



Janne Beate Reitan

Improvisation in Tradition

The concept of vernacular design allows for the understanding and appreciation of designs created without recourse to institutional qualifications in the field of design. This thesis is based upon a study undertaken in the Iñupiaq village of Kaktovik on the North Slope of Alaska – the Iñupiat are also known as North Alaska Inuit (Eskimo) – on how Iñupiaq women practice and learn vernacular designing of present-day Iñupiaq clothing – *annuḡaaq* with *qupak* trim. The study is based on a review of both design research and vernacular designing, as well as documentation based on the writer's participant observation of contemporary Iñupiaq clothing design and creation. This has been supplemented with interviews, dialogues and a process of research-by-design. An important part of the investigation has been the contextual situation: the people, the place, and the case – the Iñupiat, the village of Kaktovik and the Iñupiaq clothing. Christopher Alexander writes about design in unselfconscious cultures – here, vernacular design. Interpretations of the vernacular clothing designers discussed in this work have been inspired by Schön's theory of designers as *reflective practitioners* and by the social learning theory of Lave's and Wenger's *communities of practice*.

The present investigation of Iñupiaq clothing design indicates that learning-by-watching was the most common form of learning. Learning-by-watching can be seen as an elaboration of both Schön's and Wenger's theories of learning.

Janne Beate Reitan (1956) did her Master in art and design education at Oslo University College, Faculty of Art, Design and Drama and was then employed at the Faculty as the leader of the department of further education for teachers from 1992 to 1995 and also as Assistant Professor in Art and Design Education. She is now working with the Technology, Design and Environment Research Programme at Oslo University College.

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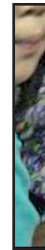
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A Study of Contemporary Vernacular Clothing Design Practiced by Iñupiaq Women of Kaktovik, North Alaska



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Arkitektur- og designhøgskolen i Oslo
The Oslo School of Architecture and Design

Dr. Ing. Thesis



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Acknowledgements

In this thesis, I explore one single case of vernacular design; the design of contemporary *Īñupiaq-Inuit* clothing made by women of *Kaktovik*, North Alaska, and I hope to contribute to a better understanding of the design practice and learning in general. Design research is still a young field with many unexplored areas and one of the omissions is vernacular design – or ‘folk’ design. In my opinion, the professional or academic design might well have something to learn from vernacular design. Although this research is about vernacular learning it is neither anthropology nor pedagogy – but didactics about what, why and how to learn within the ‘making discipline’ of design.

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Oslo, September 2006

Summary

The concept of *vernacular design* allows for the understanding and the appreciation of designs created without recourse to institutional qualifications in the field of design. This thesis is based upon a study undertaken in the *Iñupiaq* village of *Kaktovik* on the North Slope of Alaska – also known as North Alaska *Inuit* (Eskimo) – on how *Iñupiaq* women practice and learn design as they make present-day *annuġaat*. The study was based on observations, interviews with seamstresses, and authorial participation in designing and sewing in conformity with *Iñupiaq* tradition, and everything was recorded on digital video film.

The focus of research in this investigation is narrow. It seeks to throw light on how the women of *Kaktovik* practice and learn vernacular designing of contemporary *Iñupiaq* clothing – *annuġaaq* with *qupak* trim. The foundation for the study was a review of both design research according to the vernacular aspect, as well as documentation of contemporary *annuġaaq* design and making. An important part of the investigation has been the context: the people, the place, and the case – the *Iñupiat*, *Kaktovik* and the nature and social significance of *annuġaat*. Christopher Alexander writes about design in *unselfconscious* cultures, which in this research project is termed vernacular design. Interpretations of the vernacular clothing designers discussed here have been inspired by Schön's theory of designers as conscious *reflective practitioners* – even though in this case, the reflexivity happens to be only partially articulated verbally, and for the most part is expressed as actively functioning tacit knowledge. Moreover, this study has made use of the social learning theory of Wenger, namely his *communities of practice* give a perspective on learning that differs from the conventional one focused on learning in educational institutions. Thus informed, my interpretation of vernacular design and production of *Inupiaq* clothes demonstrates how the learning process can be viewed as a *collective* rather than an *individual* process; how it was continuous – with neither beginning nor end – how it was integrated into daily life and *not* a separate, discrete

activity; how learning was a result of observation, in particular watching, and *not* a result of oral or text-based teaching – instead, appraisal of the learning process was integrated into practice: the practitioners did *not* use tests; knowledge was demonstrated through specific practice, and *not* theorized. Knowledge was always demonstrated in context.

The present investigation of *annuġaat* design indicates that *learning-by-watching* was the most common way of learning. This concept of *learning-by-watching* can be seen as a development of both Schön's and Wenger's theories of learning, a concept which probably will be of great importance in further research of the learning process of design in both primary and secondary schools, in addition to academic design schools.

Sammendrag

Begrepet *vernacular design* på engelsk – eller *folkedesign* på norsk – innebærer en erkjennelse av at også utøvere uten en designfaglig profesjonsutdanning kan praktisere design. Dette forskningsprosjektet er basert på en empirisk undersøkelse i landsbyen *Kaktovik* i Nord-Alaska om hvordan *iñupiaq* kvinner – *inuiter* (eskimo) i Nord-Alaska – praktiserte og lærte å designe tradisjonelle moderne *iñupiaq* klær – eller *annuġaaq*. Undersøkelsene ble gjennomført ved observasjon av og intervjuer med syerskene, og gjennom egen kreativ design som forsker basert på *iñupiaq* tradisjon, alt filmet på digital video.

Forskningsfokuset i denne undersøkelsen er begrenset til hvordan *iñupiaq* kvinner fra *Kaktovik* praktiserer og lærer design av moderne vernacular Inupiaq klær med *qupak* dekor. Som et grunnlag for dette er tidligere designforskning i forhold til det vernaculare aspektet, i tillegg til forskning om *annuġaaq*, drøftet. En viktig del av undersøkelsen er konteksten; folket, stedet og saken – *iñupiat*-folket, landsbyen *Kaktovik* og *iñupiaq* klær. Christopher Alexander skriver om design fra *unselfconscious* kulturer, som i

dette prosjektet blir kalt vernacular design. Ifølge drøftingene inspirert av Donald Schön's teori *the reflective practitioners* er vernaculare *iñupiaq* klesdesignere bevisste reflektive praktikere – for det meste taust, men delvis eksplisit verbalt artikulert. Etienne Wenger har i sin sosiale læringsteori *communities of practice* et perspektiv på læring som avviker fra det konvensjonelle ved utdanningsinstitusjoner. Inspirert av denne teorien viser drøftingene av vernacular design og produksjon av *iñupiaq* klær at; læringsprosessen var en kollektiv og ikke en individuell prosess, var kontinuerlig og hadde ingen begynnelse og slutt, var integrert i dagliglivet og ikke en separat aktivitet, var et resultat av observasjon, spesielt ved å se på og ikke et resultat av undervisning, vurdering av læreprosessen var integrert i praksisen – de brukte ikke tester, og kunnskapen ble demonstrert gjennom praksis og ikke løsrevet fra sammenhengen.

Denne undersøkelsen av *iñupiaq* kles-design indikerer at *learning-by-watching* – å lære gjennom å se – var den mest vanlige måten å lære på. Begrepet *learning-by-watching* kan sees som en videreutvikling av både Schöns og Wengers læringsteorier, et begrep som vil kunne ha stor betydning i videre forskning av hvordan design læres i både grunnskole og i videregående skole, samt i utdanning av profesjonelle designere.

The Field

To introduce the field I start by explaining how I have arrived there. I then proceed to the focus of this research project with a discussion of main concepts, followed by the theoretical points of departure, *status questionis* of design research that stresses the vernacular as well as focusing on the *Iñupiat* – the North Alaska *Inuit* (Eskimo) – and their clothing. The section finishes with a discussion of my path through this research project from the first visit to Alaska's North Slope, all the way to the preparation of this dissertation.

POINT OF DEPARTURE

The choice of the *Inuit* village of *Kaktovik* in Alaska as the venue in which this research project took place was as the natural development of my previous experiences – in particular, as a result of a visit to Afghanistan and my experiences while preparing a masters thesis from Selbu in the middle of Norway. These experiences are elaborated below.

The Flight to Kaktovik, Alaska

Here I was, on my way from Norway, flying west across the northern hemisphere, through what seemed to be an everlasting sunset, to Alaska. After intermediate stops, I arrived twenty-four hours later in Alaska. The last leg was still ahead of me, the flight to the Inuit village of Kaktovik on the northeast coast of Alaska. There they were. Suddenly as I entered the terminal of the Frontier Flying Service for the flight to Kaktovik, I saw *them*. This was a barracks at the opposite side of the runway from the former important international airport of Fairbanks. They were *Iñupiaq*¹ women of Kaktovik heading home from shopping and other doings in the city, dressed

¹ Singular of *Iñupiat* (plural), also used as an adjective, and name of their language.

in their colourful contemporary traditional *Iñupiaq* clothing – textile *atigit* or parkas. Every *annuḡaaq* or *Iñupiaq* clothing had a ‘family resemblance’, a unique style, distinct from other clothing. I entered the plane together with the others, feeling pale and colourless. After a three-hour flight of about 700 km, passing the peaks of the Brooks Range and the enormous flat tundra that stretched from the foot of the mountain range to the Arctic Ocean, we reached Kaktovik at Barter Island.



Figure 1 Female atigit at the village of Kaktovik.



Figure 2 Male atigit in Aaka Nora's hallway.

From this bird's-eye view, the village looked like a set of pinheads in a huge landscape. As we approached, this transformed into a small network of roads with houses on each side. At the airport, there were more *atigi*-attired people driving up in pickup trucks, and ATVs (all terrain vehicles) – men, women and kids arriving to pick up the passengers. My sister-in-law's family greeted me and took me to her parents' house where I became as an adopted daughter over the following months.

Some few hours later I found myself in the middle of the extended family celebrating *Aaka* (grandma) Nora's eighty-sixth birthday. *Aaka* Nora was the head of the family. She was related to almost everybody in the village. Most of her extended family arrived at her house with different kinds of food for the party, traditional Iñupiaq food, as well as the food prevalent in the white society, such as various cakes. They sang her birthday song both in English and in Iñupiaq. The hallway was stuffed with the visitors' *atigit* – for women, men, and kids. It was a great and very colourful sight – blue, violet, some pink and green, red and brown. It was at this event that I met some of the women of Kaktovik who taught me about the design and making of contemporary *annuġaat*. This was the point of departure for what was to become my dissertation.

A visit to Afghanistan

The ideas behind this project actually started on the opposite side of the globe of Kaktovik, almost twenty-five years ago in 1982, on my journey in Afghanistan. I went to Afghanistan to work on development aid projects for women in that war-torn country. I met people from different ethnic groups, such as Hazara and Pashtun, with their particular style of clothing. Every garment was unique in design but related to the style of the group. It made a great impression to me that everybody – both men and women – appreciated and were proud of their textile traditions. As in Norway, the women made most of the textiles, and these took form as clothing, woven carpets and embroideries. I found this Afghan pride stood in great contrast to the Norwegian opinion that often regarded *textile* design and art as inferior forms compared to design and its execution in other media.



Figure 3 Clothing from Afghanistan: Hazara and Pashtun.



Figure 4 Old and new mittens from Selbu.

An investigation in Selbu, Norway

Ideas began to percolate at the back of my mind after this journey to Afghanistan, and eventually contributed to my masters thesis ten years later, in 1992. The thesis was entitled *Traditional Norwegian Knitting – Knowledge for Tomorrow?*² (Reitan 1992). I wanted to illuminate the Norwegian women's textile tradition to make *us* as proud of our traditions as the Afghanis were of theirs. To accomplish this investigation I went to Selbu, a rural district not far from my hometown of Trondheim in the middle of Norway. I knew that the knitted mittens from Selbu were world famous and had been exported worldwide for decades. Despite the fact that it was only fifty kilometers from my hometown, Selbu was not familiar to me. The first time I went there I did not know any 'natives' – just some few 'outsiders'. Through the home-craft store (Selbu Husflidssentral) from where they distributed the famous knitted Selbu mittens all over the Western world, I got in touch with some of the knitters – most of them women of retirement age. My contacts began to snowball. One contact quickly led to another.

In order to better engage in dialogue with the knitters and the knitting tradition I myself knitted during my time in Selbu, to have my own experiences with the design of patterns. We talked about their knitting and my knitting to get rid of the rules – schemes or frames – that existed within the tradition of design of Selbu mittens. I recorded the dialogues and photographed the mittens for further interpretations. At the museum in Selbu, they had a number of old mittens from the the turn of the twentieth century, which I analyzed as well – as part of my investigation of the tradition.

My preconception was that the knitters made mittens from readymade patterns obtained at the home-craft store, which had a great number of them. Through what I call conversations or dialogues, rather than interviews, with ten females and one male knitter, I recognized that they never knitted from fixed patterns. They never so much as used the same patterns on subsequent pairs of mittens. It turned out that this was as much a surprise to them as it was to me. The knitters designed the patterns while they knitted the mitten. They designed as they used the materials. They learned new pattern elements by watching each other or else they created new ones. They designed by composing different pattern elements within the framework of the tradition. This framework allowed or even encouraged them to create every pair of mittens differently from all the others – improvisation within tradition.

2 In Norwegian: 'Selbustrikking – kompetanse for morgendagen?'

FOCUS OF RESEARCH

The theories and methods of my current research are developed out of my masters thesis (Reitan 1992). In that project, I investigated the design process through my own artistic work, qualitative interviews, and artefact examination. I concluded that the mitten knitters in the Selbu village in the middle of Norway develop the design of the mitten pattern themselves, based upon a framework within the culture. Within this framework the knitters improvise. They never knitted exactly the same design on two pairs of mittens. It was interesting to discover that the knitters had not recognized this uniqueness themselves prior to my research project.

Søren Kjørup said in an interview, with reference to this masters thesis (Reitan 1992):

I can well understand that the traditional researchers, on receiving an application for a project on knitting, would exclaim 'Now listen here, that isn't research - sitting and knitting!' On the other hand, a new research tradition seems to be evolving in connection with the aesthetic subjects. One utilizes one's practical skills to test, verify and document results by, for example, knitting a Selbu mitten³ (Rebolledo: 10).

Surprisingly the “traditional researchers” in NAVF (now The Research Council of Norway) actually awarded me a student grant to ‘sit and knit’, which was probably the first such award within the arts. But that was, of course, in the KULT-program – Research in Culture and the Mediation of Tradition – which has not been quite as traditional as Kjørup mentions!

Kjørup continues:

The artist, the designer, the artisan, these professionals have inside knowledge when it comes to getting an idea, moving things about and rejecting some, accepting others... in contrast to the sociologist, for example, who would only be able to stand on the sideline registering what is going on, the artist

³ My translation from Norwegian: “Jeg forstår godt at de tradisjonelle forskerne, når de får en prosjektsøknad om strikking, skriker opp: Hør nå her - det er da ikke forskning - sitte og strikke! På den annen side, det ser ut som om det er i ferd med å utvikle seg en ny forskningstradisjon knyttet til de estetiske fagene. Man utnytter sin praktiske kompetanse til å etterprøve, verifisere og dokumentere ved å, for eksempel, strikke en selbuvott!”

can exploit his inside knowledge to feel physically how the creative process works⁴ (Rebolledo: 10).

It is this inside knowledge about improvisation within the frame of a tradition and practice and learning of design that I have investigated in the current project – this time, however, not by knitting as a research method, but by using other techniques and other materials, tools and ideas.

Perhaps some of my interpretations from Selbu could be relevant for other cultures? However, I did not regard Selbu as *my* culture either; I did not know the knitters or their community before I started my investigations, in spite of sharing a common language, nationality, and ethnicity. In this thesis, I wanted to look at similarities and differences in a culture more far removed from my own, with a different language, nationality, and ethnicity. In order to pursue an empirical investigation, I sought out a society where I supposed people designed by improvising within the tradition. Many different vernacular designs exist around the world, such as Inuit kayaks, Afghan or Sámi clothing.

Because the idea of this project was born in Afghanistan, I considered going there, where I had noticed that the garments in a region were variations of a common theme of colours and compositions. However, due to the conditions of the people after years of war, I saw the difficulties that would make it almost impossible to accomplish that project. Another case could have been the clothing of the Sámi, the aboriginal people of Norway, which I regard as particularly interesting in regard to my research interest. However, I did not have access to ‘gatekeepers’ who might open the field of empirical investigations into contemporary Sámi designing and making of traditional clothing.

4 My translation from Norwegian: “Kunstneren, designeren, kunsthåndverkeren, disse fagpersonene har en innside-kjennskap når det gjelder hva det vil si å få en ide, til hva det vil si å flytte tingene rundt og forkaste noe - akseptere noe annet... i motsetning til sosiologen, for eksempel, som bare ville være i stand til å stille seg på siden og registrere det som foregår, kan kunstneren utnytte sin innside-kjennskap til å kjenne på sin egen kropp hva det er som foregår i den skapende prosessen.”

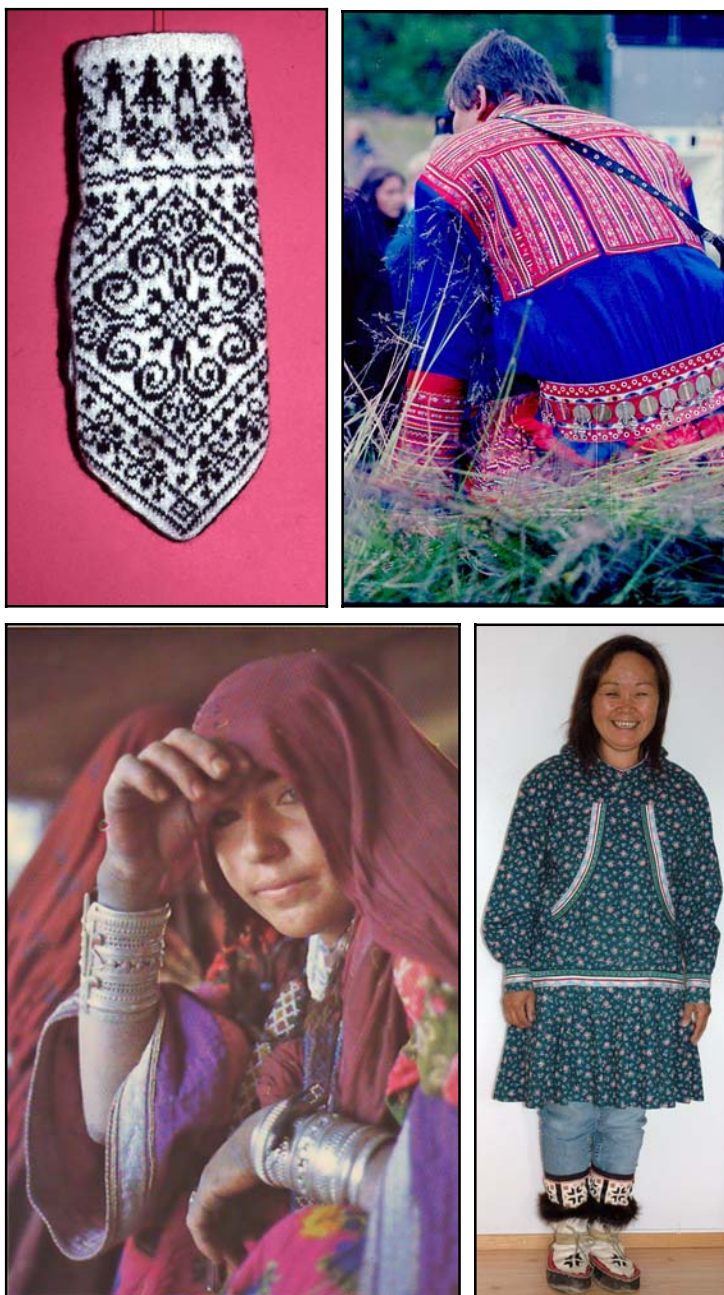


Figure 5 Vernacular design: Selbu – Sámi – Afghan – Kaktovik.

In 1994, I visited my brother Ketil in the Iñupiaq village of Kaktovik at the North Slope of Alaska, where he lived with his Iñupiaq family for seven years, before they moved to Norway. There I noticed that the women of Kaktovik made fantastic clothing that was quite different from anything else I had ever seen. The garments seemed individual and distinct from each other, yet obviously related within a common frame. I chose to travel back to Kaktovik in the winter of 1997 and the summer of 1998. Through my sister-in-law *Añuyak*, who is an experienced seamstress herself, I got to know her extended family. Through these family connections, I found that doors began to open. In this way I came to know the women of Kaktovik.

There has been a tremendous change in the *Iñupiaq* culture in the last century and in particular during the last 50-60 years. Today, the Iñupiat⁵ live in two different worlds at the same time, the Western-American and the traditional aboriginal. Most of the researchers about Inuit clothing focus on skin clothing (see section *Research in Relation to Iñupiaq Fabric Clothing*), which they perhaps regard as pre-contact and thus more genuine and traditional than fabric clothing. Also the collections and the archives in the ethnographic museums containing Inuit garments are almost exclusively made of hides and furs. It is not difficult to understand that both old and new Inuit skin garments make a deep impression on researchers as on people in general, because they are often really beautiful and elaborately decorated. As a curiosity I can mention that my sister-in-law has made a skin *atigi* of an aesthetic quality which is rarely seen, she even won the World Eskimo Indian Olympics⁶ Native Dress competition on skin clothing in 1998. The trim on these skin garments is also an improvisation in a tradition, which implies the constant creation of new and different patterns. My sister-in-law, inspired by my masters thesis and the Selbu mittens as a symbol of Norway, and as the wife of my brother, a Norwegian, she made patterns on the trim for this *atigi* based on the eight-petal rose common on the Selbu mittens. However, there are really few Iñupiaq women who actually make skin garments anymore. Skin or fur is not longer the material used for everyday; it is even rare on ceremonial occasions. If I had followed the tradition of the researchers on Inuit clothing by focusing on skin clothing, I would not have been able to observe and watch a single design process during my fieldwork in Kaktovik, because nobody, as far as I know actually made any skin *atigi* during the periods I was there.

5 Researchers have described them according to various names, as North Alaskan Eskimo (Spencer 1959) or Northwestern Eskimos (Oswalt 1979).

6 The World Eskimo Indian Olympics (WEIO) is celebrated in Fairbanks every summer with competitions in traditional Inuit and Indian sports and crafts from all over Alaska.



Figure 6 Evelyn Anuyak Reitan in her fancy skin atigi with a 'sunshine' ruff.
© Photo Galleri Galaaen, Røros

However, what made an indelible impression during my first trip to Alaska in the spring of 1994 was that the Iñupiat still made their traditional clothing despite the massive influence of the Western-American culture, and the production was part of a living, evolving tradition. The Iñupiat have adopted Euro-American materials and adapted them to their tradition, and made a unique style of clothing. In addition, this 'new' tradition is still alive and dynamic. It is in constant development, by means of improvisation, by

adopting and adapting new materials, techniques and tools into existing traditions. Researchers often fail to see or notice this phenomenon of ‘new’ tradition, perhaps as mentioned because they have been very much preoccupied with what they regard as pre-contact⁷ culture – ‘the original, genuine’ – and often regarded as though it were set in amber for all eternity. From this perspective it is doubtful that Iñupiaq fabric clothing would not even be regarded as Iñupiaq *tradition*.

