form the core of the repertoire for the Norwegian Hardanger fiddle (Gustafsson 2016). Despite the interchangeability of terms (*pols*, *springar*, etc.), the springar denomination is generally accepted as the most common name for the Norwegian variants of the polska. Springars are usually categorised according to their rhythmic structure, with particular attention to the distribution of the beat length within the bar: in even springars, generally in triple metre, the beats have the same duration, whereas uneven springars display beats with unequal length, which result in the metres defined as asymmetrical (Gustafsson 2016). Among the remarkable variety of “springar dialects”, three types were chosen for the composition of *Stringar*, namely those from Vestland (or *udelt takt* springars), Telemark (telespringars), and Valdres (valdresspringars).

The central part of the thesis consists of the study of the string quartet, with each chapter devoted to a single movement. Both the folk and the external elements lying at

the foundation of the pieces are analysed with the aid of relevant literature and inspirational examples from several musical genres. The description of *Udelt takt* is preceded by an overview of the targeted springar type, and of the Indian rhythms and progressive metal oddities that were used in the composition. Uneven time signatures, metrical and grouping dissonances, polymetres and polyrhythms constitute the rhythmic core of the first movement of the quartet.

Asymmetrical metres and their theoretical study are the subject of the *Telespringar* chapter. The rhythmic intricacies of this tune type are interpreted according to a model proposed by a recent strand of folk music research (Johansson 2010), suggesting a two-way interaction between metre as a pre-existing, external normative structure against which asymmetry is produced, and asymmetrical metre as unfolding from internalised rhythmic reshaping and variations realised in real time by the performer. The combination of top-down and bottom-up processes shapes both the metrical perception and the production of asymmetrical springar grooves. The music of *Telespringar* proposes the rhythmic aspect as elastic, malleable material that can be moulded into shapes and formed by interacting forces, in contrast with the granular, grid-like type of rhythm that dominates the previous movement. Through moments of guided improvisation, this idea is integrated with the players' individual extemporaneous contributions to form a complex, "participatory" kind of rhythm.

The last movement of *Stringar* shifts the focus from predominantly rhythmic issues to the expressive qualities of the *grålysing* springar type. These "dawn tunes", traditionally played in the early morning hours towards the end of long dance parties in the mountainous regions of Valdres, and are reputed to possess almost hypnotic powers, summoned by means of the obsessive use of repetition, a climactic form that accumulates and disperses musical tension, and the highly evocative sound world of special tunings such as the "fairy tuning". In *Valdresspringar*, the string quartet is treated as an augmented version of the Hardanger fiddle, spreading its inherent properties of sympathetic resonance, drone playing, and polyphonic accompaniment throughout the four voices. The use of modal fluctuations, temporary departures from the main modal root area towards a secondary polarity usually coinciding with the second degree of the mode, is exploited in *Valdresspringar* to the verge of polymodality. The architecture of the movement follows the narrative of a tale by folk music collector Einar Övergaard (Ramsten 1982), who at the turn of the 19th century witnessed a farmhouse dancing that

lasted through the whole night and concluded with the fiddler playing a grålysing which, after reviving the tired and sleepy guests with its electrifying energy, peaked with the fiddler's joyful cry and a strong stomp on the floor. The music subsequently faded away; the fiddler sat silent, and everybody went home, as the first grey rays of the rising sun pierced the night and ushered in the new day.

The conclusions drawn from the six-year research project are elaborated around the findings condensed in this thesis and articulated in the next three sections, where I describe the impact of the multiple research areas I addressed in the musical creation, clarify how *Stringar* answers the research question, explain my own placement in relation to the folk traditions and musical genres I investigated, present the concepts of "personal tradition" and "itinerant musical home", and suggest lines for future research in the field of folk and cross-genre musicianship.

6.1 *Stringar*: composing (at) the crossroads

In previous chapters, I have listed and described the main disciplines that have provided the fundamental theoretical, historical, and musicological material to my research. References to a series of specialised fields (ethnomusicology, historically informed performance practice, folk music theory, notation, etc.), and to other non-musical fields (cultural anthropology, physics, visual arts) are also disseminated in this written work. Moreover, I have clarified which musical genres and sub-genres (Norwegian springar music, southern Indian rhythms, progressive metal, baroque, contemporary and Western art music) shaped the essence of the *Stringar* quartet, analysing their incorporation into the texture of the composition. All these elements form the texture of my research, the paths at whose intersection I place my doctoral production. Each road is a line with a defined origin and development, a past, present, and future life of its own; the exact space where its trajectory crosses, for a shorter or a longer moment, another line, is the point of departure of *Stringar*.

The composition of the piece started at the intersection of several research disciplines and musical genres. A conscious enquiry addressing those fields was undertaken as soon as the relevant research sub-questions were raised ("What is folk?", "What is a springar?", "What is metrical asymmetry?", etc.): the multi-faceted knowledge thus generated provided the preliminary ground where the composition of *Stringar* could be rooted. The space where those different lines meet therefore offered a first and basic

answer to the main research question: “Composing (at) the crossroads: how can composition be used as a tool to construct an interstitial ‘musical home’ between different genres and influences?”, proposing interdisciplinarity as the privileged approach to an informed composition of the musical work. In my case, the active interdisciplinary investigation also embodied the exquisitely intellectual aspect of artistic research, which aims to equip researchers with a “new way of generating knowledge by making *intuitive* artistic processes more *cognitive* through critical reflection, and articulating these results for posterity” (Penderbayne, 2018).⁴⁰²

A second level of composing *at* the crossroads took this interconnectedness of genres and discipline as the point of departure for a deeper journey into artistic activity: the acknowledgment of their common features and differences helped me to recognise the areas where their strands could meet, and use them as a springboard to begin my compositional hybridisation. For the composition of *Stringar*, I opted for a shift from a cross-cultural style, similar to the cross-genre composition suggested by Penderbayne (see 1.3.1), to a trans-cultural creative approach that could transcend the questions of genre still inherently present in the former. In chapter 3, for instance, I explained how my fascination with rhythmic oddities drew my attention towards *udelt takt* springars, as it had previously done with similar irregularities detected in early music and progressive metal. Techniques borrowed from Indian percussion were also fitting enough to encapsulate those elements into more complex metrical structures. The extremely flexible groove and timing conveyed by *telespringars* resonated with the multi-layered idea of temporality proposed by much modern and contemporary art music (from the minimalists to avant-garde composers); as seen in chapter 4, the second movement of the quartet takes this specific aspect as its centrepiece. The inherent characteristics of the Hardanger fiddle and the broad expressive palette offered by its tuning possibilities (similar to the *scordatura* in baroque music) connected the emblematic folk instrument to the most quintessentially “classical” music formation, using the string quartet as an enlarged version of the *hardingfele* and distributing resonance effects, drone accompaniments, and polyphonic voicing into a four-voice texture. Chapter 5 describes how this proximity is rendered within the framing of a meta-musical element, the literary

⁴⁰² See Samuel Penderbayne, *Thesis Defense (2018)_ Artistic Research in Music (Composition)*, 2021, <https://youtu.be/Csyav8OPoOI?t=283>.

narration of the farmhouse dancing by Övergaard, which strikes very similar expressive chords. In sum, in these pages I seek to demonstrate how *Stringar* starts where the targeted elements meet; or, in other words, how I composed *at* the crossroads.