The Iñupiat practice and learn through improvisation – always expressing themselves in new creative ways – but developing and recombining elements from within a narrow cultural corpus. They do this particularly within the Iñupiaq clothing tradition and this is something I regard as extremely interesting; I view it as a kind of actionable knowledge (Drucker 2006) that can be inspirational for the development of better art and design education, not least in Norway. On the one hand, the Norwegians have developed a tradition of copying; e.g. in folk costumes⁸, knitting and embroidery, which allows little if any creative improvisation. On the other hand, we have had an ideal in visual art and design education, including textiles, of so-called ‘free-expression’ (Nielsen 2000: 71), where the goal has been to allow for as much freedom as possible. The intention behind this ‘free’ creative activity has been to stimulate creative activity, but I claim that the results have often been the opposite. The ideal aimed for in product and furniture design in Norway has also been similar, I will assert. The emphasis on creativity and innovation has been highlighted in design education at least since the 1970s. Despite this, after visiting the furniture fairs in Milan and Cologne, as well as in Oslo, Copenhagen, and Stockholm for years, I have experienced that many designers ‘invent the wheel over and over again’ – quite contrary to what the journalists in the press claim. I see similar sofas and chairs, introduced as innovations, in Milan and Cologne every year. Next year similar sofas and chairs become the ‘news’ at Scandinavian fairs. Why is this? Do ‘we’ have something to learn from ‘them’ – vernacular designers – or is such a possibility too provocative? Possibly, this is a part of a professional struggle, where the academically educated designers regard the status of vernacular design as not worthy of close attention. In other fields ‘folk’ has been a matter of research for years, as in folk music (e.g. Kvifte 1994) and ethnomusicology (e.g. Weisethaunet 1997, Feld 1974, 1984). As discussed later in the section *The Development of Design Research According to Vernacular Design*, the research on folk – or vernacular – architecture started in the 1960s, as well as in archaeology, history, and history of art (Rapoport 1969).

7 Pre-dating the arrival of Euro-American culture.

8 In Norwegian: bunad (Noss 2003).

In Alaska a research project in ‘folk’ architecture was published recently (Lee and Reinhardt 2003). There has been several research projects about ‘folk’ boats, both in Alaska (Braund 1988) as well as in Norway (Planke 2001). My purpose is to contribute to develop the ‘folk’ – or vernacular – dimension into design research as well – in particular textile design.

The interest in *learning* is increasing in many fields, including design education. This is due not least to the increasing importance of design in Western society, where questions are raised as to whether learning in the field of design education is following the correct path. One may ask what design learning is and what it is that designers need to learn. What is necessary for lay people to learn with regard to design so that they are able to communicate adequately with professional designers or architects? Is design learning a result of teaching? Since the 1960s, there has been a growing scholarly literature about design research. However, research about *vernacular design* has received little attention. One aim of the present project is to meet a demand for research about the design process of non-professionals, and hopefully contribute to increased understanding of the design process in general.

Statement of the Problem

The purpose of this case study is to investigate the design process involved in the making of contemporary traditional fabric Iñupiaq clothing; part of this is understanding the learning process involved. At this stage in the research, the designing of fabric *annuġaat* is generally limited to and defined by the Iñupiaq clothing made by women of Kaktovik, Alaska between the November 1997 and September 1998. In this thesis I will use the Inupiaq term *annuġaaq* in singular and *annuġaat* in plural – which means clothing in Iñupiaq – as a synonym to *Iñupiaq clothing*. The objective is to describe the *vernacular design process* in the making of clothing in an *Iñupiaq* village in North Alaska; the investigation took the form of an in-depth qualitative *case study*. The focus is on the design of the trim on the garments, called *qupak*, a band or border usually made of different fabric tapes.

In this project the research problem is:

How do the women of Kaktovik practice and learn designing of contemporary Iñupiaq clothing?

Some main concepts concerning the research problem will be discussed and clarified in the next section.

THEORETICAL POINTS OF DEPARTURE

After discussing the main concepts, to expose my frame of reference (Alvesson and Sköldbberg 2000: 68) I will try to place myself within the landscape of research, and clarify which paradigm (Guba 1990: 17) I believe I am moving within. This is followed by a rather detailed framework narrative about me – the researcher and interpreter – a story that is relevant to this research project.

Concepts

In what follows, I discuss the concepts of *design* and *vernacular design*. These are core concepts for this dissertation. Other relevant concepts will be clarified in the course of the text.

Design

Design is a particular trendy word at the present, and this situation makes it even more difficult to define and to use. Despite this, I prefer to use the term *design* because I consider the phenomena upon which I have focused, are close to, and exert an influence upon the 'mainstream' conception of design, the design of artefacts as *industrial design* and *architectural design*. Design can stand as a noun, a verb, and even an adjective (Lawson 2006: 3). In this thesis the emphasis is about design as a verb – a process and practice – *designing*.

Different researchers within the field also define the concept of *design* differently, sometimes very broadly on the one hand, and in a very narrow manner on the other, or sometimes in between those extremes. According to Schön, the concept of design has broadened since the 1960s (Schön 1983: 77). Herbert Simon has a broad definition of *design* when he says, "...the proper study of mankind is the science of design" (Simon 1982 [1970]: 159) and claims that "everyone designs who devises courses of action aimed at changing existing situations into preferred ones" (Simon 1982 [1970]: 55). Another broadening of the concept of design according to Schön is

Alexander's story of Slovakian peasant shawls, as Schön mentions as seeing "cultural evolution as an informal, collective, generational process of design" (Schön 1983: 77). Alexander's story of the Slovakian shawls seems close to my story of Inupiaq clothing, as I will discuss later. Schön warns against losing important distinctions between various professions or kinds of designing. On the other hand, he regards a broad understanding of the concept of design as a way of discovering "a generic design process which underlies these differences" (Schön 1983: 77), if, that is, there is any fundamental design process in the first place. Lawson also has a broad understanding of design when he mentions "Professional designers such as architects, fashion designers and engineers", at the same time as he points out "... yet design is also an everyday activity that we all do... All these everyday domestic jobs can be seen as design tasks or at least design-like tasks" (Lawson 2006: 5).

In terms with such a broad understanding of a coherent body of design theory (Love 2003) common to different fields of designing, Nelson and Stolterman (2003) criticize the traditional interpretation of design as 'problem solving', and instead suggest the idea of design as composition. They say:

Design – as an alternative to this rational approach – utilizes a process of composition, which pulls a variety of elements into relationship with one another, forming a functional assembly that can serve the purposes, and intentions, of diverse populations of human beings (Nelson and Stolterman 2003: 22).

In this thesis I follow Nelson and Stolterman (2003) in their understanding of design as composition – and hence designing as composing.

However, do ordinary people – 'folk' – *design*, or is the concept *design* reserved for academically educated professional designers?

Vernacular Design

Vernacular design (Lawson 1980: 10) – implies the recognition that practitioners who have never entered a school of design can also *practice* design. In my view, the degree of complexity makes the main distinction between professional and non-professional design (see also Lawson 1997: 22 and Alexander 1964: 32). Professional design usually involves many people, which means that the communication or dialogue between these participants is a challenge. The research in design theory often concerns this communication *between* the people involved, not the design process of each single designer within a community. One can say that the research of the design process in professional design is on a *macro-level*; by contrast, the present research concerning the design process undergone by every individual designer is what I propose to call investigations of design process on a *micro-level*. This does not mean that research on a micro level is not of interest to professional designers, only that the complexity of the professional design process including many people has been seen as the most important task for research in design theory, with little or no attention paid to the process at the individual level. In addition, professional designers usually do not manufacture what they design themselves, distinct from the non-professionals who usually both design and manufacture – often simultaneously. As far as I can see, none of the design theorists refer to empirical investigations of the non-professional design process, which is my contribution to the theory of design.

Christopher Alexander discusses the design process, or methods for creating things or buildings, in what he calls ‘*unselfconscious cultures*’ (Alexander 1964: 33-36), which in the past were often termed primitive. Alexander noticed the high quality of design emanating from these cultures, and mentioned the Slovakian shawls by way of example. Alexander wished to identify a design process for *selfconscious* cultures built on these *unselfconscious* qualities. Alexander’s definition of the design process in *unselfconscious* cultures is that:

I shall call a culture unselfconscious if its form-making is learned informally, through imitation and correction. And I shall call a culture selfconscious if its form-making is taught academically, according to explicit rules (Alexander 1964: 36).

Since the methods of learning are important in the definition of design in *selfconscious* versus *unselfconscious* cultures, I have therefore chosen to focus on the *learning* aspect of design.

To avoid the ambiguous and problematic terms *unselfconscious* and *selfconscious* I use the more neutral term *vernacular design*, inspired of *vernacular architecture* (Rudofsky 1964, Rapoport 1969: 5) to refer to *unselfconscious* cultures, and the corresponding term *academic design* for design from what Alexander calls *selfconscious* cultures. In a study about design in organizations, Gorb and Dumas make the distinction between *silent design*, for design by people who are not professional designers, and *formal design*, for professional design (Gorb and Dumas 1987). They do so without any references to Alexander's work.

Rapoport has called attention to the view that:

...we have tended to forget that the work of the designer, let alone of the designer of genius, has represented a small, often insignificant, portion of the building activity at a given period. The physical environment of man, especially the built environment, has not been, and still is not, controlled by the designer. This environment is the result of vernacular (or folk, or popular) architecture, and has been largely ignored in architectural history and theory. (Rapoport 1969: 1)

Rapoport, back in 1969, continued to argue that a shift of interest about the vernacular or 'folk' aspect had already occurred in other fields of research, such as archaeology, history, history of art, and music. As far as I can see, in the field of design research this shift is still missing, with some few exceptions that are discussed in *Status questionis*. Like Rapoport, who put forward his argument decades ago, I believe vernacular design has much to teach us – about practice as well as learning. It is rather a paradox that professional designers often make clothing inspired by vernacular clothing design. Nevertheless, the people who created the originals have usually not been recognized as designers. Research about vernacular design is a contribution to fill these gaps and highlight these designers.

In the passage cited above, Rapoport mentions, in parenthesis, folk architecture. One can assert that Iñupiaq clothing is *folk art*, even though the term *art* is rarely (see Ray 1996) applied to clothing, since clothing is usually seen as primarily functional and is not viewed as an expression of ideas.

Ylvisåker and Karlberg (1999: 185) describe *folk art* as artefacts that are primarily decorative, but can also have a useful function, and most commonly are derived from older traditions. Choosing the term *design* rather than *art* also has a parallel in the terminology of academically learned design, as far as clothing is concerned, where the terms *clothes design* or *fashion design* are used. This can be for mass production in industry, but can often be used of one-off items designed and made by the same person, analogous with folk design or vernacular design.

Vernacular design – or design in unselfconscious cultures, to use Alexander's (1964) term – runs like a scarlet thread through the fabric of this thesis.

The Theoretical Landscape of Research

My theoretical point of departure is close to what Søren Kjølrup calls *rhetorical-pragmatic situationism*⁹ (Kjølrup 1996: 25). *Rhetorical*, according to Kjølrup, refers to the importance of the concrete as the basis for acknowledgment and communication, according to the rhetoric and 'neo-rhetoric' tradition (Simons 1990). *Pragmatic* refers to the American philosophic pragmatic and the 'neo-pragmatic' (e.g. Dewey 1960 [1929], Goodman 1969), according to the practical and down-to-earth, which I regard this project to be. *Situationism* refers to the biologist and feminist theorist Donna Haraway (1988) and her concept of *situated knowledge*. The interpreter I consider as an important component of the complex context of the design process of *annugaat*. There is no 'objective' point from which to study and interpret this process outside the social life where the design process is going on (Gullestad 1996: 48). To make the knowledge as intersubjective as possible it has to be grounded and located. As an attempt to make clear my own 'situatedness' I want to account for my 'frame story' relevant to the topic for this investigation. This particular framework of experiences and ideas does not prevent the interpretation but rather integrates the understanding (Gadamer 1975). To find the ties between my own life and the investigations and interpretations in this project is impossible for me, because they are so integrated in my life that they are invisible for me (Gullestad 1996: 49).

⁹ Retorisk-pragmatisk situasjonisme.

The focus in the following framing narrative will be the part of my own story that I find relevant in connection with the *practice and learning of vernacular designing*; that is, my own story of textile, sewing, designing, and related aspects as well as the practice and learning of these skills.

Frame Story of the Researcher

Although I am not trained in anthropology, I have tried to follow the example of anthropologists Marianne Gullestad (1996) and Ann Fienup-Riordan (2000), insofar as I can make myself as writer more transparent and avoid hiding myself (the learning and knowing subject) under a veil of neutrality or objectivity (Fine 1998: 137, Clifford and Marcus 1986) by telling my 'frame story' and thereby admitting my own 'situatedness' (Gullestad 1996: 48, Haraway 1991).

I grew up in Trondheim in an old suburb not far from the city, the same place where my father spent his childhood. Different from our neighbours, who were mostly middle-class people, my mother preferred a simple furnishing style, influenced by the home crafts tradition (*husflid*), which had its ancestry in the peasant culture of rural Norway. To some extent she produced home crafts herself, such as weaving carpets, rugs, and bed linen. Usually she made her own designs. Along with my grandmother, she taught me not only how to knit but also to weave. I think an essential part of my interest in textile designing by ordinary people originates from the values with which I was raised. My brothers do not share this interest to the same extent, which I put down to the fact that textiles traditionally fall within the sphere of female activities in our culture. However, in particular, two of my cousins share my interest in vernacular design – as well as art and design education – my aunt is my mother's elder sister and her daughters were raised with similar values as I. Every summer during my childhood I spent weekends and vacations at my grandparents' farm on Frosta, a peninsula in Trondheim Fjord, 70 km from my hometown. While participating in that peasant culture, I learned to love folk art and vernacular design – the woodwork and textiles they had made. This foundation has evolved to encompass an interest in design outside the design professions – both in my own culture and in others.

At least since I was five years old in 1961 I have been a textile handicraft person. At five years of age I started in a needlework school for children as a leisure activity. I remember I was taught embroidery by the teacher and by

the other girls at the school one afternoon a week. I received my first sewing machine for children at the age of seven, and my first ordinary sewing machine I bought with the money I got at my confirmation as a very young teenager. Since then I have made almost all my own clothing, both by sewing and knitting, as well as some by weaving or crocheting. Usually I designed the garments myself, not by copying but by making a new design based on something I had seen. With regard to sewing by machine I do not remember anybody teaching me how to do it but I remember watching my mother sewing when I was a child. Almost all the clothing for her children she made herself by alteration, as well as some of her own clothing. This means she did not copy but made her own design within the confines of the mold or frame of the old clothing that she altered. I recollect watching my mother sewing and finding the experience very exiting, like watching an interesting film. After I started to make my own clothing as a teenager I bought readymade kits of patterns at the fabric store, such as 'Simplicity' and 'Burda'. Those kits contained patterns in different sizes as well as explanations or instructions of how to make specific details of the work; they also included suggestions for different alternatives of how to make the garment. The patterns inspired me to create my own designs for the garments I made. I really learned a lot about sewing by watching the drawings and the texts in these readymade patterns. Usually I designed and made the clothing without speaking to anyone, especially when my family was away for the weekends. Without those samples and suggestions from the readymade patterns, I believe that the results of my designing and garment-making would have been much poorer, and I would have been less satisfied with the results.

After my graduation from senior high school¹⁰ (upper secondary education) in the middle of the 1970s, I spent two years obtaining an art and crafts education in textiles. The two different schools belonged to distinct paradigms in art and crafts education; craftsmanship and self-expression (Nielsen 2000: 80). During the first year, I learned weaving at a school for home crafts¹¹. The focus was on the different techniques – the design process was of minor importance. We could create our own design if we wanted – or buy a pattern at the home crafts store to copy – what mattered was to make a product of high technical quality. The other school¹², which was in textile art and crafts, was quite different. There the creative design process was the main aim, and we did not learn much about techniques. The learning method was to experiment and find the solutions by oneself, without any interference

10 Ringve Gymnas.

11 Rogaland Fylkeshusflidsskole.

12 Røros Yrkesskole, Kunsthåndverk – tekstil.

from the teachers. These learning paradigms were frustrating experiences for me – both the craft-modelling and the free expression (Nielsen 2000: 71), which have their parallels in art education in respectively *the lecturing attitude* and *the charismatic attitude* (Lindberg 1988: 346). In the first case the design process did not count at all, just copying readymade patterns felt like cheating to me. At the other school the design process counted but we did not develop knowledge to be able to master the design process. The goal was to express something nobody had seen before – while the tangible results were often aesthetic products, but due to their execution, of poor quality.

When I started my education in art and crafts in the 1970s, we were in the middle of an art and crafts movement¹³ (Ylvisåker 1987), which implied great interest in folk art textiles as well. This was a part of a greater wave of interest in what people regarded as activities and objects that were genuinely Norwegian, which again can be seen as related to the struggle against the Norwegian application for membership in the European Union. Like many others within this movement, I was deeply engaged in the folk art and vernacular design of my own culture, but not to the exclusion of other cultures as well.

Since my teen-age years I had rarely used ready-made pattern for knitting. I did not enjoy just copying what others had designed. The pattern I had used in my teens was a kind of copy of an old beautiful knitted sweater from the west coast of Norway (the island of Stord), so at least I learned something about how to make ornaments in knitting. This knowledge I applied almost twenty years later for my masters thesis about traditional Norwegian knitting (Reitan 1992). All my other knitted garments have been made according to designs that I created myself. Nevertheless, I never felt I made the design completely without reference to other garments and models, that could have been something I had seen on other persons, in a magazine, or in a museum – as inspiration. However I never made any copy, I changed the design more or less to make it different and I altered the shape to satisfactory myself and accord with my own taste.

During my education in art and design I have always been engaged in learning and knowledge. What do I learn and how could I make use of this knowledge? I do not renounce what I have learned in techniques and composition, but I often missed the 'tools' to make good design. After the art and crafts education it was intended that I apply to the teachers colleges of art

¹³ In Norwegian: Husflidsbølgen.

and crafts. But all the teachers at the two different schools of art and crafts I had joined had their teacher education training from these teachers colleges of art and crafts¹⁴. I did not enjoy any of these paradigms of art education – neither the learning/teaching by means of copying nor by means of 'free' expression. Therefore I did not apply for these schools, but chose a classroom teacher training college¹⁵ for teachers within the compulsory primary and secondary school system. As a part of this education I specialized in art and crafts education¹⁶ for one year. That was another frustrating experience. The teachers did not want to teach us, or show us, anything about how to make design or art. They refused to judge what the students had made, and if we asked them for their opinions they did not want to say anything meaningful. However, at the end of the course they actually did assess what we had made but they never told the students on which basis they made their assessments. The result was that the students made a lot of things but were confused about which products were good or bad; this ambiguity reduced their opportunity to learn from what they had made.

Because I did not feel competent in drawing and did not learn drawing at school (Nielsen 2000), I never applied for higher education in art and crafts. In Norway, like many other countries, entrance examinations in drawing were and still are necessary for entrance to that kind of education. Whether my skills really were good enough for this education I will never know because I never applied. Despite this fact, I practiced as a clothing designer after I finished the teacher training in 1981. I designed and made clothing for sale – especially decorated shirts for men – by order or from a gallery. Of course, I made the design of the decoration by myself. The decoration of every single shirt was unique but the designs were within a 'family' – the one took after the others. There was a heavy demand for the shirts that I created but, as is usual for craftsman designers in textiles in Norway, I was not able to maintain myself just by means of selling my shirts, due to the low prices that they commanded. Thus it was that I got a job as a social teacher where I used my skills in art and crafts to help people with the form of teaching and training they need to master inter-human and practical situations. As time went by, this job occupied all my time and resulted in less time for designing and making garments. After finishing my masters in art and crafts education in 1992 I experienced the same pattern of living once again. I started with designing and making, got a part-time job at the teachers colleges of art and

14 Statens lærerhøgskole i forming Oslo and Statens lærerhøgskole i forming Notodden.

15 Levanger Lære- og høyskole.

16 Forming included drawing, textiles and woodwork (Nielsen 2000).

crafts, then I got a fulltime job, and after a while I abandoned the designing and making of textile products due to lack of time.

After years of working in different occupations as social teacher, vocational guidance counsellor, and head of a project of unemployed youth, in 1990 I decided to do my masters in art and crafts education. I never forgot my burning desire to improve the education in art and crafts. I still regard research about the patricians in the field of art and crafts, who have inside knowledge within the field (Kjørup, cited in Rebolledo 1994: 10), as important for contributing to the development of the corpus of educational knowledge in art and crafts. As mentioned, the issue of my masters thesis was the contemporary traditional Norwegian knitting, and whether this knitting would involve knowledge useful for contemporary people (Reitan 1992). An inspiration for the issue of that thesis was the pride in the textiles made by women in Afghanistan – pride expressed by both men and women – which I experienced during a journey in the country during the Russian occupation in 1982. I acknowledged that this pride was different from the evaluation of Norwegian textile art and crafts by Norwegians, where textile artists are the poorest, and home-knitted objects are regarded as less valuable.

I did not expect any great interest in my issue because I thought knitting was a strange subject for a masters thesis – but in my opinion, it was really important. Thus it was a great surprise to me when the subject of my masters thesis received much media attention in newspapers, as well as in radio programs. A TV program about the typical *Norwegian* in the National Broadcasting was created (Reitan 1994). What I did not know when I started this project in 1990, was the great interest traditional Norwegian knitting aroused in connection to the Winter Olympics at Lillehammer in 1994. Knitting, which I had regarded as being a strange and peripheral activity when I started, ended up being mainstream during the process of my masters degree. To me the main point was not that the knitting was Norwegian. Rather, I was looking for the knowledge inherent in textile design made by women. That time I found what I was looking for in Selbu, a village fifty km from my home city of Trondheim in Norway.

After I graduated with the masters in art and crafts education, I continued the work to develop the quality of education in art and crafts, from the position of leader of the further education for teachers at the Oslo University College, Faculty of Art, Design and Drama. The great challenge was to develop and manage a national adequate further education for teachers from senior high schools in more than thirteen different courses in art and crafts, as

different as sewing and hairdressing. This task was the result of the national reform of curricula in upper secondary education, called Reform 94. As leader I initiated and had the responsibility of more than twenty professors and 250 teachers as students for a half-year course in 'Drawing, Form and Colour'. The course was part-time for one year and took place in fifteen different places all over the country, in collaboration with the senior high school authorities in each county. To be able to give all the students equal teaching we broadcasted some hours of distant education through satellite TV live, with the most experienced professors in the studio. In addition every local group of students had their own professor. Some of the teachers from vocational upper secondary education were already educated within art and crafts. I was invited by the Ministry of Education to join the group that developed the superior curricula for the short courses already in use to qualify teachers in Drawing, Form and Colour. These new curricula were mainly based on what we had already developed in the department I managed at my college. For these teachers we developed different shorter courses of one week each, with the best professors we could find in different institutions. They came from institutions like the Oslo School of Architecture, NTNU, colleges of art and crafts and academies of fine arts, as well as the teachers colleges of art and crafts. Through these contributions, we sought to improve the quality of the teachers, and to make visible the fact that knowledge is necessary for improving education in art and crafts. In connection with the Reform 94 I also initiated a 'Network for Visual Arts', which connected all the organizations for artists and all institutions, schools and museums of visual art within Norway. The network organized a great national conference in 1994 (Nielsen 1994). The next challenge in art and crafts education was the national curricula reform in the compulsory primary and secondary school system in 1997 – L97. I initiated the development of the syllabus of the courses for further education for teachers based on the new curricula for the primary and secondary school.