If we zoom into that interstitial point, though, we might discover that what appeared to be a delimited space loses its definition the closer we look. The observation of the subatomic world, for instance, demonstrates that what we perceive as solid is in fact filled with intra-particular space: analogously, lines appear straight only at a macroscopic level. Quantum mechanics suggests that electrons gravitate around the nucleus in clouds of probability (the atomic orbitals) instead of allowing us to determine their exact position at a given moment.⁴⁰³ Similarly elusive as we look closer, interstitial points question our perception of what is recognisable as the original crossing line, and what is to be considered the crossing space itself, as a new transcendent entity. The volatile essence of *interstitiality* makes it difficult to assign specific shapes and dimensions (i.e., defined characteristics) to that space, and to identify the position of whatever moves within it. At the crossroads of cultures, and even human relations, reality abandons empirical forms and enters a less quantifiable dimension: we know *of* that reality, but we cannot really observe precisely *where* and *how* it exists, due to its state of constant flow and change.⁴⁰⁴ This interstitial space, simultaneously present and fleeting, hosts creative processes that do not simply occupy that space, but eventually – transculturally, even – *become* that space. In the case of *Stringar*, once the composition is placed at the crossroads, the music aims at taking up an increasing degree of independence from the intersecting roads that produced that space.

The different musical elements collected and studied at the crossroads give life to another entity, a new body of knowledge where the original components might still be recognisable but have lost their distinctive individuality, their genre-specific denomination. A direct consequence of this is a difficulty in applying musical categorisation to the work, as is shown at by the history of *Stringar* straight from its completion. At that time, during a lesson with my composition teacher, whose experience

⁴⁰³ Cf. 4.4.7 for similar reflections applied to the music of *Telespringar*.

⁴⁰⁴ Polish sociologist and philosopher Zygmunt Bauman (1925–2017) framed the fluid essence of contemporary society in his concept of “liquid modernity”. According to him, humanity is currently leaving an “era of *hardware*, or *heavy* modernity”, namely an epoch of symbolically “weighty and ever more cumbersome machines”, to enter what he describes as light, “*software*” modernity. In terms of power relations and freedom, it is a fluid society marked by “disengagement, elusiveness, facile escape and hopeless chase. In ‘liquid’ modernity it is the most elusive, those free to move without notice, who rule. See Zygmunt Bauman, *Liquid Modernity* (John Wiley & Sons, 2013), 113–120.

in intercultural composition is long-standing, he admitted that the piece did not seem to be in “any particular recognisable style”;⁴⁰⁵ shortly afterwards, as soon as the score reached the hands of string quartet Meta4, violist Atte Kilpeläinen wrote in an email that the piece stretched “out of the basic box” of the internationally renowned group.⁴⁰⁶ Later on, while looking for a record label to publish the CD containing the piece, a few influential companies turned down my proposal because the music did not fit their current categorisations. Even within the channels of my academic home institution, the Sibelius Academy in Helsinki, the advertisement of the fourth doctoral concert featuring *Stringar* raised genre-related problems: the concert had to be assigned a genre label, the available options being “folk”, “contemporary folk”, or “contemporary music”. The choice eventually fell on the “contemporary” attribution, despite the common association of this denomination with markedly difficult and intellectual examples of art music written today, which I found rather unfitting for the programme: I targeted my music as “contemporary” simply because it was written by a living composer, regardless of the genres involved and their recognisability.

Rather than being a hindrance, I believe that interstitiality in music can become a fundamental value, if pursued as the fruit of a solid research work. With my doctoral production I hope to have contributed to the growth and credibility of a branch in artistic research that accepts the challenges posited by a rapidly evolving and globalised musical world, whose increasing number of possible directions and paths constantly produces new intersections. Positioning myself at those points allows great possibilities for interchange, but entails a responsibility to collect and absorb enough knowledge to treat the different cultural agencies with respect, thus proposing new creations based on what Riki Thomson terms “intercultural humility”.⁴⁰⁷

Through the practice of such an ethical approach, my work with *Stringar* aims at transferring the concepts of hybridisation, interculturality, and transculturality into the compositional practice based on folk music and a variety of other elements, situated at the crossroads of many paths. Inspired by Homi Bhabha’s theories (see 1.3.1 and 1.3.3) the crossroads becomes the “third space” that *Stringar* occupies, or rather that the piece,

⁴⁰⁵ Eero Hämeenniemi, personal communication to the author, April 2020.

⁴⁰⁶ Atte Kilpeläinen to Krishna Nagaraja, ‘Re: String Quartet Proposal’, 12 August 2020.

⁴⁰⁷ Nathan Riki Thomson, ‘Resonance - (Re)Forming an Artistic Identity through Intercultural Dialogue and Collaboration’ (Sibelius Academy of the University of the Arts Helsinki, 2021), 31.

in fact, *is*: the composition, in other words, *becomes* the crossroads. In this sense, with my doctoral piece, I aim at “composing *the* crossroads”.

6.2 “Where am I?": personal tradition and itinerant musical home

During the six years I spent carrying out my artistic research in three of the Nordic countries, I have witnessed and participated in several forms of folk music-making, from sessions in pubs, festivals or private houses, to concert hall performances, to spontaneous free-form expressions of the folk out in the nature or to reconstructions of the past with costumes, re-enacted in traditional settings. I also saw folk music being taught inside and outside institutions, in public workshops, private lessons, or folk music departments. As a researcher, I have been granted access to a wide variety of musical sources, study material, and academic networks; I have been treated as a welcome guest in the thriving Nordic folk environment, and I received an abundance of tools to deepen my knowledge of the folk traditions and move closer to their circles. Those living bodies of knowledge, maintained by individual and collective efforts, stood before my analysing gaze and implicitly issued a discreet, silent invitation to step “inside the circle”: the same music that had nourished generations of folk musicians was made available to me, so that I could decide what to do with it. Nordic folk traditions in general, and polska in particular, seem to possess a special type of beauty which is perhaps “not immediately evident, but which if given time creeps under your skin and stays with you”, as it was described to me by English musician and linguist Toby Hawks at the end of his one-year stay in Kaustinen, immersed in Finnish folk music. Once the contact was established, I found myself entangled in this beauty, and felt an urgency to explore it and let its seeds germinate in my own musical soil.