However, my main interest was still researching as a contribution to the development of the education in the field of art and crafts. When I got the opportunity to begin PhD studies in art and crafts at Oslo School of Architecture in 1995, I received a grant from my employer Oslo University College to complete my PhD. The different professions I have held have given me broad experience, which I have profited from during my research. In the present PhD thesis I continue the research I started in the masters thesis (Reitan 1992). This time I wanted to go abroad and explore the practical knowledge included in the design process of contemporary *annugaat* made of women of Kaktovik.

STATUS QUESTIONIS

By way of attempting to describe the research landscape I was moving into, I chose to take a brief look at different research fields that concern the topic of this thesis – how women of Kaktovik¹⁷ practice and learn designing of contemporary *annuġaat*. The primary focus has thus been a literature review of contemporary research into the practice and learning of designing, with a special emphasis on the vernacular aspect. Second, in terms of research on the Iñupiat, I focus on the clothing. Becoming informed about *status questionis* regarding research fields as different as these is a great challenge. I have done considerable reading without finding very much that has proved relevant to my topic. Since the 1960s design research has certainly been growing, however, design *learning* has not been particularly in focus; to go further, research on *vernacular* design practice has been almost totally absent from the field of design research. When it comes to research on the Iñupiat, there has been very little investigation of indigenous or local clothing, despite the fact that the Iñupiat are one of the subcategories of the Inuit – which is the ethnic group most intensively researched, especially by social scientists. What follows from this extensive reading is my description of status questionis in relation to my focus in this thesis.

Design Research

To place vernacular design within the field of design research I start with a view of the field of design research in general. This literature review has focused on work written mostly within the Anglo-American tradition. A comprehensive monograph of the history of design research has yet to be written. However, in 1984 Nigel Cross edited the anthology *Developments in Design Methodology* – a collection of what he regarded as being the most important papers to emerge from the first twenty years of design research, which was born in the early 1960s. Cross' anthology on *design research* (Archer 1984: 348) – or *design methodology* to use Cross' term – covers the history of ideas in this field during the period from the 1960s to the beginning of the 1980s. Cross asserts:

Design methodology, then, is the study of the principles, practices and procedures of design in a rather broad and

¹⁷ The term 'women of Kaktovik' means women who lived in Kaktovik during my observations, and some women who used to live there before they moved to other places, but still were important members of the community of practice of designing and making Kaktovikian *Iñupiaq* clothing, who had great influence on the development of the design.

general sense. Its central concern is with how designing both is and might be conducted. This concern therefore includes the study of how designers work and think; the establishment of appropriate structures for the design process; the development and application of new methods, techniques, and procedures; and reflection on the nature and extent of design knowledge and its application to design problems (Cross 1984: vii).

Design methodology during this first period consisted mainly of papers presented at conferences, papers that in part were published in different conference reports. The only general textbook of design methods from this early stage is, according to Cross (1984: viii), *Design Methods* by Jones (1970). In Cross' (1984) anthology most of the texts are important proceedings about design research during the twenty-year period from the First International Conference on Design Methods in London in 1962, through the subsequent eight international conferences, to the conference on design policy, also held in London, in 1982. Most of these conferences were facilitated by the Design Research Society. As Cross writes: the first conference saw the 'birth' of design methodology, the last, its 'coming of age' (1984: viii).

Cross divides the first twenty years of design methodology into five principal areas, which are also partially chronological:

1. *The management of design process* 1962-67
 - Focus: *Prescription* of an ideal design process
 - The papers from this period concern the 'design methods movement' and 'systematic design' so as to develop systematic techniques that can be used within such a process
2. *The structure of design problems* 1966-73
 - Focus: *Description* of the intrinsic nature of design problems
 - The papers from this period concern the understanding of the complexity of these particular kinds of problems and the 'ill-structuredness' of these 'wicked' problems.
3. *The nature of design activity* (published 1979, but studied since the 1960s)
 - Focus: *Observation* of the reality of design activity
 - The papers from this period concern investigations of designers' behaviour. Methods of enquiry: from controlled experiments to open-ended interviews.

4. *The philosophy of design method* 1972-82
 - Focus: *Reflection* on the fundamental concepts of design
 - The papers from this period concern philosophical approaches to design practice
5. *The history of design methodology* 1962-1982
 - The papers from this period show that opinions have changed quite dramatically during these two decades of design research

Lundequist (1992: 7) regards design methodology more as a *research field*¹⁸ than as an *academic discipline* in general¹⁹. With reference to Cross (1984), Lundequist changes the term *design methodology* to *design theory* or *design research* because Cross' concerns are to *explain* and *understand* the design methods, while the design practitioners *use* the design methods (Lundequist 1992: 7). At least, and I agree, design methodology has been a major area of design research (Cross 1999: 6). Referring to Rittel²⁰ (Rittel 1984: 317, Cross 1984: 304) Rittel introduced a second generation of design methods, in the form of what he regarded to be an over-simplification of the design process and its *wicked* problems. In the late 1970s Geoffrey Broadbent²¹ (1984: 343) introduced a third generation, which he delineates as being analogous with Popper's *methodology of science*, introducing a model of conjectures and refutations.

With the aim of identifying the nature of the coming generation within design methodology, John Broadbent²² distinguishes four distinct generations, related to their benefit for design *practice*, not design *theory* or *research*, and introduces a fifth generation (Broadbent 2003: 2-3):

1. craft methods
2. design-by-drawing methods
3. hard systems methods
4. soft systems methods
5. evolutionary systems methodology

Distinct from Cross and Lundequist, Broadbent here talks about design methods in *practice*, not design *methodology* – which will be the theory of design practice or design methods – and he considers the first generation of

18 My translation from Swedish 'Vetenskapligt problemområde'.

19 My translation from Swedish 'en sammenhållen akademisk discipline'.

20 Originally published 1972.

21 Originally published 1979.

22 Broadbent is a biologist (Broadbent 2003: 13).

design practice to be craft practice, which according to him started 250,000 years ago, when ‘designlike thinking’ emerged (Broadbent 2003: 3). What Broadbent here calls the craft design practice seems to be quite similar to what I call vernacular design.

In a suggestion of a taxonomy of the field of design research, Cross (1999: 6) mentions three main categories according to *design knowledge*:

1. Design knowledge residing in *people*
 - Design epistemology
 - Study of ‘designerly’ ways of knowing.
2. Design knowledge residing in *processes*
 - Design praxiology
 - Study of the practices and processes of design.
3. Design knowledge residing in *products*
 - Design phenomenology
 - Study of the form and configuration of artefacts.

According to Cross, during the last decade “...there has been a growing awareness of the intrinsic strength and appropriateness of design thinking within its own context” (Cross 1999: 7). Design is now a research discipline in its own right, with a growing number of *designer-researchers*, who, however “...are still building the appropriate paradigm...” (Cross 1999: 10).

As we can see, there are several attempts to categorize the design methods, as well as the design methodology – or the theory of design methods – by different scholars over the years. Nevertheless, despite the fact that some of the theoreticians mention pre-industrial design, none of them really goes into it and looks closely at the methods and what actually is going on in the vernacular design process. In what follows, I look at some of the design theoreticians and their relationship to the vernacular kind of design practice.

The Development of Design Research According to Vernacular Design

In the following discussion of design research from this first period, I follow Cross’ (1984) presentation of the development of design methodology between 1962 and 1982. However, differing from Cross, I focus on the theoreticians who mention or discuss design practice going on *outside* the design professions. Few design theorists since the 1960s have paid much

attention to the design process going on *outside* the design professions. However, some of them refer to design processes going on in non- or pre-professional contexts, that is, the contexts that are the focus of this thesis.

With the development of positivist research following World War 2, the 'design methods movement' wanted to develop 'systematic design': "procedures for the overall management of the design process" (Cross 1984: ix). This was a main issue within design research between 1962 and 1967. In the late 1950s and early 1960s the tempo of technological development was very rapid. This obviously also influenced the design area and the increasing complexity demanded the development of more adequate design methods. The answers, in accordance with the existing positivistic paradigm, were presented as various systematic approaches to design. The traditional art of design – that is, selecting the right material and shaping it to meet the needs of function and aesthetics within the limitations of available means of production – has become immeasurable more complicated in recent years (Archer 1984: 57)²³

Two of the most influential design theoreticians in the 'design methods movement' – Christopher Alexander and J. Christopher Jones, or John Chris Jones as he came to spell his name with the passing of time – were part of this first generation (Cross 1984: 2, 3). Despite the fact that both of them were impressed of *vernacular design* made by non-professional designers, they themselves developed design theories far removed from the way ordinary people do design. Jones' and Alexander's early design methods are based on logical analysis and mathematics. They were considered to provide a sound basis for the development of systematic design procedures.

In his famous book *Notes on the Synthesis of Form* (1964) Christopher Alexander discusses the design process, or the method of making things and buildings in what he calls *unselfconscious* cultures. Alexander recognized the good quality of things that arose from what he decided to call *unselfconscious* cultures (see p. 35). He wanted to develop a design process for *selfconscious* cultures built upon these qualities. However, he based the development of new design methods on mathematical methods because he had been educated as a mathematician (Alexander 1964: 7). He wanted to make a careful examination of the success of the design processes in *unselfconscious* cultures to be able to solve the problem of the complexity in the design processes in *selfconscious* cultures. He says that this sharp line between

²³ Originally published 1965.

unselfconscious cultures and *selfconscious* cultures is not real, but that he has made this distinction for the purpose of argument (Alexander 1964: 32). The kind of culture he calls *unselfconscious* has been called primitive, folk, closed or anonymous (Alexander 1964: 33). The *unselfconscious* design process has many features different from the *selfconscious* according to Alexander; however, the most visible and reportable features of an *unselfconscious* design process are found in the way the design process is *taught and learned* (Alexander 1964: 34). He calls a culture *unselfconscious* if the design process is learned informally, through imitation and correction. And he calls a culture *selfconscious* if the design process is taught academically, according to explicit rules (Alexander 1964: 36). Alexander's inquiries will be discussed later.

One of his examples of design within an *unselfconscious* culture is Slovakian peasant shawls (Alexander 1964: 53). Alexander stresses the good quality of *unselfconscious* design (Alexander 1964: 28) and his mission is to make a *selfconscious* design method which takes care of these qualities (Alexander 1964: 132). As an architect, but also a mathematician, his solution is mathematical methods, to the exclusion of a thorough investigation of the design process of these beautiful shawls. As many design theorists have mentioned, Alexander's theories has been very influential as well in design fields other than architectural design (Cross 1984: 33). But practicing designers did not utilize Alexander's methods (Darke 1984: 179)²⁴.

Alexander aimed to produce a design method capable of designing totally new artefacts, structures or systems (Cross 1984: 3). To achieve this, he could not simply rearrange already known components but had to start from scratch with an analysis of the context into which the design must fit. He built systems and subsystems of the connections between the requirements, which were the foundations for designing components to match the subsystems. Alexander tried to make a kind of objective 'scientific' design knowledge, by defining "...design in such a way that the rightness or wrongness of building is clearly a question of fact, not a question of value (Alexander and Poyner 1984: 124)²⁵.

Based upon the paper *The Atoms of Environmental Structures* (Alexander and Poyner 1984), philosopher Janet Daley severely criticized Alexander's design theory as a part of the school of behaviorism, which she condemns as "verging on a new intellectual fascism" (Daley 1969). In particular, she

24 Originally published 1979.

25 Originally published 1966.

emphasizes that the adherents claim behaviorism is *non-ideological* [Daley's italics] and simply consists of "...tools for achieving practical ends" (Daley 1969: 71). Alexander seemed to be trying to make an 'objective' design method, where rightness or wrongness of a design is a question of fact, not of value. Then Daley further asks if it is possible to test if a building program is wrong, or a structural form is right, as judged against objective standards for establishing truth or falsity. Daley continues to argue that value statements are not always arbitrary, although they sometimes are. As an example she says that the value statement "This building plan is right" is arbitrary if the answer as to why is "Oh, I don't know. I just like it. That's the way I think building plans ought to be. It seems right to me." On the other hand if the answer is "...a coherent and logically consistent set of principles and criteria of value..." it is not arbitrary (Daley 1969: 74). I see this statement as reasonable in an academic context, but problematic according to my investigation into vernacular design, where the knowledge and judgments often are, as at least partly, tacit. Does it then mean they are arbitrary? In Alexander's attempt to avoid arbitrariness by value judgment by regarding all human tendencies as of equal importance in a 'right' design program, Daley has found that in fact he does exactly what he wants to avoid doing. By equating all human tendencies, he makes a value judgment and misses the fact that some human tendencies also can be undesirable, Daley states.

Another important researcher, Jones, had the intention to make a systematic design method working parallel to – but separate from – the intuitive and creative aspect of designing. He maintains that the intuitive and creative aspects are essential. His primary aim with this method has been to resolve "...a conflict that exists between logical analysis and creative thought" (Jones 1963: 54). Jones' design method consists of the stages: analysis – synthesis – evaluation. Many of the critics of Jones' method ignored his emphasis on the intuitive and creative part of his method (Cross 1984: 1). Jones states that:

... between traditional methods, based on intuition and experience, on the one hand, and a rigorous mathematical or logical treatment, on the other, Jones' clear intention was to supplement, rather than to supplant. Traditional design methods were often ignored by the early critics of systematic design procedures, who tended to assume that the 'systematic' must be the enemy of the 'intuitive' (1984: 9)²⁶.

26 Originally published 1963

Based on analysis of designing both in what he calls *craft evolution* as well as *design-by drawing*, Jones in *Design Methods* (1970) developed new design methods suited for post-industrial requirements. Based on his definition of *designing*, Jones states that: “

The earliest initiator of change in man-made things is not the maker-of-drawings but the maker-of-things, the skilled craftsman, the 'designer' who takes over where natural evolution leaves off. It is both appropriate and helpful to compare new methods of designing not only with recent traditions of design-by-drawing but also with the much earlier method of craft evolution (Jones 1992: 15).

Jones does not regard craftsmen as ‘trained designers’. However, he does find that hidden in the craftwork there is a system of information-transmission; he considers this transmission is more relevant for new design methods than design-by-drawing. Jones did no empirical research of designing in the craft process himself, but based his analysis on a description of wagon-making in the nineteenth century, as explained by a craftsman in 1923 (Jones 1992: 17) and published in *The Wheelwright's Shop* (Sturt 1963 [1923]). An important shortcoming in the craft designing process, according to Jones, is the lack of recording in a symbolic medium; such a medium is necessary for evaluating the design without doing experiments with the product itself (Jones 1992: 20). He further states that the advantage of design-by-drawing makes it possible to make experiments by trial-and-error in scale drawings separated from production. This is a basis for a division of labour that separates designing from manufacturing, and the result is the establishment of a design profession apart from that of the craft (Jones 1992: 22). On the other hand, designing by drawing implies that the designer has simply to rely on his visualization of the completed product. Jones suggests remedying this by apprenticeship for novice designers where they can learn from the experienced chief designer’s judgement (Jones 1992: 23). Another solution is the making of models or samples to be tested; this, in my opinion, is close to craft-designing. Jones does not mention here the possibility of design-by-materials, or by making and adjusting models or samples from the beginning, without any scale drawings (something that is not unusual in e.g. furniture design, see p. 222). According to Jones, the shortcoming of these traditional design methods – respectively craft and drawing – is the possibility of designing the parts or the details before designing the whole, which he sees as essential in the new design methods, when the “necessary

experience cannot be contained within the mind of one person” (Jones 1992: 24).

As Alexander (1984: 309-16)²⁷ and Jones (1991: 158-159) also later stated, this kind of systematic approach to design did not work very well, something was missing. Thus, the design researchers concentrated on the understanding of the complexity of the design processes and what kind of problems are created by this ‘ill-structuredness’ (Simon 1984: 145)²⁸ or ‘wicked’ problems (Rittel and Webber 1984: 135²⁹, Cross 1984: ix).

It seems Alexander was influenced by the positivistic paradigm, insofar as he tried to make an objective body of design knowledge (Cross 1984: 101). Later, Alexander developed his theory of design on ‘patterns’ which people could use to make their own design of buildings (Alexander, Ishikawa and Silverstein 1968). Some years later he dissociated himself from the methods he developed in *Notes*. In an interview with Max Jacobson in 1971 Alexander says that he wanted to create buildings as beautiful as traditional architecture (Alexander 1984: 315). At the end of the interview he explains that his motive has always been to make better design (Alexander 1984: 316). However, he did not succeed, as he says himself, because people lost sight of the need to make better design. Alexander subsequently developed his work on ‘patterns’, most extensively in *A Pattern Language* (Alexander Ishikawa, Silverstein, Jacobson, Fiksdahl-King and Angel 1977).

Some scholars tried to develop better design methods by investigating designers’ behaviour, examining what designers actually do when designing. The design researchers used different research methods from controlled experiments to open-ended interviews (Cross 1984: 167). This kind of research was of particular interest at the end of the 1970s, but had been carried on since the 1960s.

Jane Darke, in an article in *Design Studies* from 1979 (Darke 1984) called for a new paradigm in Kuhnian terms (Kuhn 1970) to replace the analysis-synthesis model of thinking about designing. She also criticized earlier design researchers because they focused on design sketches instead of observing designers at work in ‘real’ situations (Darke 1984: 177). She noticed that just asking the designers what they had done and thought during the design process could be misleading, and did not necessarily advance

27 Originally published 1971.

28 Originally published 1973.

29 Originally published 1973.

understanding of the design process. Some of the designers thought it was difficult to verbalize non-verbal processes. Another problem was post-rationalizing of what actually had been going on. However, Darke states that she actually chose to “treat the architects’ accounts as *if* they were accurate summaries...” (Darke 1984: 178). Her conclusion from the interviews of architects is that early in the design process they formulate a ‘primary generator’ to reduce the current solutions to something manageable.

Another research method that has been and still is popular in design research, and which has been encouraged by Cross (1984: 103, 169), Simon (1984) and others such as Akin (1984), is protocol analysis. This is considered to be a more objective method than, for example, interviewing. In protocol studies the designer speaks aloud during the design process. From the problems investigated in the 1970s a more reflective philosophical approach arose between 1972 and 1982 (Cross 1984: 237). These researchers did not believe in observations of what designers were doing during the design process because they were looking for new and better methods of designing.

During the 1970s some of the leading theoreticians dramatically changed their minds about design methodology. For instance, as already mentioned, both Alexander and Jones dissociated themselves from the thoughts they had about designing in the early 1960s. Alexander, who had been regarded as a leading design methodologist (Cross 1984: vii) in an interview in a *Design Method Group Newsletter* in 1971 even rejected the idea of design methodology by stating “...if you call it, ‘It’s a Good Idea to Do’, I like it very much; if you call it a ‘Method’, I like it but I’m beginning to get turned off; if you call it a ‘Methodology’, I just don’t want to talk about it” (Alexander 1984: 314). However, what Alexander rejected was not the importance of discussing and developing how to make better design. Rather, he felt the concept of *methodology* was too pretentious, and therefore ludicrous to use in relation to designing better things. He also rejected the belief that people who did not design themselves could develop ways of making better design.

Jones talks about the maker-of-things, the skilled craftsman in his major work *Design Methods - Seeds of Human Futures* (1970). In this book, Jones wanted not only to compare new methods of designing with the tradition of design-by-drawing but also to examine the much earlier method, which he calls *craft evolution* (Jones 1970: 15). His mission was basically not design theory, but what he called *ergonomic work*, which implies the function of the

thing. This book is a first attempt to understand and describe new design methods that have appeared in response to a world-wide dissatisfaction with what he calls traditional procedures, namely craft 'designing' and design-by drawing (Jones 1970: xi). As time went by, Jones concluded, as Alexander had as well, that the development of new design methods or theories were not helpful in designing things better (Mitchell 1992: xi). Jones, like his fellow design methods pioneer Christopher Alexander, rejected the over-rationalization of design methods and adopted new, more explicitly intuitively design approaches. Jones turned to design methods arising from chance and randomness, inspired by the musician John Cage.

Despite the disillusioned pioneers in the design research, such as Alexander and Jones, design theorists continued to develop design methodology, especially within design engineering and industrial design (Cross 2001). The emergence of new journals in the field of design research was important, such as *Design Studies* in 1979 and *Design Issues* in 1984.

Donald Schön (1983), with the theory he called *reflection-in-action* introduced a radically different paradigm from the *problem solving* theories introduced by Simon (1970). "The two paradigms for design methodology represent two fundamentally different ways of looking at the world, positivism and constructivism" (Dorst and Dijkhuis 1996: 254). Schön (1983, 1987) refers several times to Alexander's story about the Slovakian peasant shawls (Alexander 1964). I discuss Schön's theory more thoroughly in the section *Iñupiaq Designers as Reflective Practitioners*.

Several design scholars have called attention to design as practiced before the positivist doctrine, calling it by the Lévi-Straussian term for the collage approach to structuring objects: 'bricoleur' craft³⁰ (Rowe and Koetter 1978, Rowe 1987). Due to the increasing industrialization of production of items in the modern world, *design* has become a profession that appears in a lot of different areas, including the worlds of fashion and textiles (Lawson 1997: 14). Without always referring to Alexander, theorists still consider the design process of vernacular or craft design as for instance a "...natural unselfconscious action-based approach" (Lawson 2006: 19).

Downton (2003) claims that design is actually a way of researching. He divides the field into research *for* design, *about* design, and *through* design. Design knowledge is the focus in his epistemological interpretation. This

30 After Lévi-Strauss 1966.

position deviates from the conventional view (Dunin-Woyseth 2004) which asserts that *design* is essentially different from *research* (e.g. Groat and Wang 2002). Be this as it may, one of the research methods I used in Kaktovik – the design *practice* process – has a lot in common with the design *research* process. I have come to this conclusion from my practical experience, not least with designing. My overall aim has been to find suitable elements and combine them to compose a suitable result, with reference to everything from bias-tapes to *qupak* in the design *practice* process; then, through empirical investigations, I have presented interpretations and documented the process in the course of preparing this thesis. In a way, the present research is both research *for* design, *about* design, and *through* design. My aim in undertaking research *for* a better design education has led me to research *about* design learning among the Iñupiat from Kaktovik, partly *through* the actual process of designing.

In *Design Knowing and Learning* the editors' ambitions are to initiate the development of "a science of design learning" (Eastman, McCracken, and Newstetter 2001: 3). However, this seems more like a book about design *cognition* – or how designers think in the design action – rather than design *learning* (Christiaans 2002). One reason for this lack of development of research into design learning is probably the fact that the necessary foundational work is still missing from this field (Eastman, McCracken, and Newstetter 2001: 2). The contributions to the research field design learning are generally examples of tentatively innovative teaching techniques, without engaging in the necessary evaluation according to learning effects (e.g. Lloyd, Roozenburg, McMahon and Brodhurst 2004, Rodgers, Brodhurst and Hepburn 2005).

In the book *The Design Way* (Nelson and Stolterman 2003) the authors bring together the more qualitatively oriented design disciplines based on art and architecture, and correlate those with the typical quantitatively oriented concerns of engineering and informatics design (Love 2003). They talk about the concept of a design *tradition*, which seems similar to what Cross calls a design *discipline* (Cross 2001). Nelson and Stolterman claim that it is "...our very ability to design which determines our humanness" (Nelson and Stolterman 2003: 9), and also that "Humans did not discover fire – they designed it", which means that design was the first tradition – prior to art, religion, science and technology. This means that the concept of design is not reserved for the academically educated professional designers. As mentioned earlier about concepts, Nelson and Stolterman (2003: 22) define design as

composition; this is quite different from the conventional view of design as *problem solving*.

As far as I know, Alexander never carried out empirical research into how the design process actually is practiced and learned in what he calls *unselfconscious* cultures. I see it as essential to examine more closely how people without a professional design education – *vernacular designers* – practice and learn design, with the intention of identifying qualities that might be introduced to the field of *academic* design.

As mentioned, Rapoport maintains that a shift of interest already had occurred in other fields of research in the 1960s. As far as I can see, this shift of interest in design research is still missing, with some few exceptions (e.g. Alexander 1964, Jones 1970, Schön 1983), although none of them ever carried through any empirical investigations. The research field of design history or design studies has also been growing, in particular since the 1980s, in line with the growing interest in design in general (Margolin 1992). As in design research generally, the focus has been on design engineering and industrial design. To a great extent this exclusion of crafts from the design field has also led to an exclusion of what women have designed.

For many women, craft modes of production were the only means of production available, because they had access neither to the factories of the new industrial system nor to the training offered by the new design schools. Indeed, craft allowed women an opportunity to express their creative and artistic skills outside of the male-dominated design profession (Buckley 1986: 7).

Based on the recognition of a need for a broader concept Margolin defines design studies as "...that field of inquiry which addresses questions of how we make and use products in our daily lives and how we have done so in the past" (Margolin 1992: 115).

I now turn to the *status questionis* of the research on Iñupiaq clothing.

Research in Relation to Iñupiaq Fabric Clothing

After the review of relevant design research I continue to survey previous research in relation to Iñupiaq clothing, with the focus on textile clothing. Although this is *not* an anthropological investigation, in the *status questionis*

of research on *annuġaat* I have drawn upon several anthropological sources, which generally speaking constitute the main body of research mentioning Iñupiaq clothing. The writings on *annuġaat* are not extensive, but several authors have written small amounts on the subject, like the explorers in the late 1800s. From the 1950s, some social scientists investigated the social organization of the Iñupiaq communities, also the village of Kaktovik. None of them has written much on the clothing of the Iñupiat. The small amount of material on the Iñupiaq clothing written by these several authors is discussed in the thesis in the section *Contemporary Annuġaat from Kaktovik*. In addition to these smaller contributions about Iñupiaq clothing, Cydney B. Martin (2001) has written a PhD thesis about the meaning of the Iñupiaq *atigi* 1850-2000. Some research on Inuit clothing from other parts of the Inuit territory is also of interest.

The first investigations within Iñupiaq ethnographic fieldwork were part of what we can call the ‘pre-contact’ period. Here the aim was to collect items and describe the ‘original’ cultures before they were influenced by contact with ‘the whites’ and their culture. Dall (1870), whose aim was to give a concentrated understanding of Alaska at of that time, described the ‘aboriginal habitants’ and in the process, included some sketches of Inuit clothing, e.g. ‘Malemuts’ (Dall 1870: pl. between p. 378 and 379). They show the characteristic shape of *annuġaat* for men and women from the late nineteenth century.

The first explorer really investigating the region of the Iñupiat was John Simpson (1875) from his two years at Point Barrow. His report was first published in 1855 (Simpson 1875: 233). He writes several pages about the clothing in the area (Simpson 1875: 241-245). In addition, he mentions the use of cotton skirts (Simpson 1875: 243), which means that Iñupiat already before 1855 wore fabric clothing, although probably not yet developed and adapted to a distinguished Iñupiaq style.

Edward William Nelson from the Smithsonian Institution lived at the west coast of Alaska between 1877 and 1881 (Fitzhugh 1983: 7). However, due to poor health, Nelson did not finish his book until 1899, eighteen years after his fieldwork in Alaska. The Smithsonian Institution, which also published the book in 1899, reprinted his book *The Eskimo about Bering Strait* in 1983, with an introduction by William W. Fitzhugh (Fitzhugh 1983), which forms the basis of the following presentation of Nelson’s work. Nelson’s main work is about what he calls Bering Sea Eskimo, who basically are *Yup’ik* (see map p. 84 fig. 7) and not Iñupiaq. At the age of twenty-two

Nelson received a posting in the U.S. Army Signal Service in St. Michael, to maintain the weather station for the Army and gather information and specimens for the Smithsonian (Fitzhugh 1983: 11). Despite the fact that Nelson was not a trained anthropologist but rather a natural history ornithologist, he was the first to produce extensive records of Alaskan Eskimo societies (Fitzhugh 1983: 9). Nelson's skills in ornithology, which considered precise location and details in observations as important, is probably the reason why his description of the details of the clothing is extraordinarily precise, as well as his localizing of description (Fitzhugh 1983: 29). However, in 1881 Nelson travelled as far north as Point Barrow, which is Iñupiaq territory, as an ethnological observer on the U.S. Revenue Cutter *Corwin* (Fitzhugh 1983: 36).

Nelson writes in 1899 about his fieldwork in 1877-81 that: "... the data collected at a time when the life of the majority of the natives had not been so greatly modified by intercourse with white men as at present, are of particular value" (Nelson 1983 [1899]: 21). However, he also describes 'modified' people, who already then wore garments made of fabric: "Of late years these people during the summer wear skirts and trousers of calico and drilling obtained from the fur traders. Ordinary cotton shirts also are worn by them" (Nelson 1983 [1899]: 32). There is no further description on the design of the textile clothing, so it is not possible to compare these early garments with the contemporary Iñupiaq textile clothing. According to Fitzhugh, the Smithsonian Institution, in paintings made from the ethnographic photographs taken by Nelson, "obscured the fact that an individual was wearing fabric clothing" (Fitzhugh 1983: 44). This is in agreement with my observations of the collections in several US museums; they do not contain many textile Iñupiaq garments, if any at all. Probably, they were not regarded as 'original', 'authentic' or 'traditional' Iñupiaq clothing, as mentioned.

The next explorers investigating the Iñupiat were John Murdoch and Patrick Henry Ray from 1881 to 1882 (Murdoch 1988 [1892]). They were on the International Polar Expedition to Point Barrow, Alaska, an interdisciplinary scientific expedition where weather observations were the main task. This was the first scientific writing from the northern part of Alaska, and the only major writing about ethnography of nineteenth-century Iñupiaq culture (Fitzhugh 1988: ix). Also in the Smithsonian's reprint (1988) of John Murdoch's *Ethnological Results of the Point Barrow Expedition*, William W. Fitzhugh (1988) wrote an introduction.

Nelson refers to John Murdoch's collection and observations at the International Polar Expedition at Point Barrow (Murdoch 1988 [1892]), but this did not appear until Nelson finally managed to finish writing up his investigations (Nelson 1993 [1899]: 21). The work of John Murdoch and Patrick Henry Ray continued Nelson's earlier fieldwork in Arctic studies (Fitzhugh 1988: 37-38). They met each other in Plover Bay, Siberia (Fitzhugh 1988: xv). Nelson says, "Although my collections cover many of the objects found along the northern coast, I have been more explicit in describing those from other regions visited by me rather than to duplicate the work of Mr. Murdoch" (Nelson 1993 [1899]: 21).

Patrick Henry Ray wrote an ethnographic sketch, and John Murdoch, a naturalist, wrote a more detailed description of ethnographic collections (Fitzhugh 1988: ix). Nelson saw artefacts as a component in social life, unlike Murdoch who used artefacts rather than direct observation as the primary source of data, despite the fact that both were naturalists (Fitzhugh 1988: xxxiv). Murdoch describes the clothing of people in Point Barrow closely and he even writes some details on the trimming of the garments. He also compares these garments with clothing from other parts of Arctic and previous researchers such as Simpson, Dall and Nelson (Murdoch 1988 [1892]: 110). Patrick Henry Ray, who joined Murdoch at the expedition to Point Barrow between 1881 and 1882, writes in his *Ethnographic Sketch* (Ray 1988 [1885]) about the mode of living in the villages more than their material objects. However, in relation to his first invitation to see the Eskimo dance he describes their clothing: "They were attired in new suits of deer-skin worn with the flesh side out, dressed perfectly white; the men wore tall conical hats of seal-skin, ornamented with dentalium shells and tufts of ermine and Arctic fox-fur" (Ray 1885: 41).

Diamond Jenness participated as ethnologist in the Canadian Arctic Expedition of 1913-1916, and investigated the north coast of Alaska as well, under Vilhjalmur Stefansson's command. A part of this was an archaeological investigation on Barter Island (Jenness 19--, Jenness 1991), where the village of Kaktovik now is located. However, what was found was remnants of a settlement with no direct connection to the contemporary inhabitants and no people were permanently living at Barter Island at that time.

Charles Brower, a white man from New York, was hired by the Pacific Steam Whaling Company from San Francisco in 1884, and later he worked at the recently established whaling station located near the village of Utqiagvik

or Cape Smyth, later renamed Barrow, about ten miles southwest of Point Barrow (Cole 1994: xiv). According to Bockstoce (1986: 239), Brower, in 1888, resigned in protest over a disagreement about the management of the station. In 1892 Brower and Tom Gordon, the future trader at Barter Island, the present Kaktovik, established the Cape Smythe Whaling and Trading Company in partnership with H. Liebes Company, furriers of San Francisco . Brower lived in Barrow for more than fifty years. He was married twice to Iñupiaq women, first to Toctoo who perished in 1902 and then to Aianggataq (Cole 1994: xv) (or Assaingataq³¹), and he spoke their language fluently and wore *annuġaat*. Brower was not a trained researcher, but he learned from several researchers visiting him during the years, such as the anthropologist Vilhjalmur Stefansson and the Norwegian explorer Roald Amundsen. Brower collected for several museums and wrote articles (e.g. Brower 1899) and, inspired by Stefansson, an autobiography (Brower n.d.) of nearly 900 pages (Cole 1994: xix), which was published in an edited version in 1942, and was republished in 1994 (Cole 1994: xxi). Brower is very impressed by the *annuġaat* and the women's skills and describes intimately some of their techniques, also in sewing the Iñupiaq skin boat, the *umiak*.

From the middle of the 1900s there was a shift from the material to the *social* aspects in the research of the Iñupiat, as we find in Burch (1975, 1984, 1998), Chance (1966, 1984, 1990), and Spencer (1959). In 1952 and 1953 Robert F. Spencer made an ethnological investigation into the 'aboriginal' culture of the Iñupiat based upon the memory of older living informants about what he call a "...untouched native society..." (Spencer 1959: 1). His research was primarily about the relation between economy and society, which he though was not examined by Murdoch, Ray and earlier Simpson in the nineteenth century (Spencer 1959: 7), whose major focus had been the collection and documentation of the material culture. When Spencer talks about clothing it is about the usage, e.g. about the custom to remove outer garments indoors, and go around bare to the waist inside their dwellings (Spencer 1959: 56). Spencer also wrote the introduction chapter (Spencer 1984b) about North Alaska Eskimo – the Iñupiat – in *Handbook of North American Indians*, as well as the chapter about the North Alaska Coast Eskimo (Spencer 1984a). Norman A. Chance made an anthropological investigation with the primary emphasis on Kaktovik in 1958-1960 (Chance 1966) and again in 1989 (Chance 1990). In the first book he describes the use of Western style of clothing, apart from fur parkas (*atigi*) and less regularly *kamik* boots (Chance 1966: 29). His last book is about the ethnography of

31 Personal communication, 'Carol' August 2006

development and it is intended for undergraduate readers (Chance 1990: vii). He also talks about the custom of removing clothing indoor and the end of this practice due to pressure from the missionaries (Chance 1990: 47). Further, he discusses the use of cloth and fur parkas as well as jeans (Chance 1990:75). Ernest S. Burch, Jr. has carried out anthropological research in North Alaska since the early 1970s. His focus is the society on the large scale and not the artefacts. His work on the different Iñupiaq nations (Burch 1998) is interesting according to where the contemporary Iñupiat in Kaktovik came from.

In the 1970s and 80s, after the foundation of the North Slope Borough with the aim of ensuring the rights of the Iñupiat in the face of petroleum developments, there was a number of research projects in the Kaktovik area about land use through time (Nielson 1977, Kaveolook 1977, Jacobson and Wentworth 1982, Libbey 1981, 1983, Hall 1981, Pedersen, Coffing and Thompson 1985). An Iñupiat from Barrow, Harold Kaveolook, (1977), was teacher in Kaktovik from 1951 to 1970 and wrote a history of the village and the school for the first Inuit Circumpolar Conference held in Barrow in 1977. Michael J. Jacobson and Cynthia Wentworth (1982) researched the land use and subsistence in the Kaktovik area in the early 1980s. They write about the origin of the Kaktovik people in the 1920s and the nomadic way of living in different sites in the Barter Island area. Their accounts about clothing describe the use of different kinds of fur and skin, e.g. caribou (Jacobson and Wentworth 1982: 45). Although some photos show people wearing *annuġaat* mainly made of fabric, none of these writers has specifically investigated the clothing of Kaktovik.

There have been several archaeological excavations in northern Alaska, such as Jenness (19--), Larsen and Froelich (1948), Hall (1970). Edwin S. Hall, Jr. and Lynne Fullerton (1990) edited three volumes about the excavations and investigations by the Utqiagvik near Barrow (1981-83) where the archaeologists found a preserved household that had suffered a prehistoric catastrophe. The excavations contained several tools for making cloth of fur, such as skin scrapers, needles and needle cases, and a few garments or parts of garments were found. Of special interest was a winter *atigi* found in the the Utqiagvik Excavations where: “The edges of the narrow skirts are trimmed with strips of white fawn skin” (Turcy 1990: 145). I was lucky to have the opportunity to watch some of these *annuġaat* at the Commission on Iñupiaq History Language & Culture, Barrow, the summer of 1998. The garments confirmed that the shape of the *atikluk* has not changed

radically compared to the contemporary *atigi*, although the lower part of the female *atigi* now are without the long splits at the hips.

In the 1980s two exhibitions, *Inua. Spirit World of the Bering Sea Eskimos* and *Crossroads of Continents. Native Cultures of Siberia and Alaska*, were initiated by William W. Fitzhugh, Director of the Arctic Studies Center and Curator of Arctic Anthropology, National Museum of Natural History, the Smithsonian Institution. The exhibitions were accompanied by several books. In 1982 Fitzhugh and Susan Kaplan produced the book *Inua. Spirit World of the Bering Sea Eskimo* in connection with a travelling exhibition of the collection made by Edward William Nelson more than a hundred years earlier³² (Fitzhugh 1982: 9).

The next exhibition *Crossroads of Continents. Cultures of Siberia and Alaska*, included clothing. In the catalogue for the exhibition Valérie Chaussonnet (1988) writes a survey of the traditional fur clothing of the North Pacific region, including North Alaska, and that western clothing more or less has replaced traditional clothing. She goes on to say that traditional clothing is occasionally used, but on such occasions this “clothing is worn and exhibited as a flag, a marker of ethnic identity” (1988: 209).

Anthropology of the North Pacific Rim is a collection of essays presented at a symposium held in connection to the exhibition in 1988 (Fitzhugh and Chaussonnet 1994). There, Valérie Chaussonnet and Bernadette Driscoll (1994) write mainly about ritual and ceremonial clothing. In the catalogue for a smaller travelling exhibition from this project, *Crossroads Alaska: Native Cultures of Alaska and Siberia* (Chaussonnet 1995), Fitzhugh describes it as: “...Native clothing and decorative styles applied to garments and artefacts, for which each culture has a distinctive pattern that is clearly differentiated from that of its neighbors” (1995: 7).

After the turn of the twentieth century, in 1914, the Danish ethnogeographer and archaeologist Gudmund Hatt categorized the clothing of the natives of North America in his doctoral thesis in Copenhagen (Hatt 1914). This was the earliest major work on arctic clothing (Martin 2001). Hatt looked at different kinds of clothing as evolution, and considered the frocks from Northwest Alaska as a further developing of the two-skin-skirt³³ and the poncho. His research is based on the collections in the ethnographic museums

³² This exhibition was also the reason for the reprint of Nelson's book

³³ Toskindsskjorten.

in St. Petersburg, Helsinki, Copenhagen and Christiania,³⁴ and books on the subject, like Nelson's (1899) and Murdoch's (1892). He compares the garments from different Eskimo or Inuit groups, also the people from Point Barrow whom he calls Western Eskimo³⁵. Of interest is a drawing of a frock with black and white trimming from Herschel Island, which he says is Western Eskimo (Hatt 1969 [1914]: 82).

For almost fifty years, Dorothy Jean Ray (1992 [1975], 1977, 1996) has written about Eskimo art, including Iñupiaq clothing. In her book *Eskimo Art. Tradition and Innovation in North Alaska*, she includes clothing as art. In 1996 she gave all her Native art and artefacts to the University of Alaska Museum, and all her papers, notes and photographs to the university's archives (Ray 1996: xv). She also wrote a book, as a catalogue, for the exhibition based on this gift – *A Legacy of Arctic Art* (Ray 1996). One chapter is called *Mainly Women's Work*, where skin sewing is included (Ray 1996: 53-72). Mabel Ramsey and Emma Willoya founded *The Nome Skin Sewer Cooperation Association* in 1939. They made an illustrated catalogue of mittens, mukluks, slippers, and parkas (Ray 1996: 74-75). Also in her book *The Eskimos of Bering Strait, 1650-1898*, Ray has included small contributions about clothing, e.g. about the change of style of trim through time (1975: 175), and also the increasing use of cotton for clothing from 1867 to 1898.

Other research projects related to Inuit clothing are Jill Oakes' (1991) PhD thesis about Inuit skin clothing among Copper and Caribou Inuit, and Betty Kobayashi Issenman's survey (Issenman 1985) of Inuit clothing and her book (Issenman 1997) about all the Inuit clothing of Canada, with some offshoots to *Kalaallit Nunaat*³⁶ and Alaska as well. Cunera Buijs (2004) in her PhD thesis investigates the relationship between clothing and identity among Inuit in East Greenland in the last century.

Still, there is no comprehensive work of Iñupiaq clothing (Martin 2001: 12). The Norwegian artist Berit Arnestad Foote (1992) describes, also in beautiful drawings, the patterns and techniques for making skin clothing. This was based upon her stay at the Iñupiaq village of Point Hope from 1959 to 1961, with her husband, who was a researcher. Arnestad Foote also includes Iñupiaq fabric clothing, although the *qupak* – or as she describes them: “These ribbons are usually made from rick-rack and binding of

34 Oslo.

35 Vesteskimoerne.

36 Inuit-Iñupiaq for Greenland.

different colours” (Arnestad Foote 1992: 111) – is only briefly mentioned (Arnestad Foote 1992: 185). Cydney Martin’s aim in her PhD project *Mediated Identity and Negotiated Tradition. The Iñupiaq Atigi 1850-2000* is to “...explore the role of clothing as a contemporary expression of Iñupiaq values and of changing dimensions of Iñupiaq identity” (Martin 2001: 2). Her investigations are partly from the same region as mine, and she has even interviewed some of the same informants. Like me, she wonders why researchers generally have neglected contemporary Inuit fabric clothing (Martin 2001: 13). One of Martin’s conclusions is that “seamstresses can respond to new ideas and materials in creative ways while retaining the traditional cultural meaning of the garments” (Martin 2001: 227). My intention in this doctoral thesis has precisely been to investigate this contemporary process, and how it is learned.

In light of findings emerging from this survey of previous research on both design research and Iñupiaq clothing, I go on in the next section to discuss my path through the present investigation.

M Y P A T H

In this section I discuss my path – or the methods used in the empirical investigations as well as the interpretations of how the women of Kaktovik practiced and learned the designing of contemporary annuġaat.

Design is a quite young field of research, also internationally, as mentioned in *Status Questionis*. The first steps within this field were taken in the early 1960s, with Christopher Alexander and John Chris Jones as important pioneers. Different approaches to the design process have been a main subject for design research ever since – but limited to academic professional design, like industrial design and architecture (Cross 1984). However, the vernacular design process has been of little interest for design researchers so far, which means there is a lack of experience about adequate research methods and methodology.

Despite the short history and limited production of design research, the research on design activity is growing, and is doing so with a varied range of research methods from philosophical reflection to empirical investigation of the natural and the artificial intelligence of design (Cross, Christiaans and Dorst 1996). In particular, protocol analysis has been in focus. The aim has been to try to “bring out into the open the somewhat mysterious cognitive

abilities of designers” (Cross, Christiaans and Dorst 1996: 1). A problem with the protocol analysis method is that the designers themselves are supposed to give verbal accounts of their own thoughts during the design process (Lloyd, Lawson and Scott 1996: 438). Based on Schön, these thoughts would be *on* designing, not *in* designing, or *reflection-on-action* instead of the *reflection-in-action*, which may be most important to learn about the cognitive processes during the design process. Protocol analysis was not a suitable approach in the present project, because I wanted to observe the designing during the process, not as reflections after the fact, by practitioners on what they had done. In addition, if the protocol should be written by the designers themselves, this would perhaps have hampered the research since the seamstresses of Kaktovik are not so trained in writing. Their culture can be characterized as more oral than literate, and many of them do not have much formal education. They do not customarily even talk so much about their designing. Researchers on academic design processes are also critical of the use of protocol analysis:

All of these disadvantages weigh particularly heavily on the validity of protocol analysis in design, where 'non-verbal thinking' is believed to be a significant feature of the relevant cognitive activities, and where the use of sketches and similar externalizations of thought processes seem to be fundamental (Cross, Christiaans and Dorst 1996: 2).

I have not followed one rigorous qualitative method, but rather borrowed from different methods depending of the purpose and the possibilities in the different situations. Flexibility and improvisation have been crucial to constructions and analysis of the empirical material. This implies that the research process has been uncertain and ambiguous from the starting ideas, through the empirical level, to the writing of the thesis. During this insecure path, I have occasionally been tempted to choose more ‘safe’ and approved methods, such as grounded theory and structured interviews. Then I would not have had to make myself aware of and account for my pre-conceptions – at least not to the same degree – because the ideal attitude according to classical grounded theory (Glaser and Strauss 1967) is to approach without any previous theories in mind, although this opinion has subsequently been modified (Strauss and Corbin 1990, 1998). I was tempted by this approach, because, as the section entitled *Status Questionis* shows, written theories about vernacular designing are almost non-existent. Nevertheless, this does not mean that my construction of the empirical materials during my fieldwork were devoid of theory. Actually, as already mentioned, my MA

thesis was a start toward building a theory about non-academic designing, based on my work with traditional mitten knitters from Selbu, Norway.