During the various times when I was immersed in the folk musical life of Finland, Sweden, and Norway, my increasing familiarity with their communities provoked, tellingly, a two-sided sense of both admiration and a slight jealousy of the cohesive, somehow reassuring connection shared by the insiders, the residents of the musical house I was visiting. As a guest, I was of course invited to take part in their enjoyment, but a bittersweet realisation would invariably surface at the sight of people dancing on the floor to the rhythm of a polska, a waltz, or a *schottis*. The difference between the insiders and me was the sense of *belonging*: I, with my mixed cultural upbringing and the absence of a folk music tradition to relate to, was beholding the warmth of a cultural bond

that seemed to connect the people, young and old, who felt they were part of a unity. I could dance and play with them; I could study the traditions, put on the traditional costumes required in special performances; yet, I could not change my past and pretend that most of my story had not unfolded far and away from the soothing embrace of a shared folk tradition. I was witnessing something very precious and alive, which was asking me where I wanted to stand: inside or outside the circle? If I stepped inside the circle, what would become of my past and my present individuality? How far was I willing to go in order to consider myself *integrated* into a tradition? Did I actually want to be integrated at all?

The debate around the definition of “tradition” and “traditional” presented in 2.1.4 has highlighted the terminological and conceptual challenges that surround the terms of the discussion. From the late 18th-century qualification of traditional folk music as “authentic” reported by Gelbart,⁴⁰⁸ to the diversity of opinions and stances taken by modern intellectuals and music practitioners, the concept of tradition seems to elude definitive categorisations and imply an inescapable series of dichotomies such as preservation/innovation, authenticity/corruption, and integrity/contamination. To decide where to stand in relation to those divides is every folk musician’s responsibility, especially in our globalised, interconnected world; an awareness that the cultural forces at play are closely intertwined, consequently blurring the contour of categories such as insider/outsider, is now more crucial than ever. Definitions are, in my opinion, like maps: very useful models of reality, not to be confused with reality itself. I have always considered myself as an outsider to the folk traditions I was researching; the question they were silently asking was fairly simple: “Where do you stand now?” Or, to myself: “Where am I?”

The relation between individualities and traditional collectives, as mentioned earlier, is both complex and crucial for the survival and development of folk traditions. This theme is one of the fundamental underlying motifs in the book *To Be Nothing*, where Norwegian Hardanger fiddler Benedicte Maurseth reports conversations and anecdotes collected during her 30-year master-apprentice relationship with her teacher Knut Hamre. Reflecting on the tendency of the Norwegian folk music community to transmit its heritage “as faithfully to the original as possible”, she acknowledges preservation as a

⁴⁰⁸ Gelbart, *The Invention of ‘Folk Music’ and ‘Art Music’*, 12–13.

response to the urge to protect this “vulnerable genre” from being “lost to time”; however, Maurseth wonders whether an excess of protection can “manage to stop the river from flowing freely”:

Within the inner circles of the Norwegian folk music community, there are constant debates over whether there is too much or too little preservation and renewal of our traditions. [...] Without forward movement, folk music will surely die. If the pressure to hold on to tradition becomes too intense, then our music will definitely begin to stagnate.⁴⁰⁹

The danger of thinning the line of tradition to the brink of extinction seems to be real, as “folk music today is almost an underground genre compared to the years leading up to the 1950s, when it was still a practical part of daily life in most villages” (ibid., 27). Hamre himself, one of the most reputed and influential living fiddlers in Norway, conceives his musical tradition as a “sturdy foundation”, always at his side whatever he would play. He would, however, feel close to the tradition whenever he “broke from the many unwritten codes within it” (ibid., 61), namely the pressure from the expectations to fulfil a pre-established style, strictly adhering to the version of the tradition he had learnt from his masters. Hamre can only feel artistically at ease in the intermediate space of manoeuvre between the strong traditional identity and the world outside the tradition, aware of the coexistence of the two levels within himself, needing “both the local and the global, the big ideas and the small. All of it inside us, at the same time” (ibid., 109). Once this level of fusion between the self and the tradition is realised, the fiddler becomes a drop of water poured in the ocean, giving up their personal identity *into* the collective and then regaining it *through* the collective, in a fascinating ever-spinning wheel of mutual exchange. Eventually, as the book title reveals, the tradition bearer *becomes nothing*:

It isn't me playing, even though I'm the one physically making music. Something else is playing through me. The actual individual, in this case the *person* Knut Hamre, is unimportant. It is never about me, but an art that is much greater than myself. This is why I am a nothing.⁴¹⁰

This solution negotiates the relation with a folk tradition within the tradition itself, and within the tradition bearers themselves. Regardless of their degree of innovativeness, tradition bearers are well rooted in their culture, which might come from their exposure to the tradition from a very early age or from a long, intense, and resolute process of

⁴⁰⁹ Maurseth, *To Be Nothing*, 101–2.

⁴¹⁰ Ibid., 145.

integration. The latter is the case for, among others, fiddler Daniel Sandén-Warg, who despite his Swedish origins and upbringing managed to absorb the local musical (and linguistic) dialect of the remote Norwegian Setesdal valley so well that he is now one of the reference figures in that folk tradition. It is therefore possible, even for outsiders, to become “musically indigenous” in the hardingfele community. Other positions are of course possible in relation to an established cultural phenomenon such as a tradition. At the opposite side of the spectrum from tradition bearers, outsiders might decide to limit their interaction with the culture to a sort of short musical visit, where, after collecting beautiful folk musical pictures and savouring exotic folk musical meals, they travel onwards and resume their “musical tourism”.

In addition to these two positions, though, there is a third possibility, namely the choice of constantly stepping in and out of the circle, negotiating the urge to know what lies inside it with the awareness of not *belonging* to it; if, ultimately, one belongs anywhere at all. It is the perspective of a researcher who tries to study and absorb a folk tradition, but then takes a further, crucial step. This type of researcher does not simply walk and statically remain *out* of the circle, but actively proceeds *beyond* it, taking the internalised knowledge into other territories, driven by an urge both to deepen and to *develop* it, acting as a *connector* with the world outside the circle. During my research, the awareness that I had embraced this position gradually increased from unconscious to intentional, finally consolidating a deliberate perception of myself as a “musical explorer”, not satisfied with being a musical tourist, but on the other hand unwilling to commit to the task of becoming musically indigenous. A tradition bearer feels at home in the tradition; a tourist only pays a visit, and then goes back home. I myself have no fixed or stable musical home to feel comfortable in or to go back to, despite my proximity to Western art music: a meaningful prize – and price – of my doctoral process has been the acceptance of such a nomadic condition, and the desire to see the art it can originate.

Throughout the journey of my research, I have brought the folk traditions in contact with several other elements, and vice-versa. However, only towards the end did I realise that the main cultural Other I was putting the folk in contact with was, in fact, my whole self: an outsider who, in turn, had chosen to put himself in contact with the otherness of folk music traditions. This may also be what happens in the maturation process of folk fiddlers, when they start seeing their whole independent individuality against the translucent yet substantial filigree of their musical tradition. One can be a

stranger even in one's own home: maybe there was not such a huge divide between me and those people on the dance floor, after all.