The Interpretive Setting

Although this venture into design research, is not precisely anthropology, in recent years, ethnographic approaches to design research have been more common – also in engineering design, especially in research about design teams (Button 2000). The present project is not about design teams as such, but rather focuses on individual designers working in a community of shared design knowledge. Although my project is not ethnography, my investigation has a lot in common with an ethnographical approach. I have done fieldwork in a society far from home – the Iñupiat in Alaska – and different from my own – Norway. Ethnography has been described as:

...a research process in which the anthropologist closely observes, records, and engages in the daily life of another culture – an experience labelled as the fieldwork method – and then writes accounts of this culture, emphasizing descriptive detail. These accounts are the primary form in which fieldwork procedures, the other culture, and the ethnographer's personal and theoretical reflections are accessible to professionals and other readerships (Marcus and Fischer 1986: 18).

In this study I have closely observed, recorded, and engaged in the daily life of another culture – the *Iñupiaq* culture – as the fieldwork method – and then written up accounts of this culture, emphasizing descriptive detail on how the women of Kaktovik practice and learn to design annuġaat. Moreover, through this dissertation, my personal and theoretical reflections are accessible to professionals of various fields, as well as general readers. The purpose is not to investigate the *culture* of the Iñupiat of Alaska as such, or the meaning of Iñupiaq clothing – but the vernacular design process carried out by the women of Kaktovik as a *case* of a design process. To do this I have not followed a special methodology, but have followed my own path, borrowing ideas and advice gleaned from many methodologies. In addition, I have developed special methods like *designing*, as a way to try to grasp the ideas involved in the designing of annuġaat. However, in the construction of the empirical material I admit that I have been inspired by ethnographic research methods.

Although the designing of this research project built upon experiences and knowledge from my MA thesis (Reitan 1992); nevertheless, the trajectory followed by in this investigation was not fixed and finished before I started the fieldwork in Alaska. The research design has been created inductively, during the research process, based on reflections of what seemed most appropriate and possible during the process. I will come back to these reflections. I want to discuss the path I walked to create *my* story of how the women of Kaktovik were thinking and acting while designing and making contemporary annuġaat.

In this work, culture is viewed from an anthropological point of view. As for my theoretical point of departure for this investigation, I agree with Clifford Geertz when he sees culture as a context within which social events, behaviour, institutions, or processes can be *thickly described*³⁷ (Geertz 1973: 14). According to my fieldwork experiences in Alaska, I consider the context as an important integrated, or inter-woven, part of the design process of Iñupiaq clothing – the every-day-design integrated in, and dependent upon every-day-life. This implies that it is not possible to investigate or describe the design process separated from the context – or culture – where the process develops. As the researcher, I was a part of this context – including my experiences, beliefs and concepts (Gullestad 1996: 49) – during the investigations, as will be elaborated in the next section. This thesis is about *my* opinion of the design process of Iñupiaq clothing – seen through my Norwegian eyes as well as my very personal eyes influenced by my life-story. The reader's interpretation of my interpretation will therefore be of third order (Geertz 1973: 14). My intention is to write *my* story – not *the* [hi]story – about a very exciting phenomenon to me – and hopefully to others – the design process of contemporary, modern traditional Iñupiaq garments developed mostly in the course of the twentieth century – the cloth or fabric *atigi*, which is a parka, and *atikluk*, which is a kind of dress for women and a shirt for men.

A myth about the Iñupiat is that their culture is dying or assimilating into the American culture. This is also the view of many researchers who focus on the problems in the Inuit societies. I will not deny the influence of the American culture on the Iñupiat, nor drug and alcohol abuse, social and other problems. However, the intention of this study is to focus on the very healthy living tradition of making annuġaat – as a part of a culture characterized by the capability to integrate new phenomena into their tradition. My object of

37 Geertz borrowed the term "thick description" from Gilbert Ryle (Geertz 1973: 6).

study is practice and the learning of the *design process* of annuġaat within the context of present-day Iñupiaq culture – as an investigation within the discipline of both creating design and art and design education. This is not about the Iñupiaq society and the social life as such (Geertz 1973: 27). I focus upon the contemporary beautiful annuġaat and attempt to understand how the design process takes place and how this process is learned. Through this, I wish to throw light on the design process of annuġaat in particular, by way of making a contribution to the understanding of the variation of forms of the design process.

Of course the design process of annuġaat is interesting for the Iñupiat themselves – perhaps not in a written condition – because for them the real design process is part of their reality – their every-day life. For others, this written investigation of their design process could be "...another country heard from," as Clifford Geertz says (Geertz 1973: 24). Within the field of art and design education, the discipline of making objects has been modestly studied. There has been little research, and consequently insufficient knowledge about the design process outside the professions of visual design, such as among architects and industrial designers. This lack of knowledge is, among other things, important to art and design education. I hope this project might contribute to a dialogue between professional and non-professional designers, and between different cultures. My contribution to design theory is to make a 'thick description' of the design process of Iñupiaq clothing, "not to generalize across cases but to generalize within them" (Geertz 1973: 26).

Iñupiaq terms and some other special terms used in the thesis are explained once in the thesis, and there is a vocabulary at the back of the thesis. Iñupiaq terms are introduced in italics, as well as core concepts and names of references. The references are in the Chicago Manual of Style 15b from the EndNote software³⁸. The references from the transcriptions of the videos are organized in: video-tape#-counter# (e.g. 25-14.23 means video-tape #25 – 14.23 on the counter of the video recorder).

The Linguistic Setting

Before I went to Alaska for the first part of my fieldwork, I started to study Iñupiaq from textbooks and tapes from the Native Language Center at the

³⁸ Edition 8.0.2. from Thomson www.endnote.com

University of Alaska, Fairbanks. I continued the study during my stay in Kaktovik.

Before I arrived in Kaktovik, my pre-understanding was that all the inhabitants spoke American English, except some of the elders. For everyday talk English would work. But I thought that perhaps they might not translate to English the language they used in relation to the making of their Iñupiat clothing. In many ways, this seemed to be true.

My problem turned out to be the limitation of the vocabulary in the Iñupiaq-English dictionary (MacLean 1980) and in the available textbooks (MacLean 1985, 1986). They covered only a very limited number of words about sewing and designing. This was an interesting observation itself. Is not the making of annuġaat important enough within the Iñupiaq culture to be included in the dictionary and in language courses? One answer could be that this course was developed for students at the University of Alaska, Fairbanks, and deals with situations common to student life, such as what occurs when they go to the canteen at the university and what to do in their vacation. Another reason could be that Edna MacLean, the woman who designed this course, who has been very important for the development of education in Iñupiaq language, is not an expert in sewing herself³⁹. The intended complete Iñupiat-English dictionary has yet to be published.

To me it seemed adequate to try to learn Iñupiaq for everyday speech. In Kaktovik the everyday speech was English as far as I could observe. The children studied Iñupiaq for one lesson every day at school, but the education in all other subjects was in English by English speaking white teachers from the ‘Lower 48’⁴⁰. The everyday speech for the children, between children and adults was English. This was common, also between adults, with some exceptions. Sometimes old people talked Iñupiaq to the youth, who did understand, but they answered in English. Some of the middle-aged Iñupiat talked Iñupiaq when angry or indignant, or spoke it when they did not want *taniit*⁴¹ to understand what was on their minds. I was able to engage in discussions in English with the seamstresses I talked to during this first stay, interspersing some words in Iñupiaq that I had learned.

After the first part of my fieldwork in Alaska in February 1998, I decided not to continue the Iñupiaq language course. This may have been a wrong

39 Personal communication August 1998.

40 Alaskan name of the main USA, meaning the 48 states on the continent between Canada and Mexico

41 *Iñupiaq* for White people

decision. During the final part of my fieldwork I talked to some older women in Kaktovik who did not seem comfortable talking in English about their sewing. Their English was no poorer than my own, quite to the contrary. Part of the reason for their hesitancy may have been that my English was not good enough, or my accent was too different from theirs. Another reason for some problems could have been the difficulties of talking about the sewing and designing process at all, and especially if my interlocutors did not feel comfortable with the situation.

In this text, I have decided to write in English to make it readable for as many as possible. For special words, I have used the Iñupiaq terms in the Kaktovik dialect.

Construction of the Empirical Material

My intention before I started the fieldwork in Alaska was to visit museum collections of old Iñupiaq skin and fabric clothing. My pre-understanding was that the contemporary Iñupiaq clothing had an unbroken traditional line from the old skin clothing. I actually visited exhibitions, collections and archives in the Iñupiat Heritage Center, in Barrow, the University of Alaska Museum in Fairbanks, and the Anchorage Museum of History and Art, as well as the National Museum of the American Indian and the American Museum of Natural History, both in New York City, the Smithsonian's National Museum of Natural History in Washington D.C, the Pitt Rivers Museum in Oxford and the Museum of Mankind in London, and the Museum of Cultural History in Oslo. However, all that material I recorded has not been of great assistance in advancing my interpretations. This in itself is an interesting theme within the realm of interpretation. The museums had several Iñupiaq garments made of fur or skin, but almost nothing made of textile and fabric. The exceptions were the Anchorage Museum of History and Art, and in particular the University of Alaska Museum that actually received a gift consisting of a number of fabric Iñupiaq garments from Point Hope which will be discussed in this thesis. Tracing these back to the skin clothing is important, especially with reference to contemporary skin *atigit*, which are not part of this investigation. However, regarding fabric *annuġaat*, the old skin clothing seems important only in terms of filling out the general picture, such as the time-honoured custom of always making a new and different trim for every new *annuġaaq*, the repeated pattern elements. While these trims are always innovative, the way they are placed is fixed according to the rules of the tradition.

The seamstresses of Kaktovik are ‘the others’ to me in Norway, in the sense of belonging to another ethnic group and another culture on the other side of the North Pole. On the other hand both the researcher and the researched belong to a common culture of practice – ‘the sewing culture’. To me this common ground was an important qualification for my understanding of their designing. To a great extent, based on my own experience as a seamstress for many years, I was able to understand their actions and thoughts when designing. However, during the few months I spent there I obviously could not experience and learn as much as they had done ever since childhood.

People in Norway and Europe often regard Alaska and the Inuit as exotic. The Inuit are regarded as living in a very different society and culture. Differences are obvious – however similarities are perhaps more striking. In Kaktovik the population has all the facilities common in Norway as well as other Western societies, i.e. contemporary frame houses, cars, satellite TV, all kinds of electronic goods, stores, post office, community house, Western style clothing, and so on. As in Norway they are very influenced by the US economy and culture, and they actually are a formal part of American culture, through TV and other media, and especially through the American school system. The most obvious difference I found was that their special Iñupiaq culture existed side by side with the Western American culture – through hunting, fishing, travelling, whaling, sharing food, Eskimo dancing and music, language (to a certain extent) and annuġaat.

In addition I interviewed most of the staff at the Commission on Iñupiaq History Language & Culture in Barrow, originally with the aim of investigating a part of the context of the practice and learning of annuġaat at Kaktovik. Luckily, this staff appeared to be mainly Iñupiaq seamstresses, with particular knowledge about the issue of my research. In addition, they were more familiar with discussions about such issues. Parts of the interviews with them will be included in the following interpretations. The styles of annuġaat from Kaktovik and Barrow are quite similar, because the Kaktovikmiut mainly came from Barrow and still have relatives there (29-05.30).

I do not include the *taniit* when speaking of women of Kaktovik, because these women did not participate in the everyday life of the village; rather, their activities were limited mainly to school-related activities. During school activities, also at celebrations for the closing of the school at Christmas and

for the summer holidays, the Iñupiat – children as well as adults – rarely wore annuġaat.

My sister-in-law, Evelyn Anuyak Reitan, who is married to my brother Ketil Reitan, has been my gatekeeper (Creswell 1998: 117, Hammersley and Atkinson 1995, Punch 1998) to the seamstresses of Kaktovik. As her sister-in-law, I was regarded as a relative and a member of the extended family. That meant they trusted me and understood my relationship, and gave me access to their homes, celebrations, everyday life, and thoughts normally kept private. The privilege they gave me came encumbered with the great responsibility not to abuse their trust – but most of all, this trust allowed me an access to their world of designing, which was an essential condition to carry out this project. To be a part of the extended family and a relative of almost everybody of Kaktovik, gave me a unique opportunity to come close to people in general and the seamstresses in particular.

I lived as a ‘daughter’ of Anuyak’s parents and a member of the extended Aishanna family for six weeks from Thanksgiving to Christmas and over the New Year in the winter of 1997, and then for three months living in lodgings at some relatives during the following summer. To live so close to other people for such a long time was hard for the hosts as well for me as a visiting researcher, although I was regarded as one of the extended family visiting from far away.

‘Joanna’ was one of the typical seamstresses of Kaktovik. In telling my story about the design process involved in contemporary annuġaat made by women of Kaktovik I chose to focus on ‘Joanna’ and her thoughts and actions while she was designing new garments. My interpretation is based to a large extent on her practice. She was ‘a case in the case’. ‘Joanna’ was the one I observed for the longest time during my fieldwork, mainly because I was present at her home almost the whole time she was working on two different *atigit* in the weeks leading up to Christmas. I learned important knowledge about the design process from the other seamstresses of Kaktovik too, knowledge I will mention as I narrate ‘Joanna’’s design process.

On the other hand, there is a risk that these ties to the seamstresses have limited my interpretations, but the richness of the knowledge has made me feel this is unlikely. In my opinion, they have a lot of knowledge interesting to people living beyond Kaktovik and Alaska. A lot of the research of Inuit today is about social and environmental problems, admittedly very serious

matters. To tell about their knowledge of designing, I felt, would hopefully contribute to a more positive and complete picture of the Iñupiat.

I chose to record my observations, interviews and my own venturing into Iñupiaq design by digital video. The tapes allow me to repeatedly review scenes, for further interpretations. In the empirical work I did elsewhere for my MA thesis, I recorded interviews with a tape-recorder, in addition to photographing the items we were talking about. To handle all this technical equipment was impractical and I sometimes felt this was disturbing to the interview situation. Therefore, I decided to use a digital video camera during my fieldwork in Alaska. Then I could record both sound and pictures simultaneously, and this made it possible to film while we were talking. In addition, I recorded some important social events, as well as certain aspects of everyday life that I judged to be relevant for the context of the project. My experience was that the video recording was less disturbing than tape-recording and photography. One reason is perhaps that people nowadays are used to video-recording – other people also videotaped during different occasions while I was in Kaktovik, at both public and private events. Not having regular photographs, I made still pictures from the videotapes, since photos have been crucial to this thesis.

The incredible number of choices I had to make during my fieldwork in Alaska meant that the observations I decided to video-tape were a part of the interpretations – not an objective data-collection. Although I wanted as far as possible to look at the designing from the Iñupiaq seamstresses' points of view, it was of course not possible to do so. The seamstresses as well had different points of view on many matters. My view is influenced of my life and my pre-conceptions as well as my investigation of what I observed and learned during my path in Alaska.

In the following I will give an account of the methods used in the construction of the empirical material: participant observation, interviews, and designing.

Participant Observation

To observe the design process is difficult because it takes place inside the designer's head (Lawson 1997: 39), and perhaps body, as well as outside in the observable outer world. What is possible is to watch what the designer does, and listen to what she says. But this seldom, or rather, never, reveals

everything that is 'going on in the designer's head'. To give a more well-rounded picture, I triangulated by adding interviews and also went to a similar design process myself.

My intention was to observe and interview between five and ten of the seamstresses of Kaktovik. Due to different personal matters some of the women I wanted to speak with, refused. Another reason for the refusal could be the extensive research they had contributed to earlier (Chance 1966, 1990, Nielson 1977, Jacobson and Wentworth 1982 etc.) in addition to projects about traditional Iñupiaq knowledge at the Commission on Iñupiaq History Language & Culture (IHLC)⁴². A third reason, which I did not know until I visited IHLC in Barrow at the last part of my fieldwork, was that the informants were normally paid for their contributions. I could probably have raised that kind of money if I had known this custom before, something that is relatively uncommon in research, as far as I know. I can understand the reason for this, usually the informants do not think they profit by the research projects they contribute to, and also suspect that the researchers are those who make the profit.

I do not think the fact that I was not able to observe and interview all the informants I intended has influenced the project negatively. I gained enough empirical material for the subsequent interpretations from the two women I actually observed during their designing and making of garments. I observed one seamstress making two different atigi covers between Thanksgiving and Christmas in 1997. From the other seamstress I ordered an atigi for myself intending to observe the whole designing process by participating in and watching her work during the course of several weeks in the summer of 1998. During the designing process, none of these women talked very much.

In addition to the design process I also observed the use of annuġaat, which I regard as an important feature related to the actual designing. The traditional Eskimo dance is an increasingly important part of the Iñupiaq culture. This is also an important arena for the wearing and display of annuġaat. I participated in some of these events, such as Thanksgiving, Christmas and New Years, and the Whaling Festival *Nalukataq*⁴³. I also visited the World Eskimo Indian Olympics in Fairbanks in July 1998, watched the competitions in traditional Iñupiaq sports and dance, skin-sewing and the beauty contest where the participants wear traditional Iñupiaq skin-

⁴² Personal communication, Jana Harcharek August 1998

⁴³ The Whaling Festival held in June, communal feast held outdoors (MacLean 1980: 30)

clothing. I finished my fieldwork in Alaska by being present for the culturally important whaling in Kaktovik in September 1998.

Qualitative Interviews or Dialogues

The path I made through the landscape of designing annuġaat I made based upon the experiences from my investigations of the designing of traditional Norwegian knitted mittens in my MA thesis. In order to gain insight into the knowledge that is fully communicable verbally or in text, in Kaktovik, as in Selbu, I intended to carry out qualitative interviews among the knitters at Selbu. My intention was to construct semi-structured interviews with prepared questions. This resulted in my eliciting almost no answers at all or simply statements of no interest to understanding the designing process. When I asked for thoughts about designing they answered about technical issues according to the sewing. I found out they never talked about the designing, it was difficult for them to find words and articulate the knowledge that I was able to observe in action when they were designing the clothing. I felt that my role as interviewer was problematic. When the interview dealt with not only the seamstresses' knowledge, but also with my own inside knowledge as a practitioner, my role became more active, because we were acting more like equal participants with different types of competence. This method is in accordance with the dialogue method, which was developed at the Swedish National Institute for Working Life over a period of ten years (Göranzon and Florin 1991).

To help this out I chose to take up a more active approach than is recommended for an interviewer (Kvale 1996). The interviews became a conversation or a dialogue between more or less skilled seamstresses – them and me. The knowledge of designing is to a great extent *tacit knowledge*⁴⁴ and difficult to talk about. To avoid this problem during our dialogues, we talked about clothing they already had designed and made, and samples I had designed and made for this purpose.

When recording the two seamstresses making annuġaat, I never asked them to speak, but I sometimes asked them questions about why they chose to act as they did. Sometimes I experienced that my questions could be understood as criticism, and therefore somewhat impolite, like “why did you choose that colour” meaning “that was a stupid colour to choose”.

⁴⁴ Thomas Kuhn (1970), who refers to Michael Polanyi's (1983 [1966]) concept *tacit knowing*.

My initial intention was to both observe and interview the same seamstresses, as a way of method triangulation, to see if there was correspondence between what I saw during the observation and what I heard during the interviews. However, the seamstresses I observed did not have more time to spend on me after the long periods I had watched them sewing, and asking. And the other way around, I did not have the opportunity to observe the informants I actually interviewed, or talked with. All together I talked with fourteen women and four men from Kaktovik, born between the 1910s and the 1960s, most of them in their 60s when I was there. In addition I talked with four women and one man in Barrow, born between the 1940s and 1960s. Some of the informants are more quoted in this thesis than others due to the theoretical focuses in play.

In respect for their wishes to remain anonymous in this thesis, because to draw attention to oneself is not usual among the Iñupiat, I have changed their names.

Designing as Research Method

I look upon my participation in designing as a vital research method to uncover what is characteristic for the process of designing by improvisation within a tradition. In my opinion, the *inside knowledge* (Kjørup cited in Rebolledo 1994: 10) that comes from having competence as a practitioner of designing activity can make a vital contribution to understanding, especially when combined with a researcher's perspective from the outside. This can be conveyed by research into actual production, in this case, the discipline of designing. In this project, as a practice-based PhD (Durling 2004: 31), I used my own creative work as a research tool in order to participate socially in the realm of *tacit knowledge* that the design process conveys. I did not make copies, but acquired knowledge in a limited area of the tradition under investigation. I did this in order to improvise within the frame of the Iñupiaq culture. Of course, there was a limit to how deep knowledge I was able to acquire during my fieldwork, but I think this method was key to being able to pose essential questions in unveiling Iñupiaq knowledge through participant observation and interviews. To test whether or not I had really attained the same competence in composition and decoration as the Iñupiaq seamstresses, I had them judge my products; here I used the principles for composing Iñupiaq décoration. I did not just copy their products. I had to master the

knowledge of the Iñupiaq designing and sewing culture in order to make my own unique clothing within the frame of reference of the Iñupiaq tradition.

My interpretations of their designing process have to a great extent been influenced by, and based on my own thoughts and experiences. To try to gain better insight into the differences between my previous experiences compared to theirs, I designed and made my own *atikhuk* – based on how I interpreted their thoughts and actions when designing. For an ‘instant learning’, I used video-recordings of one of the seamstresses. This allowed me to watch her designing process over and over again. In addition, I designed and made some samples of annuḡaaq decoration, which I regarded as falling within or without the ‘rules’ of their tradition. I would use these samples to talk to them about limitations and possibilities for the creation of designing within their tradition. I also recorded myself on video trying to talk when designing and making, intending to unveil my thoughts. However, I felt that my talking interrupted the design process; it was difficult to both think and talk simultaneously. This kind of talking can be seen as a kind of protocol for protocol analysis, which some design researchers think “... interferes with designing” (Lloyd, Lawson and Scott 1996: 461). This could actually change the designing process and make it less successful, or at least different than what it would have been if I had not spoken. When I watched the videotape afterward I had almost ‘forgotten’ to speak at all. During the designing process, I went into a concentration that made me forget to verbalize what I was thinking of.

The Path of Interpretations

I went to Alaska to investigate a designing process that I regarded as different from ‘ours’. When I got there, for a long time the similarities were prominent in my perceptions and I found it difficult to interpret their designing culture. My picture of their designing process became clearer during the interpretations. However, similarities are still striking between ‘their’ and ‘our’ designing culture, which will be interpreted later.

After finishing my fieldwork in Alaska and starting the next level of the process, namely the interpretation, I first made transcripts from the video tapes. All together, I had recorded almost one hundred hours during the two periods of fieldwork. Only some of these recordings seemed to be relevant to further interpretations – that is, observations of designing and dialogues. The rest of the recordings will be seen as context, which will be mentioned

whenever regarded interesting for the interpretation, such as instances from festivals and celebrations, old Iñupiaq clothing in museums and activities in Kaktovik. While listening to and watching the video tapes I chose to write from the most interesting parts according to the subject of the investigation.

On this level of the interpretations I was stuck. To find a way out back to a secure path, I went to *grounded theory* and the computer program NUD*IST. Inspired by the idea of intimate analysis of collected data (Glaser and Strauss 1967, Strauss and Corbin 1998), I imported the transcripts from the video into the program and started the narrow reading and coding process. The result was a lot of categories, codes, nodes, index trees, and memos. However, the interesting theory I expected to create did not emerge. Some of the memos I wrote were interesting thoughts about the empirical material. They emerged from the reading of the text I had made but not exactly from the narrow analysis word by word, line by line, and paragraph by paragraph.