Embracing my otherness in respect to the folk traditions proved to be the necessary foundation for a fruitful dialogue with them; in this I adhere to Juniper Hill's belief that "continuity and change are not opposites, rather change is continuity" (op. cit., 55; see 2.1.4). The involvement with several Finnish, Swedish, and Norwegian folk communities showed me that, as confirmed by Hamre's case in prominent folk circles, the negotiation between traditions and their individual bearers is constantly in progress: musical cultures at all levels are homogenous yet diverse, identity-based but ever-changing, protective and yet simultaneously exposed to external influences. Outside the circle of *belonging*, I might transfer the individual/collective interaction into the field of my own, internalised version of the folk traditions I studied, and suggest – perhaps provocatively – that I am the bearer of my own *personal tradition*, my home away from home (when I do not even have a home anyway).

Is taking refuge in the contradictory witticism of a *personal tradition* a cheap way to escape the friction between the inside and the outside of the circle? Can we excuse any use of the traditions under the flag of individuality? Where is the line between authentic and unauthentic, between inside and outside? What qualifies as pure? These are the type of questions that, in my opinion, have no definitive answer, but are nevertheless fundamental to guiding our discovery of ourselves and the world, shaking off the dust of our certainties and demanding from ourselves the courage to explore further.

How far can the individualisation of a tradition be pushed, without threatening its cohesion? The self-referentiality of individual legitimisation can become problematic, if pursued without the assimilation of the tradition through knowledge and participation. On the other hand, group legitimisation may turn collectively self-referential if it excludes artistic bravery and values a solely preservative museum idea of folk music over a living, organic traditional body. My current personal attempt at finding a balance between these two forces, though by all means not definitive, lies in the music entrusted to *Stringar* and in the artistic process it has entailed, whose fundamental concepts are conveyed through these written pages.

Is my musical creation respectful of the folk? And who *is* the folk, anyway? Was my knowledge of the traditions sufficient to use them as basis for my compositions? Is my doctoral output an acceptable offering to the traditions that inspired it, in return for the

knowledge they have provided? These and more related questions, rhetorical or effective, are perhaps not entirely for me to answer, if not through the artistic production founded on the artistic research they originated, which finally leaves the judgement to the listeners and readers whom, I hope, I have accompanied through my own, personal travels on the wings of polska. Over the course of that journey, I have encountered and studied deeply inspiring folk music, and I have investigated the reasons why I treasured it; I have allowed it to engage in a mutually transformative interaction with my own musical world. In the Nordic folk traditions, I have found fragments of a broader, *itinerant musical home*: I chose the path to take them with me as I travel towards that home.

At the end of this cycle, I recognise its life-changing message; one that has taught me, through the power of folk music, both ancestral and actual, to embrace my otherness and transfer the joy and safety of belonging to a tradition, to that of being my own itinerant, flowing, personal tradition.

6.3 “Where do we go from here?”: future research

A series of suggestions for future strands of research concludes this thesis, based on the experience of the *Polska Travels* doctoral project and with special emphasis on folk-related endeavours.

6.3.1 Research spin-offs

The historical and musicological parts of my research have revealed topics that were not fully explored in the current project; however, they may provide possible starting points for new artistic research endeavours that might not yet have been attempted. As a series of mere suggestions, a brief list is provided here:

- ‘From Ars Nova to Meshuggah’: a research on the use of polymetry in European music, connecting the early examples in medieval music with the modern intricacies of djent metal.
- ‘Asymmetrical beats and where to find them’: expanding the work of Johansson and the other musicologists who have investigated the nature and diffusion of asymmetrical metres in polska and springar music, further research could be undertaken specifically on how such asymmetries have emerged in the stratified history of folk traditions, based on their notation in music collections and the

evidence provided by archive recordings, as well as the comparative analysis of asymmetrical playing in other traditions or musical genres.

- ‘Rejuvenating the old – Early music practice and its revitalisation’: a systematic examination and reflection on how H.I.P. specialists have attempted a renewal of their art through the incorporation of other genres (folk, pop, gospel, contemporary) into early music, a theme that is increasingly present in baroque festivals and round tables.
- ‘The young (baroque) person’s guide to folk music’: pedagogical strategies in introducing Nordic (also Irish and Scottish) folk music to baroque musicians, based on the common ground and research areas between the two genres, and responding to the growing requests by emerging baroque ensembles for knowledge and guidance in this field.
- ‘The art of folk music’: a survey on how modern-day folk musicians approach and eventually incorporate Western art music into their own practice, exploring the interstitial space where the two types of musicianship can meet, and reflecting on the interdependence or dominance of one over the other.
- ‘Write or wrong? – Negotiating literacy and aurality in musical learning’: a study of aural and written music transmission in folk and Western art music, producing combined strategies for musicians to access and incorporate both worlds into their own music-making.

6.3.2 Interdisciplinarity

The urgency of the challenges posed by our complex and interconnected world has repeatedly been stressed in previous pages. Artistic researchers are exposed to influences coming from disparate – sometimes unprecedented – directions; borders of many kinds are problematised, as are all-inclusive interpretations of identities; collaborations between different cultural agencies are increasingly advocated for as an indispensable tool for our society to understand “where to go from here”. The local, the global, and their interplay (Baumann 1996; Hill 2005; Hamre 2019) are now at the forefront of the cultural discussion: the tiny details of the small picture and the extensive breadth of the large scenario both require our attention and action. As the two polarities

expand in their respective directions of particularism and globalism, the need for artists to find themselves inside their gradient has hardly ever been more pressing.

In this perspective, an active, mutual interaction between disciplines and experts can provide substantial means of advancement in artistic research projects whose scope transcends the borders of a single research area. A sectorial approach to knowledge certainly nurtures specialisation, but restrains interconnectedness and limits the range of possibilities for its own development. In my practice-based doctorate, the connection between the expertise from theoretical fields (history, musicology, theory, etc.) and the embodied knowledge of performance and compositional practices has shaped the core of the methodological approach and the artistic creation itself. Polska scholars and their publications, philosophers, music theorists, fiddle and dance tutors, composition teachers, research advisors, all have laid a fundamental tile in the mosaic of my project; it has been however my own responsibility to put the single parts in contact and draw the overall picture, therefore realising the interdisciplinarity of the research.

The history of the polska and its connections with baroque music, for example, appears to be known mostly by experts in Nordic folk, and is virtually unknown to early music specialists or common folk practitioners. The study of the polska transversal development as an overall musical phenomenon, to the benefit of both musical fields, certainly deserves a far wider and more capillary circulation. Notable efforts in this direction have been carried out by scholars and musicians at prominent Nordic and Polish academies and institutions over the past decades;⁴¹¹ a similar dissemination is to be wished for in other European countries, and overseas. In general, a closer and more intentional communication between experts in various fields, institutional departments, academic research areas, and musical compartments (folk, art music, etc.) is suggested here as a vital ingredient for fruitful artistic ventures.