I started the interpretation all over again, and suddenly I created the main metaphor – designing seen as improvisation. Actually this idea had been on the scene for a long time, as witnessed by the preliminary title of the project, “Improvisation within a Tradition” even before I went to Alaska for my first fieldwork. Further, I followed the path of *reflexive methodology*, which I found particularly relevant in the creation of the interpretations of the empiric material.

Reflexive Interpretation

The interpretation in this thesis is inspired by *reflexive methodology* (Alvesson and Sköldbberg 2000). Alvesson’s work (1996) can be seen as an application of *reflexive methodology*, where he develops the methodology for multiple interpretations of situations. Here he applies three types of interpretation to one empirical case of an information meeting in a big company. Separate interpretations are inspired by three different types of theories: one, critical-cultural inspired, another, Foucault-inspired, and a third inspired by a Habermas interpretation. Alvesson states that this is not the same as eclecticism, but is rather a method: “To interpret a given body of empirical material from different points of view...” (Alvesson 1996: 13). He maintains that such a multiple interpretive view is very rare. The advantages are that employing more than one interpretation can yield a richer understanding and “...encouraging the readers to make their own interpretations” (Alvesson 1996: 14). On the contrary when several theories

are merged into a single frame of reference, interpretive capacity can be lost. Multiple interpretations also emerge boundaries and blind spots of a particular theoretical perspective (Alvesson 1996: 14). This also means that the reflective (Alvesson and Skjöldberg 2000) character of the research becomes clearer. It is thus important that “the chosen theoretical sources of inspiration” (Alvesson 1996: 14) make the approach as ‘interesting’ as possible. Because reflexive methodology (Alvesson and Skjöldberg 2000) requires that the researcher has a certain depth of knowledge of the theories in play, I have chosen to concentrate here on the concepts of *practice* and *learning* in just two different theories: Schön’s theory of *the reflective practitioner* (Schön 1983, 1987) and Wenger’s theory of *communities of practice* (Lave and Wenger 1991, Wenger 1998). In my opinion, these sources of inspiration allow “for cross-fertilizations as well as certain friction” (Alvesson 1996: 15). The character of the empirical material is also different from Alvesson’s (1996) which were taken from one social situation. My fieldwork in Alaska lasted over several months during the winter of 1997 and the summer of 1998. Despite these differences, Alvesson (1996) has been of great inspiration to the present thesis.

Initially I wanted to find out about the thoughts of the seamstresses of Kaktovik. However, could I trust that what they said was what they really thought? Some of their talk was actually during the observation of the designing process, but did they talk because I was present, or did they usually talk to themselves and the materials in the act of sewing? I could never be sure, because it is difficult to ascertain whether they usually talked during the work. Perhaps they were not even conscious about if they talked or not, as I experienced myself during my own designing and sewing process. I video-recorded myself. I experienced that talking during the designing disturbed the concentration of the process, I was distracted. This could actually change the designing process and make it less successful, or at least different than what it would have been if I had not spoken. When I watched the videotape afterward I had almost ‘forgotten’ to speak at all. During the designing process, I went into a concentration that made me forget to verbalize what I was thinking of.

To reveal any underlying meaning in a *hermeneutical* sense is not my main purpose in this investigation. The focus is what the seamstresses did and said during the designing and making of the annuġaat, and also to reveal what knowledge and experience in designing their actions were based upon. I wanted to learn what was going on during the designing of contemporary Iñupiaq clothing.

In the writing of my story of the designing of annuġaat in this thesis, I admit that the results are my own view, not theirs, although I have tried to learn how they think and act when designing (Fine 1998, Clifford and Marcus 1986). To me the seamstresses from Kaktovik, and I myself, are more ‘ourselves’ – in opposition to the academic designers from Norway and other Western countries, who are the ‘others’. This opinion reflects the dichotomy I have constructed for a discussion between vernacular design and academic design. Or could it be that I do not belong to any of them, neither the vernacular nor the academic? Even though I am educated as an art and design teacher, in sewing I am almost an autodidact or educated through tradition represented by my mother and grandmother. This is quite similar to the Iñupiaq seamstresses. In addition, I have developed my sewing skills by sewing clothing for other people, a practice not so different from the Iñupiaq.

I cannot be sure that my picture is an intersubjective picture of the designing process of annuġaat, even if my interpretations of what they said and did are. However, if we want to learn more about the designing process, here represented by the Iñupiaq clothing as a case of vernacular designing, we have to do empirical investigations. Postmodernism’s fear of empirical material (Alvesson and Sköldbberg 2000) would prevent the investigation from accessing important knowledge of the designing process. In order to avoid giving a fixed, ‘objective’, one-dimensional picture of the Iñupiaq designing process, I have tried to make visible different possible interpretations. I cannot give a complete picture of the designing process of Iñupiaq clothing – but hopefully some interesting pieces of a puzzle. To indicate the distinction between the constructed empirical material and my interpretations, I have principally written the first in the past tense, and the latter in the present tense.

The interpretations on this level are not closely bounded/ tied to the empirical materials. I was of course not able to record everything interesting during the fieldwork. The empirical material gave rise to new ideas, which are of course discussed. Inspired of the concept of ‘thick description’ (Geertz 1973), I participated in the everyday life in Kaktovik, as a venue where the designing process took place. Some aspects of the context I found relevant for interpretation, like the seamstresses switching back and forth between sewing and other duties. In the interpretations only some specific, selected situations are ‘thickly described’, preferentially from the observations and the talking with the key informants (Alvesson and Sköldbberg, 2000: 242), my seamstress colleagues ‘Joanna’ and ‘Victoria’.

Initially one reason for carrying out this project was to criticize the common way of regarding designing. In this sense, this project is inspired of *critical theory*. In the final level of the interpretation, I discuss the interpretation of the designing process of Iñupiaq clothing against the academic view of what constitutes designing processes. This is a profession-critical discussion of the designing process.

‘The linguistic turn’ is especially associated with postmodernism and the focus on text (Alvesson and Sköldberg 2000). One reason for this dominant interest in text in recent research is perhaps the fact that the researchers’ primary medium is written texts. Visual media are infrequently their channel of expression – as opposed to researchers of the ‘making discipline’ of design (Dunin-Woyseth and Michl 2001). My interpretations would have been impossible and meaningless without using the visual medium to supplement and add meaning to the written text. The growing research on, of, and in visual design will perhaps contribute to a design ‘visual turn’ of research (LaSpina 1998). The visual is an important and growing part of the world – not least because of the visual mass media. Actually, scholars are now discussing the development of multimodal concepts (Kress and van Leeuwen 2001).

This is a research project on *female* textile cultural traditions. I do not intend to discuss here, any more than other researchers discuss their investigations of what are *male* cultural traditions. To me research on a *female* tradition is *regular* research and not special case research.

A critical view of how designing, and in particular vernacular designing, theoretically are described, hopefully helps us to see new aspects and to gain new understanding about designing, to make new metaphors and ways of seeing the designing process.

Starting with this research project’s earliest inception while I was in Afghanistan, through my masters project in Selbu, and culminating in Kaktovik, the focus of research is narrowed to how the women of Kaktovik practice and learn designing of contemporary Iñupiaq clothing. The concepts of design and vernacular design are discussed. Then I go on to clarify the theoretical point of view as *rhetorical-pragmatic situationalism*. In line with this view I have given a detailed framework narrative of me as subject of research (the researcher and main interpretator) and as part of the object of research, as a learning practitioner hailing from outside the local culture. In the review of the Status Questionis I stressed both design research with a

focus on the vernacular aspect, as well as research into the Iñupiat and their community, with the main focus on the annuġaat.

To summing up, my path through this investigation has been based on ethnographic fieldwork in Alaska in 1997 and 1998, through participant observations of seamstress practices and learning, mainly from Kaktovik, together with interviews that were conducted as dialogues with these seamstresses, and practical research by actually designing and making in textile within the Iñupiaq tradition. The interpretations are inspired by reflexive methodology, based on two different theories, as outlined in Chapter *Practice and Learning in Iñupiaq Vernacular Design*.

As an introduction to the investigations, I now give an account of the context – the people, the place and the case – the *Iñupiat*, *Kaktovik* and *annuġaat*.

The Iñupiat, Kaktovik and Iñupiaq Clothing

I now continue by presenting the context in which the seamstresses of Kaktovik practice and learn the designing of contemporary annuġaat. The social and cultural contest is that of the Iñupiat – the people the seamstresses belong to. This is followed by a brief history of the village and a short account of annuġaat ending up with the contemporary garments made from manufactured fabrics.

THE IÑUPIAT

There are about 150,000 Inuit living in Alaska, Canada, Kalaallit Nunaat and Russia (Inuit Circumpolar Conference Alaska 2006). Within the broad category of Inuit, the Iñupiat number about 13,500⁴⁵ (Alaska Native Language Center 2006) and are mainly located in the North Slope Borough, the Northwest Arctic Borough, and most of the Nome Borough – in the northern coastal and northwest areas of Alaska. The total population of the state of Alaska is approximately 627,000. The Iñupiat now live mainly in villages and towns from the community of Unalakleet in the Norton Sound on the Bering Sea at the west coast of Alaska (Burch 1998) and across the North Slope of Alaska, all the way to the Mackenzie River Delta in northwest Canada. They are bordered by the Brooks Range to the south, while the northern boundary is the coast of the Arctic Ocean. Some Iñupiat also live in the cities of Fairbanks and Anchorage, both outside and south of their core area in northern Alaska.

45 “The word *Iñupiat*’ means ‘authentic’ or ‘special’ human beings” (Burch 1998: 3).



Figure 7 Map

Already in 1870 Dall mentioned the name Inuit: "The Inuit Tribes. - The Inuit of Alaska extend everywhere along the coast, from Mount St. Elias northward, to Point Barrow, and eastward to the Mackenzie" (Dall 1870: 401). Mount St. Elias is located near the southernmost point of the south-north axis which constitutes the Alaskan-Canadian border. In 1971, the first Inuit Circumpolar Conference with participants from Kalaallit Nunaat, Canada and Alaska, took the decision to recognize the name change advocated by those ethnic groups that were formerly called *Eskimo* to *Inuit*. This was a political decision taken as a mark of self-respect and to transcend the stigmatization that they endured when referred to as Eskimos. In Alaska, many people still call themselves Eskimos in everyday speech. One reason is perhaps that they continue the colonial custom they have become used to, and thus it can be difficult to change a lifetime habit simply by means of a

political resolution at a conference. Another possible explanation is that Inuit is the name people in Canada call themselves in their traditional dialect of the language. In north Alaska, they call themselves Iñupiat.

In pre-contact times the various peoples Europeans subsequently referred to as Eskimos did not have a general all-encompassing name for themselves. Their custom was to call themselves by their local group name, and refer to others in like manner. The name they called themselves usually mean 'the real people', such as Inuit in Canada and Iñupiat in Alaska.

The Native language of the Iñupiat is the *Inuit-Iñupiaq*. Inuit peoples all the way from northwest Alaska, through Canada to Kalaallit Nunaat speak Inuit-Iñupiaq in different dialects (Woodbury 1984: 56). These dialects are as different as the Scandinavian languages Norwegian, Swedish, and Danish. The Inuit in southwest and southern Alaska talk *Yup'ik* – also called Western Eskimo (Kaplan 2006), which is as different from Iñupiaq – or Eastern Eskimo – as English is from German⁴⁶. Today, the first language of most of the Iñupiat of Alaska younger than forty-five to fifty years of age is English. In Alaska, only about 3,000, out of 13,500 Iñupiat, speak the Iñupiaq language. This is due to the assimilation policies of the USA towards the pre-contact indigenous inhabitants, including the Inuit. This is manifested in such things as the use of the English language in schools, and to the general Anglophone development of the society, including the media. However, today in the North Slope Borough School District all the schools teach the Iñupiaq language one lesson every day in an effort to keep the language alive.

Iñupiaq meaning "real or genuine person" (*inuk*: person + *-piaq*: real, genuine). This form is singular ("He is an *Iñupiaq* ") and also an adjective ("She is an *Iñupiaq* woman"). The plural form of this noun is Iñupiat, referring to the people collectively ("the Iñupiat of the North Slope"). In Canada, about 24,000 of 31,000 Inuit speak Inuit-Iñupiaq, and in Kalaallit Nunaat, 46,000 of a population of 46,400 are speakers (Alaska Native Language Center 2006).

⁴⁶ Personal communication, Lawrence D. Kaplan January 1998.

THE KAKTOVIK VILLAGE

Kaktovik is located on Barter Island at the eastern end of the north coast of Alaska. The village is located in the North Slope Borough, which includes the northern part of Alaska from the Canadian border on the east to the Bering Strait on the west, and extends as far south as the Brooks Range. Kaktovik is one of the most remote villages in Alaska. The nearest neighbouring settlement is the oil field of Prudhoe Bay, also called Dead Horse about 200 km to the west. Eastwards on the other side, the Canadian border is located near Demarcation Point, about 100 km distant, and the nearest village is the Canadian village of Aklavik 200 km away. The nearest city from Kaktovik is Fairbanks in the middle of Alaska, 650 km away. To the south is the flat uninhabited tundra for 80 km, and then the pointed mountain peaks of the Brooks Range which reach heights of 3000-4000 meters. In a valley between these mountains lies the village of Anaktuvuk Pass. The northern boundary is the Arctic Ocean stretching all the way to the North Pole. Kaktovik is located at 70° 07'N, 143° 40'W, approximately as far north as Tromsø in Norway, but directly across, on the other side of the North Pole. Barter Island is a tundra plateau 6.5 km across and separated from the mainland by narrow channels and lagoons (Nielson 1977: 1).

The long distances and lack of road links to the outside world might indicate that the inhabitants of Kaktovik are very isolated; however, despite the remote location they travel a great deal. In earlier periods of their history, the Kaktovimiut travelled with dogsled teams and covered vast distances. Today they usually go by airplane. During the winter it is possible to travel by snow-scooter to the nearest villages in Canada, and to the mountains for hunting and fishing. During summer, the Kaktovimiut go by boat, on vacation to Canada, to their fishing camps near the village, and occasionally as far as Barrow, the capital of North Slope Borough 500 km away.

In 1998, Kaktovik residents numbered approximately 286; nearly 88 percent of residents were Iñupiat (North Slope Borough 2006). The few non-Iñupiaq in the community live there mainly for short periods. The village was in a period of growth due, among other things, to the fact that descendants of people who moved from Barter Island now were moving back. The village had a square urban grid plan, with avenues one direction and streets the other. The majority of the houses were prefabricated wooden structures built on poles to raise them above the always freezing and thawing tundra. The only dry ground consisted of a number of gravel roads. Many of the households had a truck or a car, or at least an ATV – all terrain vehicle with four wheels

– that is designed for use on various types of terrain – and almost everyone had a snowmobile for winter transport. The houses were equipped with electricity and oil heating. The newest houses had indoor plumbing, and the remainder were to have the same facilities in the coming years. Thanks to big common antennae, everybody had access to massive numbers of TV channels, both the commercial kind common to the rest of the USA and non-commercial public channels for natives of Alaska and Canada. Everybody was linked by telephone, usually a cordless one, with the possibility of communications with the whole world. In addition, all the households and businesses, as well as the boats, had citizen-band two-way radios (CBs), which meant that at all hours people could talk and listen to everybody else in the village. The message might be about a meeting, to announce the departure for the next flight from the airport, a boat on the ocean in trouble, or just to say 'good morning', 'good afternoon', as somebody usually did every day. The CB seemed to be very important for the social intercourse in the village, especially in the wintertime when the cold snowy weather sometimes made people house-bound. Kaktovik is located in the coldest part of Alaska; during the winter temperatures of -40°C were common, and the temperature sometimes dipped as low as -50° to -60°C , the average temperature in February is -20° (Reitan 1988: 12). Summer temperatures when I was there were 5 - 10°C , and 17°C was the highest, which was regarded as a hot summer. The average temperature in June is 5°C (Reitan 1988: 12). In comparison, Fairbanks in the middle of Alaska often has summer temperatures of 25 - 30°C .

At the present site, they also built a new school, very well equipped with computers having internet and email connections, library, gym, etc. Other institutions were the Community Building, the Presbyterian Church, the US Post Office, the Police Station, the Health Clinic, the Fire Station, the Department of Municipal Services with all the vehicles for water, sewage, roadwork, snow trucks, school bus, seniors' bus, etc. The village had two general stores, two hotels with restaurants serving very plain basic food, an amusement centre offering different kinds of snacks. Every Monday and Thursday people 'go bingo' at the Community Building, and the pull tab room was open every working day. Some of the businesses in the village were private and others were cooperatives.

Barter Island, as the elders still call the community, instead of Kaktovik, indicates the mercantile role of the site, a traditional place for trading between Inuit people from Canada and those from Barrow in Alaska, as well as other Iñupiat and other Native Americans from the mountains of the Brook

Ranges (Nielson 1977). Jenness (1957: 151) who did archaeological investigation in the area in 1914, like Brower (n.d.: 779), ascribes the name ‘Barter Island’ to the explorer Sir John Franklin, who passed through the area in 1826 (Libbey 1983: 5). “The Western Esquimaux having purchased the furs from those men that dwell near the Mackenzie, at Barter Island, proceed to the westward again without delay” (Franklin quoted in Jenness 1957: 151).

Jenness reports that Franklin did not mention an Eskimo name, but he states that the local natives at the end of the 1800s called the place “karktorvik: ‘the place where people used to seine.’ That time and later, it was a popular fishing place, which could adequately account for the name...” (Jenness 1957: 151). However, Jenness’ Iñupiaq guide told him another story as an explanation of the name, “a distracted father who, after a long search, discovered the body of his murdered son, caught in the meshes of his own fishing net” (Jenness 1957: 152). These are the two different explanations of the origin of the present name Kaktovik. In 1964, the people living on Barter Island decided to give their village the Iñupiaq name *Kaktovik*⁴⁷.

Today's village of Kaktovik is not really an old settlement. This part of Alaska was for a long period not permanently inhabited due to the lack of a means of subsistence. Nearby, where the airport is currently located there are ruins of a previous village. In 1914, the anthropologist Diamond Jenness, together with the Iñupiaq families of “Ayacook” and “Terigloo” (Jenness 1957: 187), excavated two sites on the north shore of Barter Island. They found a large number of whale ribs from old sod houses constructed over a framework of whalebones, a feature that indicates the inhabitants had once been whaling (Jacobson and Wentworth 1982: 3). Investigations indicate that the inhabitants left the village 500 years ago. Possibly, they moved eastwards through today's Canada, such that their descendants reached as far as Kalaallit Nunaat. During the centuries between the existence of this old village and today's Kaktovik, people moved and travelled back and forth through the area all the way from the Mackenzie River Delta in the east to the western part of Alaska.

During the first decades of the twentieth century Iñupiat of the north slope of Alaska occasionally lived in the area surrounding present-day Kaktovik, usually during summer. At that period they subsisted by hunting whales, seals and walrus, as well as ducks along the shore, and trapping of fox, wolf and wolverine (Jacobson and Wentworth 1982: 3, Nielson 1977: 1) – among

47 English spelling of what is phonetically *Qaaktugvik* in Inupiaq.

other pelts, their fox furs were sent for sale to the fashion houses of Europe and the USA. The summer was devoted to caribou hunting. The whaling, which dominated the local economy at the century's cusp, began to decline, largely because whale baleen corsets were going out of fashion in Europe and North America. The white whalers were looking for alternative sources of income. One such whaler was the Scot, Tom Gordon, who came into the area in the end of the 1880s (Brower n.d.). Some years later, he settled permanently in the north of Alaska and married an Iñupiaq woman. His first wife died in 1902, in one of the terrible measles epidemics that accompanied the arrival of the whites, at the same time as Gordon's companion Charles Brower's first wife passed away.

Tom Gordon later married another Iñupiaq woman *Agiak* and they settled at Point Barrow, the very northernmost spit of Alaska, and lived there for some years. After the crisis in the whaling occurred, Charles Brower who had established a whaling and trading station in Utqiagvik, near present-day Barrow, encouraged Tom Gordon to go eastward to establish a trading post for fur trading for the Cape Smythe Whaling and Trading Company in partnership with the fur trading company H.B. Liebes of San Francisco, as many other former commercial whalers along the Beaufort seacoast (Jacobson and Wentworth 1982: 3). In 1917, Tom Gordon and his family moved to Demarcation Point at the border to Canada, and built a trading post on the site still called Gordon. His wife *Agiak's* younger brother Andrew Akootchook and family also followed, as did Andrew's wife Susie's parents. After a year, Andrew and his family were looking for a better area for their hunting and fishing subsistence. They settled near the ruins of the abandoned village at Barter Island, an area where other Iñupiat families from the North Slope lived as well.

In 1923, on the basis of Andrew Akootchook's recommendation – he had been living there since 1919 (Kaveolook 1977: 1) – Tom Gordon and family moved to Barter Island as well. The oldest son, Gordon was left to continue the trading post at Demarcation Point, and Tom established another one, near the present site of Kaktovik, on the north western part of Barter Island; this they called *Iglukpaluk*.⁴⁸ Today the establishing of the trading post at Barter Island can be seen as the foundation of the village. Since then the island has been inhabited, but the Akootchooks are the only family who have lived there permanently since. Other families have moved back and forth, depending on the possibilities for support. When Tom Gordon had a stroke about 1938, and

48 Meaning: "big house seen from far away" (Jacobson and Wentworth 1982: 12).

died in Barrow a year or two after (Kaveolook 1977: 2), nobody took over the fur trading because the fur era was over. Some of the people from the area then moved to Canada (Jacobson and Wentworth 1982: 4).

Susie and Andrew Akootchook are the parents of Elizabeth Franz, one of my informants. The British botanist Isobel Hutchison visited Barter Island and the home of the Akootchooks' in October 1933. She reports about the Akootchooks' that: "The house was the usual Eskimo dwelling of driftwood, but contained a sewing-machine beside the stove and bunks, and the walls were decorated with religious pictures and texts" (Hutchison 1934: 166). This means that Elizabeth's family as early as in 1933 owned a sewing-machine, when she was only 3 years old.

Many of the people who moved to Barter Island came from Barrow. However, conversations Burch had with old people from the Nuataagmiut, the people who were living in the Upper Noatak River in Northwest Alaska, indicate that some of them came from that area (Burch 1998: 109). Isaac Akootchook, one of the elders in Kaktovik, confirmed this information to me⁴⁹. This seems to indicate that the sewing tradition in Kaktovik cannot merely be traced back to the Barrow region. One reason for the quite continuous and contiguous culture all over the North Slope was that people moved and travelled.

As a result of the Cold War, in the late 1940s the United States Air Force established its Distant Early Warning (DEW line) radar network throughout the Arctic and located its main installation at Kaktovik (Nielson 1977: 1). The building of the station provided paid employment for the local people. The US Air Force needed an airport and considered the sand spit to be the best location. The consequence of this decision was that the people living in that area had to move to another site chosen for them by the Air Force. In 1947, the old village was bulldozed, barricaded by oil drums and covered with cement. At the new site, which "was along a slowly-eroding section of beach and in the landing pattern of the airfield (Nielson 1977: 4), the Iñupiat had to build houses of cast-off military lumber and Quonset huts (Jacobson and Wentworth 1982: v). The Inhabitants did not understand why they were told to move and could not protest and fight against it, because they did not know the English language well enough at the time (Daniel Akootchook in Nielson 1977: 4). In 1953 the village was relocated again, in the same manner as the previous time (Nielson 1977: 5).