⁴¹¹ Among the many publications, symposia, and initiatives, it is worth mentioning collaborative projects such as [Polska dance paths](#), reuniting researcher/musicians from Poland and Sweden: for reference, see festivalmazarurki, *Polska - Dance Paths*, 2017, <https://www.youtube.com/watch?v=s86uvuqzc>. Artistic works such as Paweł Iwaskiewicz and Orkiestra Czasów Zarazy, *Stil Polonaise* (Ayros – AY-CD03, 2018), and the already quoted *Telemann's Poland* by the same artist and group, are based on the musicological study of the Polish style in folk and baroque music. The use of historical folk tune sources (the *spelmansböcker*, or “fiddler’s tunebooks” of Scandinavian countries) has inspired, for instance, the [Spelmansböcker i Norden](#) convention in Växjö, Sweden (2017), featuring both scholarly lectures and concerts programmes based on old folk tune collections. See ‘Spelmansbok 2017’, accessed 3 February 2022, <http://www.smalandsmusikarkiv.nu/spelmansbok2017/>.

6.3.3 Contemporary music

Composing music that stems from different influences can question ordinary genre labelling: is our appreciation of a piece based on what we *recognise* in it, or what we think that piece really *is*? Even if the blurriness of the categorisation is nowadays a widely known phenomenon, the commonplace sense of “contemporary music” still seems to identify it with the part that is markedly intellectual, difficult, sometimes inextricable, and only directed towards a group of select listeners. The truth can be manifestly different: many living composers produce works that elude strict categorisation, based as they are both on their own diverse background and on their exposure to different genres.

Within the current circle of Nordic folk music, personalities such as Mats Edén, Adrian Jones (Sweden), and Timo Alakotila (Finland), have gained a high-profile reputation as folk instrumentalists and composers of their own genre-free (albeit clearly folk-inspired) music. In even greater numbers, art-music composers have been inspired by types, instruments, or melodies from folk traditions: Karin Rehnkvist (Sweden), Lasse Thoresen and Lars Petter Hagen (Norway), and Matthew Whittall (USA/Finland) are but a few names. Folk-based compositions, however, generally seem to focus either on the particular sound of a folk instrument (the Hardanger fiddle, the nyckelharpa, the jouhikko, for instance), or on its tune repertoire (Norwegian springars, Swedish polskas, Finnish *pelimanni* music). The coexistence of both aspects appears to be less frequent, for which reason I fervently advocate its development through the placement of my two last doctoral pieces, *A Norwegian Suite* for solo Hardanger fiddle and *Stringar* for string quartet, in the global artistic community context.

A paradigm shift in the concept of “contemporary music” is currently under way, broadening its scope to include all music that is, simply put, produced by a living composer. Naïve as it may sound, this definition entails the risk, concealed in all-inclusive endeavours, of resulting in an undifferentiated mass of music where individualities are under-represented. The alternative, however, is the loyalty to a rigid idea of contemporary music as “classical” music, confined to a classical and therefore slightly elitist canon; this is, in my opinion, an outdated and outmoded stance. Once again, the purity/contamination and preservation/innovation divides may simultaneously develop or hinder the discussion; it is my wish for my own art, and for any art exploring similar territories, to acknowledge such potential biases, while at the same time progressing towards the formation of a conscious, bold, and open body of “contemporary music”.

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Appendix 1 – *Stringar*, complete score

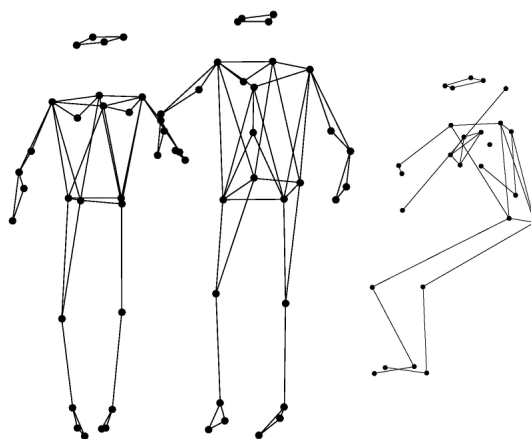
Krishna Nagaraja

(1975)

Stringar

(2020)

for string quartet



Telespringar motion capture image from "Investigating Musical Meter as Shape" (2017)

Mari Romarheim Haugen, University of Oslo

Duration: 22' approx.

- I. Udelt takt: 7'
- II. Telespringar: 6'
- III. Valdresspringar: 9'


Musical Guidelines

This composition is inspired by the Norwegian *springar* tradition. A relative of the Swedish *polska*, the springar is a couple dance that spread and developed in Norway since at least the XVIII century. Several variants are nowadays thriving in different areas, each with distinct characteristics. Springar tunes are mostly in triple time, though the three beats are often unevenly distributed within the bar. One of the beats might for instance be prolonged, or shrunk, adjusting the length of the remaining beats in order to keep the total bar length intact. The extent to which these asymmetries are performed may vary greatly from one *spellemann* (folk solo instrumentalist, generally a fiddler) to another: metric patterns specific to each particular springar type can therefore only be approximate. Before undertaking the study of this piece, especially movements II and III, it is highly recommended to watch or listen to relevant documentation from the Norwegian living tradition. References are provided in the detailed instructions that explain the content of each movement.

General instructions

Vibrato an appropriate sound for this piece is a rather straight and clean tone: vibrato should therefore be generally avoided unless the performers feel a need for it in specific places

Open strings the use of open strings is recommended even when not specifically marked in the score

 "crescendo dal niente": generally applied to notes that are already being played by another instrument, it requires the sound to appear from silence and out of a pre-existing note

I. Udelt takt

Literally meaning “undivided beat”, the “Udelt takt” is considered by some researchers to be one of the oldest springar types. Its rhythm is based on the smallest metrical unit, a beat, which is repeated evenly so that the measure is not a triple but rather a 1-beat bar: the 1,2,3 or 1,2 beat hierarchy found in other meters is absent here. The dance itself mirrors this feature with the constant “bouncing” of the dancers’ steps. The phrases can consequently consist of an odd and irregular number of beats: 2, 3, 5, or 7 are common beat-counts, as displayed in this movement in the melody at letter B.

Such “metrical asymmetry” recalls the use of uneven time signatures in other folk music traditions: in Indian music, for instance, a rhythmic cycle (*tala*) can have 5, 7, 11 beats. However, even simpler cycles like *Adi Tala* (8 beats, similar to a 4/4 time signature), are grids on which extremely complicated and mathematically proportioned evolutions take place, as shown in the art of South Indian vocal percussion or *konnakol*. This movement largely draws from rhythmic reduction formulas recalling the *konnakol* concepts of *kuraippu* and *korvai*, where a short melodic motif is repeated in such a fashion that it shrinks every time and is ultimately reduced to its smallest value. The end of the formula has to coincide with the downbeat of the next available bar, so that the rhythmic cycle is respected. See, for instance, bars 6 to 9 in the viola and cello parts.

Letter C displays a sub-variant of the Udelt Takt springar, swaying between a triple-time springar (in 3/4 with equal beats) and a duple-time *gangar* form (6/8).

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- Somashekar Jois, “Korvai in Adi Tala”: <https://youtu.be/K1Q9QgFyJjw>

Allegro ritmico (♩ = 114)

Violin 1

Violin 2

Viola

Cello

4

mf cresc.

mf cresc.

sf

f

mf

sf

f

mf

[illegible]

12 A

sfz *f* *p* at the frog, very percussive; "pinch" the string and let it ring *mp* rhythmical

20

simile 4

26

mp rhythmical

31

mp

35

mf

mf

mf

mf

39

cresc.

f leggiero

cresc.

cresc.

cresc.

B Allegro giocoso

45

mf

mf

mf

53

mp

f

sf

sf

sf

mf in evidenza

62

mf

mp

f

mp

mf

p

mf

70

mp *mf* *mf* *mp* *mp*

77

mf *mf* *mf* *mf* *mf*

84

mf *cresc.* *f* *p* *f* *p* *cresc.* *f* *p* *f* *p* *cresc.* *f* *p* *f* *p*

91

mp

mp

mf

mp

98

p

mf

p

mf

p

mf

p

mf

mp

mf

105

mf

p

mf

p

mf

p

mf

p

mf

cresc.

f emphatically

sf

110

cresc.

cresc.

cresc.

molto espress.

114

f

sfz

f

f

f

sfz

119

mf cresc.

mf cresc.

C

mp dolce cresc.

mp

dim.

mp

dim.

131

mf

dim.

mp espress. con grazia

p

dolce

p

dolce

p

dolce

140

mp

mp

mp

147

poco cresc.

poco cresc.

poco cresc.

154

mp

mp sub.

mp sub.

mp sub.

160

mf in evidenza

D

pizz.
p

leggiere

pizz.
p

169

mf

mf

mf

177

arco

mp

cresc.

cresc.

3

3

mp

cresc.

E

p sub.

mp ethereal

mp ethereal

p sub.

184

pp

pp

p dolce

188

pp

pp

p

mf *espress.*

192

pp

pp

pp

pp

195

mp

pp

mp

pp

mp

pp

199

pp

pp

mp espress.

p dolce

203

pp

pp

p

p

207

pp

pp

mp cresc.

mp in evidenza

cresc.

211

mf cresc. *f*

mf cresc. *f*

mf cresc. *f*

215

mf cresc. *f*

mf cresc. *f*

mf cresc. *f*

F Allegro ancora più giocoso

mf sub. *mf*

mf

mf

225

mf

230

p *mf* *mf*

p *mf* *mf*

p *mf* *mf*

p *mf* *mf*

235

mp *mf* *mp*

mp

mp

239

mf mp mf mp

mf mp

mf mp

mf mp

244

mf dim.

dim.

p

p

250

mp cresc. molto f

mp cresc. molto f

mp cresc. molto f

mp cresc. molto f

254

mf

mf

mf

mf

258

cresc.

cresc.

262

G

cresc. molto

ff

cresc. molto

ff

cresc. molto

ff marcato

cresc. molto

ff marcato

267

272

276

II. Telespringar

Springars from the Telemark region are in triple time, with an uneven beat distribution. Compared to a hypothetical triple-time pattern with even beats, the first beat in Telespringars is long, the second is medium, the third is short; the foot is generally tapped on 1 and 2, sometimes also on 3. The amount of asymmetry applied in Telespringars varies greatly from fiddler to fiddler and from performance to performance, arguably even more than in other springar types.

The compound time signature chosen here (3+3+2/8) approximates this highly flexible structure but does not convey the difference in length between the first and the second beat; this movement revolves around the idea of rhythmic elasticity and adjustment: a degree of freedom in the execution of the music inscribed in this time signature is accepted and advised, provided that the vertical alignment of the patterns remains intact where required.

Reference:

- Knut buen, "Kivlejenta":
<https://youtu.be/gdmhTjWBAVg>
- Mari Romarheim Haugen&FourMs Lab, "Motion capture - Norwegian Telespringar":
<https://youtu.be/oMO7BhzCHa0>

Abbreviations

- NS not in sync with anybody, independently
- RE "Ripple Effect": the player smoothly switches to the next pattern after hearing another player change their pattern, just as ripples propagate on the surface of water. One instrument acts as initiator of this process: the viola, for instance, at letters C and D, or the first violin from letter J to letter M.

Boxes

In a single instrumental part, two consecutive boxes connected by an arrow require a gradual change from one to the next. A simple horizontal line indicates simple repetition.

- | | |
|------------------|---|
| Before letter G: | A boxed pattern is to be started NS, unless it is connected to another box by a dashed vertical line. It is to be played and repeated in an individual tempo and NS |
| From letter G: | A tempo is established, boxes are vertically aligned and therefore synchronised |
| From letter J: | See the instructions for RE described above |

II. Telespringar

Lento, senza misura (♩ = 60)

(note durations are indicative, dashed barlines are for reference)

Violin 1

pizz. (ca. 10") arco gliss. IVc. (ca. 10") **Lento** **Più calmo** ca. 40"

f *mf* *p* *mp* *leggiere* *p* *grotesque*

Violin 2

pizz. (ca. 10") arco gliss. IVc. (ca. 10") **Lento** **Più calmo** ca. 40"

f *mf* *p* *mp* *leggiere* *p* *grotesque*

Viola

IVc. gliss. poco a poco *p*

Cello

pizz. (ca. 10") arco gliss. IIIc. (ca. 10") **Lento** **Più calmo** ca. 40"

f *mf* *p* *mp* *leggiere* *p* *grotesque*

A **B** ca. 30"

ord. NS NS **B** NS *p* *slow* *mp*

ord. NS NS **B** NS *p* *slow* *mp*

ord. NS NS **B** NS *p* *slow* *mp*

ord. NS NS pizz. IIIc. arco IIIc. *p* *f* *p*

C

(tempo may be varied throughout repetitions)

mp [ca.15"] RE [ca.10"] RE [ca.5"] NS RE

mp [ca.15"] RE [ca.10"] RE [ca.5"] NS RE

mp [ca.15"] [ca.10"] [ca.5"] NS

NS etc. natural harm. gliss. IVc. simile IVc. simile IVc.