⁴⁹ Personal communication, September 1998.

Harold Kaveolook, an Iñupiaq from Barrow, was encouraged by the Bureau of Indian Affairs to move to Barter Island to establish a school for the children in the area in 1951 (Chance 1990: 65). The present school is named the *Harold Kaveolook School* after him. The school was another motivation for settling in the village, and the families living in the surrounding area, in addition to families who had been living in Canada and other places, who thus attracted, moved to the village and settled down. As well, work on the DEW Line Station also attracted young men, Iñupiat and some *taniit* from other places. Some of these young men married the young women of Barter Island, and they are now the grandparents of Kaktovik. From 1950 to 1953 the number of inhabitants in the village increased from 46 to 140 (Reitan 1988: 18). The establishment of the DEW line “radically altered the cultural, socio-economic and settlement patterns of Kaktovik” (Nielson 1977: 2), from essentially a hunting community with a trading post, the community moved into a market economy, although hunting and whaling continue, even when I was there, to be important expressions of Inuit identity, as well as a way of procuring meat, which is very expensive in the village stores.

Some of the Iñupiat men who moved from other villages for jobs on the DEW Line Station grew up within the tradition of subsistence whaling. In 1964 (Reitan 1988: 31), they re-established the first traditional Iñupiaq whaling crew at Kaktovik, and they caught the first bowhead whale that year (Kaveolook 1977: 2). During my visit in 1998, ten crews took part in the whaling, and they caught their quota of five whales. I had the exceptional opportunity to join the crew of ‘my’ family, who actually caught the first whale that year, Herman Aishanna was the Whaling Captain and his son Freddie Co-captain and boat operator. The whales are exclusively for local consumption and the meat, as well as the favourite food *maktak* – whale skin with blubber, are shared among all the Iñupiat in the village and some relatives outside, with meat and blubber distributed according to traditional rules (Reitan 1988).

In 1964, the Air Force ordered the third move of the village, however, this time the Air Force at least conducted negotiations with the village council and other authorities before issuing their orders (Nielson 1977: 5). This time the inhabitants agreed because the site where the Air Force had first moved them was not good. Some of the houses were about to fall into the ocean owing to soil erosion caused by permafrost thawing and the action of the waves. The US Air Force promised to help move the houses to the new and present site, but they did not keep their promise. In the end, the inhabitants had to do all the work themselves. This is still the present site of Kaktovik

village. On March 26, 1971, the City of Kaktovik was incorporated, a city of 'second grade'. This included an elected local council and a mayor. The 1970s was a decade that saw an upsurge in the struggle for aboriginal rights, including the right to practice traditional subsistence activities, like whaling.



Figure 8 "Barter Island, Brooks Range, 1963".
© Brickley Collection, Library and Archives, Anchorage Museum at Rasmuson Center

In 1972, as a result of Iñupiat political pressure in the face of petroleum development in the area, the North Slope Borough was founded in order to take care of administrative needs of the local people. The borough includes the villages of Kaktovik, Anaktuvuk Pass, Nuiqsut, Atkasuk, Point Hope, Point Lay, Wainwright, and Barrow, the capital of North Slope Borough. One main task for the borough is to manage the income obtained by the Iñupiat from the oil industry. In 1968, the largest oil find in North America was made at Prudhoe Bay on the North Slope of Alaska (Jacobson and Wentworth 1982: v). Unlike many other natives, the Iñupiat managed to take control of the income from the oil fields, according to the terms of the Alaska Settlement Act of December 1971 (Jacobson and Wentworth 1982: v). They organized native corporations in each village and a common welfare system for the North Slope Borough. This means they built a welfare community to



Figure 9 Kaktovik 1997-98

take care of the inhabitants' needs like healthcare, housing, schooling, etc. In addition, all shareholders and their children were paid an amount of money every year. All the welfare activities also provided employment for many of the inhabitants. Some few were also employed in the oil industry. The result was that no one in Kaktovik was unemployed; instead, they sometimes had to import labour from outside in order to have a sufficient workforce. Some people did not want paid employment because they preferred to live the traditional way by hunting, trapping and fishing. Others, mostly women wanted to work at home.

The DEW line was closed down and the US Air Force left after the collapse of the Soviet Union in the 1990s. Even the characteristic big radar dishes were removed between my first trip to Kaktovik in 1994 and my return in 1997. The creation of new jobs is a challenge. Some people of Kaktovik work on the oil rigs at Prudhoe Bay 200 km away, where they go by plane for fourteen-day work shifts. However, these oil fields will not last forever. Kaktovik is just outside of the Arctic National Wildlife Refuge. The next big issue is drilling for oil in the Arctic National Wildlife Refuge, and Kaktovik is split over this issue. Their support has been taken for granted by those with economic and political power; however:

... when a delegation of U.S. senators and Cabinet secretaries landed on the unpaved runway here last month, an unusual sight greeted them: the first protest anyone can remember in Kaktovik. A handful of residents chanted slogans and unfurled signs opposing oil drilling, reflecting a small but significant shift in sentiment against proposed legislation that would permit drilling on the nearby tundra (Blum 2005).

After this brief history of the village of Kaktovik I will now focus on the annuġaat.

CONTEMPORARY TRADITIONAL CLOTHING FROM KAKTOVIK

The contemporary annuġaat is part of a living tradition that is still developing. In this chapter, I first set the contemporary clothing within a historical context, and then present a more thorough description of the qupak – the trim on the garments – that is the main focus in this investigation of

how the women of Kaktovik practice and learn designing of contemporary Iñupiaq clothing.

The Tradition of the Fabric Annuġaat

Adoption and adaptation were – and had long been – important phenomena in Iñupiaq culture, enabling the people to survive under many different conditions (see also Margaret Lantis in personal communication with Chance 1990: 61). The Iñupiat learned from others, such as the *taniit* whalers, traders, missionaries and teachers – whenever they saw something that could improve and develop their own practices: guns for hunting, snowmobiles for transportation and engines on their boats. Before that they traded and exchanged goods and ideas with other indigenous people, such as Indians and Inuit from present-day Canada, southern Alaska or Siberia. These people again traded with others, among them Englishmen in Canada or Russians in Siberia (Jenness 1962).

Before the 1870s, when the first white commercial whalers arrived (Hooper 1881: 39, Bockstoe 1986), the common annuġaat was made of fur or skin. Except for clothing and footwear that required protection from precipitation and was usually made of sealskin or intestines, the most common clothing material was hides of *caribou* – the wild reindeer. The caribou fur had different colours, or darker and lighter parts (Dall 1870: 22). If the women once in a while for special use added trim to these garments, they usually made a simple trim, as e.g. stripes or mosaic of alternate dark and light rectangles as lines at the hem of the annuġaaq. Although the caribou usually were light coloured on the ventral or stomach surface, they lacked the bright white colour. However, the Iñupiat obtained white domestic reindeer fur by trading with peoples from Siberia, on the other side of the Bering Strait. Probably, they also adopted the Siberian custom of making patterns (Issenman 1997: 105), and adapted this to their own custom of fur clothing. This style was composed of a mosaic of dark and light reindeer or caribou fur made of many small pieces sewn together in complicated patterns. Traces of this style remained in the contemporary fur *fancy* atigit that some Iñupiat women make, and even use in the Native Dress Competition at the World Eskimo Indian Olympics (WEIO) every summer in Fairbanks.



Figure 10 a. Evelyn Anuyak Reitan winning the Native Dress Competition and b. participating with her son Martin Apayauq Reitan in the Baby Contest for Eskimo skin clothing at the World Eskimo Indian Olympics, Fairbanks July 1998.



Figure 11 a. A woman's frock "...from the head of Norton sound". National Museum of Natural History (NMNH 176105) and b. a frock, or atigi, from the Iñupiaq district around Point Barrow (NMNH 74041).

Regarding a construction of a history of annuġaat, it is somewhat problematic that different writers have used different names for the same people, and also not been clear about the division between Iñupiat and Yup'ik, as e.g. Nelson (Nelson 1983 [1899]). One of the objects Nelson collected on his way to Point Barrow in 1881 is of particular interest and relevance – a woman's frock (Nelson 1983 [1899]: 55 Pl. XVIII,) (Fig. 11a) "...from the head of Norton sound..." (Nelson 1983 [1899]: 36), without any further specifications of the origin. What Nelson did not know was that he was in the border area between the two main groups of Inuit; the Iñupiaq-speakers living in North Alaska, Canada and Kalaallit Nunaat, on one hand, and on the other, the Yup'ik-speakers from the south shore of Norton Sound to the Prince William Sound in South Alaska, and to Chukchi in Siberia on the west side of the Bering Strait. These two groups have different languages, each with a number of different dialects and cultures (Fitzhugh 1983: 19).

However, Nelson recognized that the “Western Eskimo”, as he called them, from Point Barrow to Kuskokwim River were divided into two distinct, what he calls, dialects (Nelson 1983 [1899]: 24), which actually now are recognized as two different languages – Yup’ik and Iñupiaq. The people “...are not separated by physical barriers...” he says, and he thought they very quickly learned to understand each other, although he says distinction between the Unalit and the Malemut is considerable. Today we know the Unalit were Yup’ik-speaking, and the Malemut Iñupiaq speaking (Fitzhugh 1983: 19), in other words, languages as different as English is from German⁵⁰ (see p. 85). In the chapter *Distribution of Tribes and Dialects* Nelson points out that in previous times the southern limit of the Malemut was at the head of Norton Bay, and “... now the people at Shaktolik and Unalaklit are mainly Malemut or a mixture of Malemut and Unalit” (Nelson 1983 [1899]: 24). Shaktolik was the northern boundary of the Unaligmut, and was Yup’ik-speaking when Nelson was in this area in 1877-81. Today Unalakleet is the southern boundary of the Iñupiaq language. This means that “the head of Norton sound” was very probably in the Malemut part of the area, which was within the Iñupiaq-speaking area. In addition, both the Iñupiat and the Yup’ik had a nomadic or semi-nomadic life at that time, and depending of the time of the year they went north or south, east or west, following their game animals. Consequently, in my opinion, the most probable origin of this frock is Iñupiaq. It is possible that Iñupiaq and Yup’ik in this mixed area wore the same kind of clothing, but it is not probable. As Fitzhugh writes there are considerable differences “seen both in the types of implements found and in the types of decoration applied to them” north and south of St. Michael and Norton Sound...” (Fitzhugh 1983:17). Nelson continues to describe in detail what the frocks looked like. In particular he examines minutely a garment (Accession No. 64272) from Cape Prince of Wales (Nelson 1983 [1899]: 35) at the edge of the Bering Strait, which for certain is in the Iñupiaq area. Nelson writes that the general style of the garments is practically identical in pattern northward from Point Barrow to the Yukon mouth (Nelson 1983 [1899]: 31), which is close to the south shore of Norton Sound. Most of this area, northward from the head of Norton Sound, we now know was territory of the Iñupiat. Murdoch (1988 [1892]: 118, Fig. 61) includes a drawing of a frock, or atigi, from the Iñupiaq district around Point Barrow, and this drawing shows a frock quite similar to that mentioned and collected by Nelson at “the head of Norton sound” (Nelson 1983 [1899]: 36). This strengthens the theory that the frock Nelson collected is Iñupiaq and not Yup’ik.

⁵⁰ Personal communication, Lawrence D. Kaplan January 1998.

Henry B. Collins discusses the problem about the boundary between Yup'ik and Iñupiat in the area where Nelson collected the artefacts, north and south of Norton Sound in West Alaska. "Eskimo houses north and south of Norton Sound differed fundamentally in structure. Their clothing, hunting technology, art, and ceremonial traditions were also distinct" (Collins 1982: 30). However, when Fitzhugh and Kaplan describe the territory of what they call the Bering Sea Eskimo, who are Yup'ik, they say "...between Bering Strait and the Aleutian Islands..." (Fitzhugh and Kaplan 1982: 13). In my opinion it is more correct to say the Norton Sound instead of the Bering Strait because the northern shore of the Norton Sound and the Alaskan side of the Bering Strait are inhabited by the Iñupiat, with the exception of Cape Darby. This border is important to know when determining whether some of the artefacts in the collection of Nelson are Yup'ik or Iñupiaq, e.g. the woman's frock from "the head of Norton Sound" (Fitzhugh and Kaplan 1982: 138). In this book about the Bering Sea Eskimo, they also show a lot of specimens which are Iñupiaq without saying so, which can be confusing. They write, "Eskimos living about Bering Strait can determine the homeland of an individual by noting the cut of his or her garment, the shape of his boat, as well as the kind of ornaments he or she wears". However, in the Bering Strait the inhabitants are and were Iñupiat, not Bering Sea, or Yup'ik. The authors stress the differences between the Yup'ik and Iñupiat, but they do not follow up this distinction either in text or in the choice of illustrations. I see the same problems as in *Crossroads of Continents* (Fitzhugh and Crowell 1988). It is difficult to know which artefacts are Yup'ik and which are Iñupiaq. About the women's frocks – or atigi – in this book they show both the one from Nelson's collection and call it Bering Sea Eskimo (Fitzhugh and Crowell 1988: 43, Fig. 41⁵¹) (see Fig. 11a), and the one collected by Murdoch in Point Barrow (Fitzhugh and Crowell 1988: 214, Fig. 276⁵²) (see Fig. 11b). They do not mention the similarities and the remarkable thing that these almost identical frocks could exist in two quite different cultures. In a new edition of her book from 1975 *The Eskimos of the Bering Strait 1650-1898*, Ray says, "...Iñupiat from Unalakleet to northern Alaska and across Canada" (Ray 1992 [1975]: xii). This means that her determination of the border of Iñupiat differs from Fitzhugh's, who mentions Bering Strait as a Yup'ik area (Fitzhugh and Kaplan 1982: 13). The understanding of the north/south border between the Iñupiat and the Yup'ik is important for the understanding of the

51 National Museum of Natural History (Washington D.C.) No.176105: Fur parka, Bering Sea Eskimo, Nelson, col. 1878-81, Alaska, 131 cm. (h), arctic ground squirrel skins, reindeer- and marmot-skin, red-dyed leather, wolf and wolverine fur trim.

52 National Museum of Natural History (Washington D.C.) No.74041: Parka, North Alaskan Eskimo. Ray, col. 1881-83, Point Barrow, Alaska. 110 cm. (l), caribou, reindeer, and mountain sheep skin, wolf and marten fur trim, dyed leather, red yarn, sinew.

origin of the woman's frock from 'the head of Norton Sound', which actually is north of Unalakleet but south of the Bering Strait.

Dall (1870), in describing the clothing from the Point Barrow area states that: "The northern tribes are not as proficient in embroidery as those of Norton Sound, and their garments are much more plainly made and deficient in trimming" (1870: 410). Nelson, to the contrary, who visited the area in 1881, points out that: "From the Yukon mouth northward the women's frocks are much more handsomely made, the mottled white skin of the tame reindeer, obtained from the Siberian people, affording good material for the production of ornamental patterns. Some of these garments are very richly ornamented..." (Nelson 1983 [1899]: 35). As a parallel, the contemporary Yup'ik fabric parkas are trimmed with readymade tapes, while the Iñupiat atiklukiit are often trimmed with handmade compositions of tapes called qupak.

However, as early as in 1855 John Simpson mentioned Iñupiat wearing fabric clothing:

It would be impossible to enumerate the varieties of dress we witnessed at the grand summer dance, when, among new skin coats, might be seen the clean white-cotton shirt and the greasy and tattered Guernsey frock, besides others made up of odds and ends, such as cotton or silk handkerchiefs procured at the ship, showing that they were bound by no rule as to dress on the occasion (Simpson 1875: 243).

As mentioned in *Status Questionis*, these fabric garments were probably not yet developed and adapted to a distinguished Iñupiat style, but still followed the prevailing, mainly Euro-American Victorian style of the day. In 1881-82, the scientist John Murdoch recognized the Iñupiat use of fabric clothing. Concerning materials, Murdoch, like Nelson, mentions that: "The clothing of these people is as a rule made entirely of skins, though of late years drilling and calico are used for some parts of the dress which will be afterwards described" (Murdoch 1988 [1892]: 109). He adds that surprisingly many wore ready-made clothing, in particular in summer when it is not too cold, in particular cast-off clothing obtained from ships' crews, but they usually preferred their skin clothing, except in "rare instances in the summer" (Murdoch 1988 [1892]: 109). Murdoch also mentions what we can regard as a precursor of the contemporary atigi and atikluk: "Of late years both sexes have adopted the habit of wearing over their clothes a loose hoodless frock of

cotton cloth, usually bright-colored calico, especially in blustery weather, when it is useful in keeping the drifting snow out of their furs” (Murdoch 1988 [1892]: 111).

Later, he also mentions skirts of white cotton for camouflage “when hunting on the ice or snow” (Murdoch 1988 [1892]: 122). From Murdoch’s observations, we know that the women’s atigi still had hip high splits at both sides in 1881-82. However, he adds that, “The women nowadays often line the outer frock with drilling, bright calico, or even bedticking, and then wear it with this side out” (Murdoch 1988 [1892]: 120). This description is not far from the contemporary atigi, a cover of cotton with a warm lining. “Calico”, as Murdoch mentioned had been adopted by the Iñupiat, meaning fabric or cloth in general⁵³, and is a name still in use among the Iñupiat. However, Murdoch was not impressed by the Iñupiat’s adoption and adaptation of the whites’ style of dress. He regrets that just a couple of youths learned the convenience of pockets, “and accordingly had ‘patch pockets’ of cloth sewed on the outside of the skirt of the inner frock” (Murdoch 1988 [1892]: 112). Compared to those days, today one big pocket, or one divided in two by means of a zipper, is a common feature of fabric Iñupiaq garments; however, on contemporary Iñupiaq skin atigi the pockets are usually missing.

Murdoch mentions the skins of tame reindeer obtained from Siberia. He continues to describe in detail the trim on skin clothing, made of narrow strips of different kinds of skin in different colours (Murdoch 1988 [1892]: 114), unlike the mosaic-patterned trim of contemporary Iñupiaq skin atigi. This old kind of trim seems more to have been an ancestor of the contemporary fabric trim than was the mosaic trim, which was probably adopted from Inuit in Siberia. When describing the details of the clothing, Murdoch mentions that one of the collected garments serves as the prototype, which suggests that the three collected frocks were slightly different (Murdoch 1988 [1892]: 113). As for contemporary clothing, “The chief variations in deerskin frocks is in the trimming” (Murdoch 1988 [1892]: 115). However, neither Nelson nor Murdoch and Ray mention trim on the fabric clothing.

Murdoch even mentions the children and how they learned. He seems impressed by the extreme affection of parents for their children, and also how the older children took care of the smaller ones (Murdoch 1988 [1892]: 417). About learning he says: “The young children appear to receive little or no

53 Original meaning: cotton cloth imported from India - Etymology: Calicut, India (Merriam-Webster 2006)

instruction except what they pick up in their play or from watching their elders” (Murdoch 1988 [1892]: 417). After telling how the boys learn hunting and whaling from early age, he continues to notice that the girls learn to sew by imitating their mothers.



Figure 12 Children wearing Western style of clothing.

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The style – or fashion (Martin 2001) – of Iñupiaq fabric clothing has changed through time, due to a dependence on the materials available. The textile materials the Iñupiat first started to use were flour sacks and bolsters as protection for the fur atigit – from blowing snow or freezing rain. The first male atigit were made of used flour sacks, the white colour of which was suitable for camouflage during hunting and trapping in wintertime. For purposes of camouflage, they still use white fabric covers outside their parkas for hunting during winter, and a dark colour during summer. In old pictures dating to the early part of the fabric epoch of annuġaat, we can even see men dressed in patterned fabric (e.g. Burch 1998: 92).



Figure 13 Western style of dress, worn under a fur atigi. In other words the reversal of the normal order of today.

© Lomen Collection, # 72-71-847, Archives, Alaska and Polar Regions Collections, Rasmuson Library, University of Alaska Fairbanks. Copyright 1903, "Eskimo Belles, Nome, Alaska".

When the white missionaries and teachers came to north Alaska, following on the heels of the whalers and traders, they enjoined the Inupiat women to wear ankle length Victorian style dresses inside or outside the fur atigit and "...deemed that women should not show their trousers..." (Issenman 1997: 108). This was a part of the U.S. assimilation policy (Jenness 1962: 27). Their goal was to Christianize the Inupiat. Traditionally the knee-length female skin atigi had high slits on each hip, something that the missionaries considered to be not only indecent but also a hindrance to the missionizing project. The white women, conforming to the costume style of the period, wore long skirts or dresses of Victorian fashion, often with a frill or valance underneath, even in the crisp and wintry conditions of Alaska. Photographs from that period show Inupiat women wearing the same Western style of dress, with the fur atigi covering it. Dorothy J. Ray tells an alternative theory about the origin of the female fabric atigi:

It is uncertain whether the Eskimos made up their own pattern for the original cloth parka with the wide bottom ruffle, as

some women maintain, or whether the idea was adapted from a Hawaiian garment brought to the Eskimos by traders from the islands. This tentlike gown was adapted by Hawaiian missionaries from the 'mother Hubbard,' which was apparently first illustrated in 1765 in Mother Goose's Melody (Ray 1977: 52).

Later they reversed this order and used the fabric dress as a cover for the fur atigi. When adapting the Hawaiian 'Mother Hubbards' gown to colder climate they added the hood with fur and a warm lining (Oakes 1991: 14). The female missionaries and teachers even arranged sewing courses to teach the Iñupiat women to make Western style clothing. These fabric garments were the point of departure for today's traditional annuġaat, instead of remaining a symbol of White culture, the Iñupiat have developed the originally Victorian style to a symbol of Iñupiat identity (Martin 2001). The fabrics they used were probably the same as the white women brought for their own clothing. At first, the female Iñupiaq fabric clothing was very similar to the regular clothing for white women. As elsewhere during the Victorian era, the dresses covering the fur atigit were floor-length, which was impractical for the life of the Iñupiat women. They were still a nomadic people travelling from place to place hunting, gathering and fishing. In particular, the latter two activities were women's work, and were carried out in addition to managing the household in the tents or in the sod houses. To make it possible to wear those covers over the fur atigit during their work activities they had to shorten them. The short pleated skirt⁵⁴ at the hemline was convenient for their purpose, because this made the skirt wide from the hips, while at the same time the garment's overall length hid their lust-inspiring, sinful legs.

This custom then developed into the contemporary fabric atigi, where the fur usually is replaced with quilted fabric lining material. For special use, they still use fur for linings, as for children's garments and for hunting clothing, but caribou has been replaced with commercial sheepskin. Today the most common material for contemporary annuġaat is flowered cotton or sometimes viscose fabric for women's atigi covers, or atikluk with quilted fabric lining for atigi. Male Iñupiaq clothing is usually made of single-colour cotton. This could be regarded as the framework or the standard rules of the

54 'Joanna' called the skirt "underneath" in English (5-20.10) and "avavsijauraq" in Iñupiaq (5-25.30)



Figure 14 a. Western style of dress worn over a fur atigi, similar to the contemporary Iñupiat clothing and b. detail.