D **E**

ca.40" RE RE RE ca.20" RE ca.5"

mp *cresc. e acc.* *f* *rall.* *marcato, stubborn*

mp *cresc. e acc.* *f* *rall.* *marcato, stubborn*

mp *cresc. e acc.* *f* *rall.* *marcato, stubborn*

p *slow* *IVc.* *f marcato, stubborn*

Repeat the previous box in sequences of 3-4 patterns, choosing one note from this mode:

Gradually converge to Vla tempo $\text{♩} = 120$

ca. 30"

Keep the same tempo and note through the sequence; change both ad lib. every new sequence

cresc.

Repeat the previous box in sequences of 3-4 patterns, choosing one note from this mode:

Gradually converge to Vla tempo $\text{♩} = 120$

Keep the same tempo and note through the sequence; change both ad lib. every new sequence

cresc.

Repeat the previous box in sequences of 3-4 patterns, choosing one note from this mode:

A tempo $\text{♩} = 120$

Keep the same tempo and note through the sequence; change both ad lib. every new sequence

cresc.

Repeat the previous box in sequences of 3-4 patterns, choosing one note from this mode:

Gradually converge to Vla tempo $\text{♩} = 120$

Keep the same tempo and note through the sequence; change both ad lib. every new sequence

cresc.

give cue

Con misura, a tempo ($\text{♩} = 120$)

On cue by Vla

F

ff

p sub.

ff

mf

Strictly keep a steady rhythm and the isochronous beat

ff

mf

Without affecting the bar length, gradually prolong ①, and shrink proportionally ② and ③

ff

p sub.

Without affecting the bar length, gradually prolong ① and ②, and shrink proportionally ③

Strictly keep a steady rhythm and the asymmetrical beat

♩ = 160 (♩ = 160)

4x

4x

4x

4x

give cue

G

A tempo ♩ = 160

On cue by VI2

4x (incl. the boxed bar)

4x (incl. the boxed bar)

4x

4x

2x

2x

2x

2x

gliss. poco a poco

3

4

3

3

p

H

Staff 1: *p*, *cresc.*, **I**
 Staff 2: *mf*, 3, 3, 3, 4x, 3x
 Staff 3: *mf*, 3, 4x, 4x, 2
 Staff 4: *p*, 3, 3, 2, *cresc.*

J

Staff 1: *f* grotesque, *f*², *ord.*, *ad lib.* (2-4x)
 Staff 2: *f* grotesque, *f*², *ord.*, *ad lib.* (2-4x)
 Staff 3: *f* grotesque, *f*², *ord.*, *ad lib.* (2-4x)
 Staff 4: *f* grotesque, *f*², *ord.*, *ad lib.* (2-4x)

RE*: when a pattern change from another player is perceived, smoothly switch to next pattern at any point in the current measure, jumping to the corresponding point in the new pattern

Repeat until everybody has completed the pattern shift and homorhythm is reached

K

[illegible]

L

Exercise L consists of four staves. The first staff (treble clef) contains a box with two measures of eighth-note triplets. The second staff (treble clef) contains a box with two measures of eighth-note triplets. The third staff (bass clef) contains a box with two measures of eighth-note triplets. The fourth staff (bass clef) contains a box with two measures of eighth-note triplets. Arrows indicate that the boxes on the second, third, and fourth staves begin at the same time as the box on the first staff.

M

Exercise M consists of four staves. The first staff (treble clef) contains a box with two measures of eighth-note pairs. The second staff (treble clef) contains a box with two measures of eighth-note pairs. The third staff (bass clef) contains a box with two measures of eighth-note pairs. The fourth staff (bass clef) contains a box with two measures of eighth-note pairs. Arrows indicate that the boxes on the second, third, and fourth staves begin at the same time as the box on the first staff. A text box on the second staff reads "Listen carefully to V11! (pattern change)".

N

Listen carefully to V12!
(pattern change)

Listen carefully to Vla!
(pattern change)

O

cresc.

p

p₂

pizz.

G.P.

p

p₂

pizz.

cresc.

p

p₂

pizz.

G.P.

ord.

IIIc.

pp dolce

cresc.

p

p₂

pizz.

Attacca
III - Valdrespringar

III. Valdresspringar

Springars from Valdres are characterised by a rather short first beat, a long second beat and a medium third beat. Foot-tapping mostly happens on 1 and 3, but frequently also on 2.

The uneven Valdresspringar meter, despite being once again a speculative approximation, is generally used by fiddlers in a more uniform way than in other springar types (Telespringars, for example). The time signature chosen here is the compound $2+4+3/16$, with occasional cadential bars in $9/16$ where the three beats are even.

Below are some remarks regarding beat accentuation for this movement: it is advised though to take them merely as general suggestions and to contextualise them while performing the piece.

1. the short first beat is played as a normal first beat, with no particular stress
2. the long second beat is launched by a slight “uplifting” motion in the beginning, realised more with the speed of the bow than with the pressure, which is then slowed down again towards the end
3. the medium third beat is both the landing of the second beat motion and the connection to the following bar, to whose downbeat it is for this reason very often slurred

An overall smoothness and seamlessness in conducting the melodic lines is also recommended.

Long notes have two functions, conveyed through the dynamic markings: they either reproduce the sound of the resonance strings of the hardanger fiddle (sounding when the respective note is played in the main melodic line and then fading out), or act as drones to be kept at a constant dynamic until the end.

This movement makes use of two features that are rather distinctive of the Valdres tradition: the hardanger fiddle tuning called *det grøne stillet* (the “green tuning”), and the tune genre of *grålysingane* (“dawn tunes”).

The “green tuning” requires an unusual major second between the first and the second string of the fiddle:

The “d: when g connec tunes:

The image displays musical notation for the Valdresspringar movement in green tuning. It consists of five systems, each with two staves: 'main strings' and 'resonance strings'. The notation is in treble clef with a key signature of one sharp (F#). The first system shows a G4 note on the main strings and a G#4 note on the resonance strings. The second system shows a G4 note on the main strings and a G#4 note on the resonance strings. The third system shows a G4 note on the main strings and a G#4 note on the resonance strings. The fourth system shows a G4 note on the main strings and a G#4 note on the resonance strings. The fifth system shows a G4 note on the main strings and a G#4 note on the resonance strings. The notation is in a compound meter of 2+4+3/16. The text 'The “d: when g connec tunes:’ is written to the left of the first system. The text 'r, often ingane, n these' is written to the right of the first system. The text 'rgs resonar' is written below the first system. The text 'main strings resonance strings' is written above each system.

In the “Einar Övergaards folkmusiksamling”, a collection of folk tunes from Sweden and Norway compiled at the beginning of the XX century, the author describes the Grålysingane tradition in an evocative paragraph, which constitutes the narrative backbone of this movement.

“There is dancing in a farmhouse. The *Springar* and *Halling* dances have succeeded one another, and the hour is past midnight. The guests, their bodies tired and their stomachs full, are now drowsy, and many are fast asleep. Only a few tireless couples remain on the dance floor, but the dancing still has the same energy as when the night was younger.

Then, as the first light from the East announces the new day, the sound of the fiddler tuning his strings spreads through the hall. He strikes a chord and that fairy-like tuning known as the “green tuning” is heard. The tired guests shake off their sleepiness with a start: they recognise those tones, the “Dawn Tune” is coming. The fiddler begins to play; the strange melody electrifies everyone. Nobody can sit still, not the old, not the young, not the old wives and old men who have long since withdrawn from the dance floor: everyone must now come forward and join. Never has the dance had such life as now. The playing grows more and more intense. Suddenly, a loud cry of joy bursts forth from the Valdresian fiddler. He stamps his foot strongly on the floor. Dust clouds float towards the ceiling; through their veil and the tobacco smoke, in the half-dimmed light of a lamp, one can see the spirited silhouettes moving in a swirling dance.

The fiddler then falls silent. The wild, loud energy that had reigned earlier, summoned by the “Dawn Tune”, has now settled down. One after the other, the guests drag themselves home, and the dance is over.”

Reference:

- Jan Beitoaugen Granli, “Den so styggen blistra ner’n begrov mor si”:
<https://www.youtube.com/watch?v=4rEQ3-Fv5eU>
- Laura Ellestad, “Grålysing frå Slidre”:
<https://www.youtube.com/watch?v=np4URpDW6ig>
- Jan Beitoaugen Granli&Bibbi Blomlie/Ådne R. Geicke Kolbjørnshus, “Valdresspringar”:
<https://www.youtube.com/watch?v=QBdyC5JXthA>

III. Valdresspringar

Lento (♩ = 60)

Violin 1

Violin 2

Viola

Cello

10

A **Allegro calmo** (♩ = 120)

The musical score is for a piece titled "III. Valdresspringar". It is written for four string instruments: Violin 1, Violin 2, Viola, and Cello. The score is divided into two main sections. The first section is marked "Lento" with a tempo of 60 beats per minute (♩ = 60). It consists of measures 1 through 9. The second section is marked "A" and "Allegro calmo" with a tempo of 120 beats per minute (♩ = 120). It starts at measure 10 and continues with a 2+4+3/16 time signature. The key signature is one sharp (F#). The Lento section features various dynamics such as *pp dolce*, *p*, and *mp*, along with articulations like *V*, *IIIc.*, *IVc.*, *IIc.*, and *Ic.*. The Allegro calmo section features a 2+4+3/16 time signature, triplets, and dynamics like *p* and *mp*.

326

73

p *p* *mp* *mp* *mp* *mp*

80

mp *mp* *mp* *mp* *mp* *mp* *p* *cresc.* *mp* *cresc.*

87

mf *mp* *ten.* *p* *cresc.* *mf* *mp* *ten.* *mf* *mp* *ten.* *mf*

C

100

mf in evidenza

p

p

102

p

p ten.

p

110

mf

poco a poco intensificando

mp

mp

118

cresc. *mf* *f*

125

mf *sub.* *mp* *f* *mp*

133

mp *mp* *mf*

141

mf

mf

mp

150

mf

mp

mf

mp

mp

mp

mp

mp

158

mp

mf

mf

mf

167

mf 3 3 mp mp mp mp mp mp mp

175

mf mp mp mp mp mp mp mp mp mp mp mp mp

184

mf mp mp mp mp mp mp mp mp mp mp mp mp

192 E

cresc. *mf cresc.* *mf cresc.* *cresc.* *mf* *f*

200 *sf* *f* *sf* *sf* *sf*

207 *sf* *sf* *sf* *sf* *sf*

213

3 cresc. 3 3 3 3

cresc. 3

cresc. 3

cresc.

219

ff 3 3 3

ff 3 3 3

ff 3 3 3

ff 3 3 3

225

F

ff *f* 4 4 4 4

ff *f* 4 4 4 4

ff *f* 4 4 4 4

ff *f* 4 4 4 4

Ic. Ic. Ic. Ic.

232

mf *f raw* *ten.*

mf *f raw*

mf

f ten. *meno* *f ten.*

240

ten. *f*

f

f raw *f norm.*

meno *f ten.* *meno* *f ten.* *meno* *f norm.*

247

f

f

f

f

254

254

260

mp

261

261

267

mp

268

268

274

mp *p*

G Lento (♩ = 60)

The musical score consists of four staves. The first system (measures 283-286) shows the beginning of a section. The second system (measures 287-290) continues the musical ideas. The third system (measures 291-292) concludes the section. Dynamics include *p dolce*, *p*, *mp*, *pp*, and *pizz.* (pizzicato). Articulations include accents and slurs. The score is marked with first, second, and third endings (Ic., IIc., IIIc.).

Measures 283-286:

- Staff 1: *p dolce*, *p*, *p*, *p*
- Staff 2: *p*, *p*, *p*
- Staff 3: *p*, *p*, *p*, *p*
- Staff 4: *p*, *p*, *p*, *p*

Measures 287-290:

- Staff 1: *p*, *mp*, *mp*, *p*
- Staff 2: *p*, *p*, *mp*, *mp*, *p*
- Staff 3: *p*, *mp*, *mp*, *p*
- Staff 4: *p*, *mp*, *mp*, *p*

Measures 291-292:

- Staff 1: *p*, *p*, *pp*, *p dolce*
- Staff 2: *p*, *pp*, *p dolce*
- Staff 3: *p*, *p*, *pp*, *p dolce*
- Staff 4: *p*, *pp*, *p dolce*

**Appendix 2 – *Valdresspringar*, complete springar melody
score**

Valdresspringar

A

Allegro calmo (♩. = 120)

Section A musical score, featuring various rhythmic patterns and trills.

B

Section B musical score, continuing the rhythmic patterns and trills.

C

Section C musical score, concluding the piece.

Musical score in G major, 2/4 time. The score consists of 11 staves. It features various musical notations including treble clefs, key signatures, and complex rhythmic patterns. Key elements include:

- Triplets (marked with a '3') are used throughout the piece.
- Trills (marked with 'tr') are present in several measures.
- A section marked with a 'D' in a box begins on the fourth staff.
- The piece concludes with a double bar line on the eleventh staff.

E

F



From its baroque German-Polish origins to the current Nordic local variants, the polska folk dance tune type has enjoyed a history marked by the crossing of geographical, temporal and societal boundaries. The study of this development provides the basis for Krishna Nagaraja's research project *Polska Travels: Composing (at) the Crossroads*. Nagaraja uses composition to build temporary "musical homes" that sit right at the crossroads of many genres and disciplines, fulfilling the need for new artistic practices in the negotiation between personal identities and external bodies of knowledge. The artistic outcomes are new arrangements and compositions based on folk music material hybridised with early and contemporary art music as well as with other elements. This thesis summarises the research findings, taking the string quartet *Stringar* as a case study to suggest the concept of "personal tradition" inscribed in the open, itinerant field of trans-genre contemporary music.

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