© Photo by: R.M. Andersson . American Museum of Natural History Library. Colville River delta. "Eskimos of Niralek-Colville delta", July 3, 1909 Anderson-Stefansson Expedition. Image # 16951.

tradition, from within which the seamstresses carry out their design dialogues and their improvisations.

The main shape of the present-day garments of Iñupiat and Yup'ik are quite similar, except for the hood, which is pointed for the Yup'ik. The most distinguishing difference in style is the trim. The Yup'ik usually put ready-made patterned tapes on their garments. Iñupiat sometimes do too, but what

is regarded as a nice atigi or atikluk is trimmed with a mosaic ribbon made of different kind of textile tapes put together in an intricate composition sewn directly on the annuġaaq during the process of designing and making.

The lengths of the female fabric atigit have changed through time, not unlike the Euro-American clothing fashions, in which the Iñupiat participate as well. From the early 1900s to the 1960s, the length shrank to the middle of the thigh – and in effect became a miniskirt. Then the length expanded again, although some maintained the short style, or a mix of different lengths, mirroring Euro-American style. The shape of the skin atigi has changed as well. Qimniq Klegenberg (see p. 106) shows a long fur atigi without splits and an even longer fabric dress underneath (Issenman 1997: 116). Today, the even hem of the fur atigi is right beneath the knees, the shape is wide and straight, without splits.

Pictures from the 1940s to the 1960s show Iñupiaq women dressed in clothing made of the same kind of dresses as Euro-American women, often striped or chequered patterns, but the shape was in the original Victorian style but shorter. The Iñupiat adopted the Victorian style of dress – more or less voluntary – and then adapted it to their peculiar Iñupiaq style of clothing, and this tradition remains. However, I hardly saw any striped or chequered clothing on my visits. When I followed ‘Victoria’ as she purchased materials for new atigi and atiklukiit in Fairbanks, we went to the big fabric stores for *patchwork*⁵⁵, which is big business all over North America. There is a huge assortment of patterns, colours, and tapes, contrary to fabric for ordinary dresses, which is rare because White women do not make their own dresses anymore. If the Iñupiat women still were dependent on dress material they would be unable to continue to make their clothing. Thus they adopted the patchwork materials and adapted them to their peculiar style of annuġaat. In Fairbanks, the big city where the Kaktovikmiut⁵⁶ went shopping, there were three or four big fabric stores. They displayed rolls of fabrics from wall to wall, floor to ceiling, in different colours, most of them floral-patterned in different sizes.

The choices of fabric for the garments show the character of combined collectivism and individuality within the community of seamstresses of Kaktovik. Most of the seamstresses chose bluish colours, from violet through blue to turquoise, or a mix of them. However, some of the women, in

55 To sew together small pieces of fabric in particular patterns, often geometric, to make blankets, pillow covers, duvet and quilt covers or other items.

56 Iñupiaq: People of Kaktovik

particular the oldest, who also were the most experienced chose other colours, like red, green, and brown as the basic colour. This indicates that the skilled ones had the most courage and conviction to express their individuality. Another reason for this variation, however, could be that different styles or fashion depended on the different values of the different generations (See Martin 2001).



Figure 15 Women from Point Barrow, atigit with striped or chequered patterns
© Library and Archives, Anchorage Museum at Rasmuson Center, # B85-27-2502.

Christian Klegenberg, originally a Dane, former whaler, established a store on the southwest shores of Victoria Island in Northwest Canada (Oakes 1991: 24). His Inupiaq wife Qimniq from Wainwright Inlet, and their daughter Edna taught Copper Inuit seamstresses to make “Mother Hubbard style” garments (Ray 1977, Isсенman 1997: 117). After a fire in Klegenberg’s boat, he recounts the following:

The fire and the water between them had done some damage to my own calicoes, which I intended for trade along the Siberian coast. You may ask, why calicoes in the Arctic? Because Eskimos are proud of their best clothes, and in the summer time they protect them by covering them with a calico slip, just as some people cover their best upholstered furniture that way in the summer. The Eskimo women will make smocks for their

men, and Mother Hubbard gowns for themselves. Speaking of clothes in the Arctic, I may as well mention here that our form of clothing, made of woollen and cotton materials, including socks and underwear, will serve very well in the Arctic during the summer. But in the winter the Eskimo skin garments are warmer, lighter, and more comfortable, especially the style of them prevailing in Alaska, Mackenzie River District, and on Victoria Island. Farther to the east the clothing made is more clumsy, and the caribou skins are not so well prepared. (MacInnes 1932: 142)

Captain Christian Klegenberg also tells that:

The girls came in their best clothes; all made of skins which they had laboured over and sewn during the summer for the winter styles. Of course, the general shape of their garments in the Arctic does not change, but the trimmings and the color of the ornamental furs and the ways these are attached and the fancy work which goes with them do change quite a bit from winter to winter, and the women seem to know through the summer just what the most fetching mode will be for the next winter. I was made to know somewhat about these things after I began to have daughters in the Arctic coming into their teens and dancing through the season of the long night. One year the girls will be waiting [sic] still-born caribou calf that looks like seal but is darker. Another year all their trimmings must be ermine, and the next dark wolf, and the next red fox, and so on, even if their poor father must reach down so far south as Great Slave Lake to get what they want. Skin clothes will take all of a summer to make daintily, what with tanning, and selecting trimmings to match for mukluks and mittens and parka (MacInnes 1932: 74).

Contemporary Annuġaat of Kaktovik

When I was in Kaktovik in 1997 and 1998, it was common for women and girls to wear atigit outdoors, especially in cold weather. Atigit for both women and men had a quilted thick lining or a lining of bought sheepskin⁵⁷. Outside they put a cover, really an atikluk, made of thin cotton fabric, more rarely of viscose, velvet, or corduroy. Patterned fabrics were most common. The atigi had a hood with a ruff, preferably of wolverine, and usually fur on the edge underneath and on the wrists. The female one was long enough to cover the knees, for the male it was shorter, and both had a zipper in the front and big outside pockets. This means it is a practical garment. One of the seamstresses made an atigi for me because she was worried about me and my survival without an atigi when I was going to go to Barrow, which is a cold place, although this was in the summer. Nevertheless, as we know it was possible to buy garments that had the same functions. In addition, from my experience, the atigit they made themselves were not cheaper than the bought Western style parkas; the materials they bought for sewing were very expensive. The atiklukiit for both sexes were quite similar to the respective atigit, but without any lining or fur. For special occasions, as Eskimo dance, a lot of them wore *kamiit* – knee-long footwear made of caribou fur often trimmed with geometric pattern of dark and light fur similar to the qupak on fur atigit.

It seems as though the aesthetic aspect was very important as well. Because the atigi had an almost loose cover, it was easy to change the outer part of the garment. The expensive lining lasted for many seasons, but it was common to make a new cover at least annually for Christmas. This means they could have a new look to their outer garment every year or even more often. The covers were smart-looking with the trim qupak around the hips, more exciting than most of the ready-made jackets. Another important aspect, it seems to me, was the ease with which they could create and change their presentation of themselves with the help of atigi covers. The annuġaaq was a material object that functioned as almost a social arena for making and creating an aesthetic impression, perhaps also for those who did not produce their own clothing, but chose only to wear the garments. A few women also wore *fancy parkas*, which mean atigit made of fur, usually ground squirrel, and qupak made as a mosaic of small pieces of skin of different colours such as white, black, and brown. These garments were trimmed with a big ruff called a *sunshine ruff* made of wolverine and wolf fur.

⁵⁷ That is to say, they are made of high quality quilted material (used to sew clothing for polar expeditions) or else they use purchased sheepskin.

Women also wore atikluk, which had the same shape as the cover of the atigi, but without lining and fur. Usually the atikluk had no zipper, and as such it had just one pocket. Usually there was a hood, but sometimes only a collar. For everyday use, the women usually wore Western style casual clothing like sweatshirts or T-shirts, but for special occasions they wore atikluk. The atikluk was not as common as the atigi, and was most common among elderly women and little girls.

There were small differences in style between younger and older Iñupiat. Frequently young girls inherited the old atigi from their grandmothers or other older relatives while the older women made themselves new ones. It did not seem to bother the youth to be wearing their grandmothers' used clothing. When making new clothing the young women usually preferred



Figure 16 Family from the Kaktovik area in the 1940s.

smaller flowers in the pattern of the fabric, and also more bluish colours, while the older women often used more pronounced and bigger patterns with more variety of colours – such as reds, greens and browns. One reason for these different choices could be that the older women possessed greater depths of experience and certainty about ‘what works’ and ‘what does not work so good’ according to the aesthetic results, when mixing shapes and colours to design a good Iñupiaq garment (see p. 105).



Figure 17 Female atikluk of Kaktovik.



Figure 18 Female atigit of Kaktovik.

Men and boys also wore atigit both for everyday life and special occasions, more seldom for work. They were, however, more frequently worn by women and girls. Among the women, it was the oldest and the youngest who most often wore Iñupiaq garments. The shape of the male atigi differed from the female. It was usually a single dark colour, made from thick cotton or corduroy, but by contrast to the women's garments, the qupak was wider and more complicated. In addition, there were qupak at the bottom of the sleeves. The male atigit also had a big ruff, preferably of wolverine. The boys' atigit were similar to the men's, but of course smaller. Some few men also had an atigi made of fur, but more simple than the female one. Adult males also wore atikluk when they performed at the World Eskimo Indian Olympics as dancers or drummers. On other special occasions in the village only young boys and young men wore atikluk. The shape of the male atikluk was, like the male atigi, shorter than the female one, and the qupak was placed on the hips, the pocket on the stomach, on the sleeves and the hood. In addition, the fabric was thicker cotton in a single colour.



Figure 19 a. Male atiktuk and b. atigi .



Figure 20 a. Female jacket and b. straight atigi.

Some Iñupiat preferred to wear a short jacket (Fig. 20a) made of single colour cotton fabric trimmed with qupak. To trace the origin of this kind of jacket is outside the scope of this investigation but it seems they developed after the Second World War. 'Victoria' has made many of these jackets, also for sale. They are good as "summer jackets, for blueberry picking," she said, "the hood (is good) so the mosquitoes don't eat you up" (29-10.00). Some people in Kaktovik also wore these jackets for the Eskimo dance, where they preferred a shorter garment than an atikhuk. Some of the women also preferred a lined straight jacket, without the ruffled skirt at the bottom (51-06.37), some longer than the men's. These jackets were often trimmed with a qupak, including machine embroidery and readymade fabric flowers or other motifs. The same kind of qupak was common on another and more modern style of atigi; a long straight hooded coat (Fig. 20b), usually made of velvet or corduroy, same as the shorter jackets. After briefly describing the different kind of annuġaat used by Iñupiat of Kaktovik, I continue to discuss the usage of the annuġaat.

Qupak

The qupaat – the special kind of trim on the annuġaat – were made of different kinds of fabric tapes. Although each single *qupak* was unique – no two garments were the same – they were all related, part of a common tradition. This kind of trim was made all over the Iñupiaq-speaking area. This is something I have never seen anywhere else, this technique and design seem unique to the Iñupiat, including those living in the Mackenzie Delta across the border in Canada, although their version of the design is even more elaborated. The shape of the different kinds of garments were approximate fixed, except for adjustments of length and size. The *qupaat*, however were supposed for creation in form of improvisation within the tradition.

The qupak was usually built up by numerous rows of different colours of bias tape, in addition to one or several rows of rickracks (see Fig. 22). Bits of bias tapes, in colours that contrasted with those of the bottom tapes were intermixed in a quite special technique to compose this trim. The bits were placed upside down with the back surface protruding underneath the next row of bias tape in the horizontal direction. At the next row these bits were folded up and the opposite ends were placed underneath the new row of horizontal tape. In addition, the bits for the following row are added underneath the same horizontal row. In this manner they continue to add bits for the whole composition, which usually was between five and nine rows deep, usually

more for the male clothing. The qupak's composition looks like a pattern unit of approximately 10-12 cm repeated all around the garment. Each pattern unit is composed of a symmetrical motif mirrored on both a vertical and a horizontal axis – as a diamond. A plain bias tape in a colour that united the other colours in the composition usually concluded the composition. Some of the seamstresses added rickrack to the composition in a curved pattern (see Fig. 41). Commonly, the qupak was placed at the end of the trunk of the annuḡaaq, on the female garments that means just above the added flounce at the bottom.

The concept of *patterns* has in the literature been defined as:

...a design composed of one or more motifs, multiplied and arranged in an orderly sequence, and a single motif as a unit with which the designer composes a pattern by repeating it at regular intervals over a surface. The motif itself is not a pattern, but it is used to create patterns, which will differ according to the organization of the motif (Phillips and Bunce 1993: 6).

In this thesis I preferred to replace the term *motif* with *pattern unit*, because the units the patterns are composed of are not really motifs, just parts of the smallest unit of the composition.



Figure 21 A pattern unit of approximately 10-12 cm for fabric and fur qupaat.

Nobody seemed to know how the idea arose to put small pieces of bias tape together in this unique way; it is unique and particular to Iñupiaq style. As mentioned, I have visited several exhibitions, collections and archives in a lot of museums without finding many fabric Iñupiaq garments. However, at

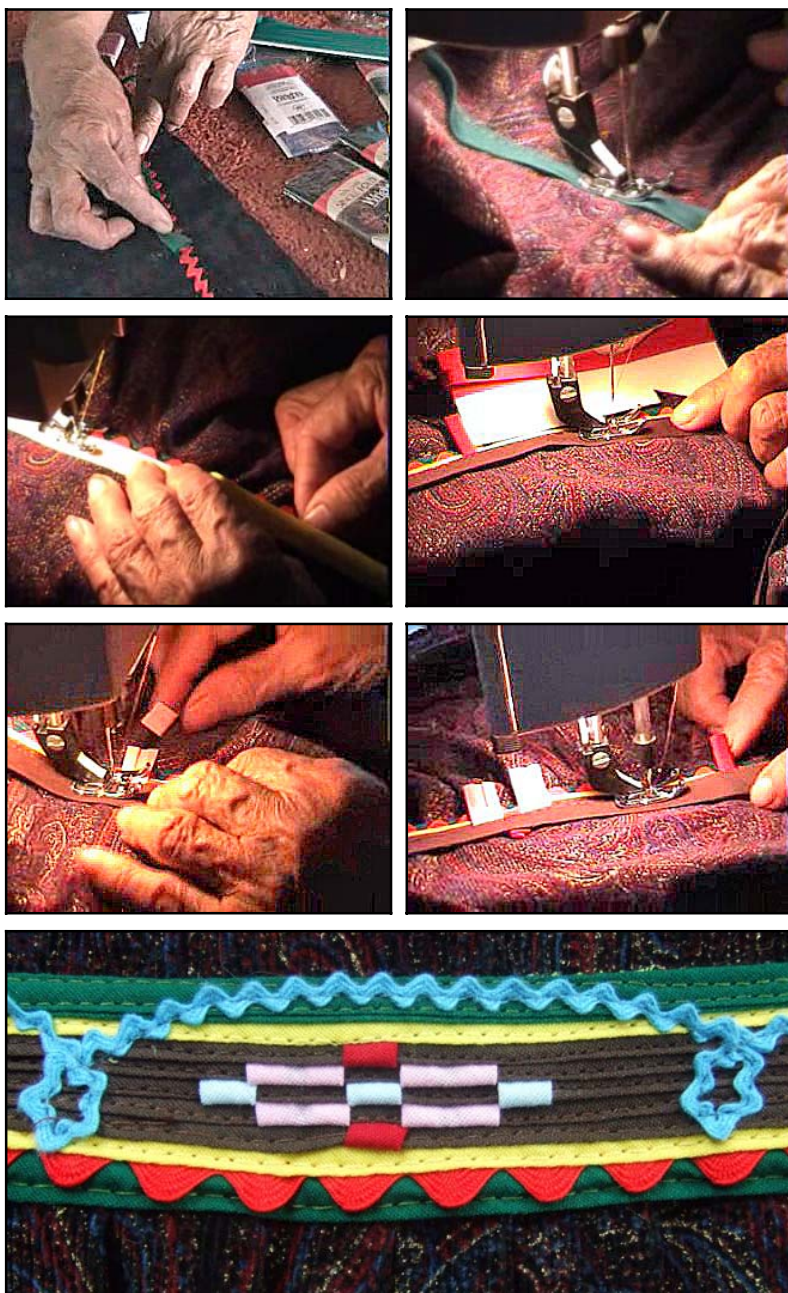


Figure 22 The process of qupak making.



Figure 23 Fabric atigit with qupaat at the blanket toss competition at Nalukatak, Point Hope 1940.

© American Museum of Natural History Library, Image #: 2A3817. Photo by: Dr. F. Rainey.



Figure 24 Man from Barrow, 1959, atigi with contemporary qupak.

© Library and Archives, Anchorage Museum at Rasmuson Center, # B85.27.2369.

the Anchorage Museum of History and Art, I saw a few fabric garments made for a white teacher's family by Daisy Lane and in addition a set of *qupak* separated from the annugaaq is originally was a part of. On some of these garments, I found some particularly interesting trim, made of strips of striped or checked fabric. The stripes were put in the vertical direction, making a pattern of small constructed pieces. Several stripes from different patterns and colours were placed above one another, to make ribbons of trim on the garments.

When I visited the University of Alaska Museum in Fairbanks I found they possessed the most comprehensive collection of fabric Inupiaq clothing in any museum, as far as I know. This valuable collection was collected by Dr. Robert and Margaret (Petey) Lathrop, while he was serving as a dentist on the northwest coast of Alaska. In 1997, the family donated the whole collection to the University of Alaska Museum in Fairbanks. The garments are made of Daisy Lane or the whaling festival in Point Hope in 1950. Margaret Lathrop even spent a year learning to make Inupiaq skin clothing from Daisy Lane (67-68). She gave the museum the fur garments she made by herself as an apprentice to the master annugaaq-maker, Daisy Lane.



Figure 25 *Qupaat* on *atikluikiit* probably made by Daisy Lane for a teacher's family in the 1910s. Anchorage Museum of History and Art # 96.41.3a.



Figure 26 *Qupaat* on *atikluikiit* probably made by Daisy Lane for a teacher's young son in 1918-19. Anchorage Museum of History and Art, # 96.41.1a.



Figure 27 Atigi with qupak made by Daisy Lane for Nalukatak, Point Hope 1950.
 From the collection of Dr. Robert and Margaret (Petey) Lathrop. University of Alaska Museum (UA97-025-0100).

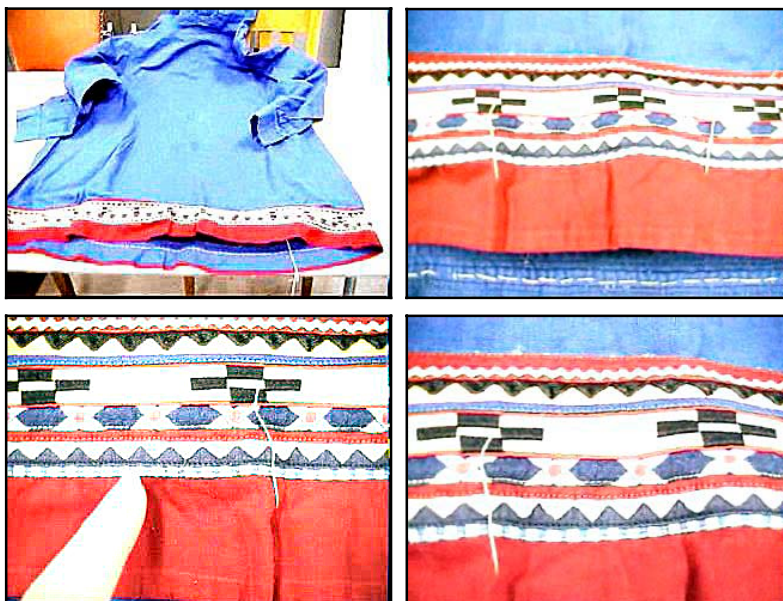


Figure 28 Atigi with qupak made by Daisy Lane for Nalukatak, Point Hope 1950.
 From the collection of Dr. Robert and Margaret (Petey) Lathrop. University of Alaska Museum (UA97-025-0101).

Again, it seems like the Iñupiaq seamstress Daisy Lane adopted the striped and checked fabric, changed the way of using them, and adapted those materials to the particular Iñupiaq context. This kind of trim can be seen as a precursor for the contemporary trim which is principally made of pieces and lengths of bias tape of different colours, sewn together. Although the techniques are different, the appearances are quite similar. Another explanation could be that she used the strips of striped and checked fabric to make patterns similar to those made of bias tape. However, I do not know if anybody made bias tape trim earlier than those made of patterned fabric. I have not seen any in the meagre number available in museum collections. A closer study of photos from archives and collections could perhaps give a better answer to that question, something that is not the focus of this thesis.

Other researchers mention this kind of trim (Issenman 1997, Martin 2001), and some of them regard the fabric qupak as derived from the Delta style of fur trim (Oakes 1991: 15, 125). *Delta-trim* could indicate that the origin was among the Iñupiat in the delta area of Mackenzie River Delta, just east of the Canadian border. Before World War II the Iñupiat were nomads travelling back and forth around the north and west coasts of Alaska and across the Canadian border east to Herschel Island at least, following the game animals and engaging in seasonal gathering. However, the women of Kaktovik I asked had not heard the name Delta-trim (e.g. 51-35 40). They used the Iñupiaq word qupak also when they spoke the English language. One exception was ‘Mary’ who grew up at the Canadian side of the border in the Mackenzie River Delta with her parents originally from the Kaktovik area (89-01.10). She also called the garment *Mother Hubbard*, as was usual in Canada.

I have not found a clear answer to the question of the origin of this kind of trim in Kaktovik. None of the women from the village or other Iñupiat women I asked could give me any information. One of them answered when I asked:

Janne: Do you know where this style comes from? (qupak on my atikluk)

‘Victoria’: Our relatives. We start thinking we could do that too, different colours and different designs. So we started up like little stuff, and then we getting better and do it more. All my relatives doing different stuff when I was teenage. So I all the time watched. Try to. They are few ladies that teach me,

they've done really good.
(30.1-06.00)

Even the oldest of my informants, about 80 years of age, did not remember if this custom was common when they grew up or not, or when they started to use these materials themselves (92-15.36).

‘Victoria’ told me that she started to make trim from ready-made fabric tapes when the mail order catalogues first came to Kaktovik. She was a teenager at the time, after the World War II.

‘Victoria’: Long time ago they had native store. We bought few. We don't buy lot but we atikluk and tried to put trimming in them too. Long time ago. Bias tape. One time when we finally got Sears catalogue, when I was teenage like. And we start getting air plane. They could send out some mail. People from Sears rural book and stuff, and they start order. My dad was still alive. I told my dad I'm going to order from Sears the bias tape, you know. 'Qupakrak' we call it. My dad said OK, I write it down what you want to have. My dad asked me how many one colour I wanted. So I said maybe five colours in one tip. Like five yellow, five black, green, and white and stuff. By the time, when my little order finally came I got lots of bias tape. I didn't know they were going to be that many. We tried to make like this (pointing at my atikluk). On handle sewing machine. Harder. Learned from relatives in Barrow.
(30.1- 03.30)

From that time onwards, tapes of different colours and shapes were available in great volumes and were possible to obtain fairly quickly and at a reasonable price, without having to travel all the way to cities like Fairbanks, which was about 700 km away. In those days, they did not have any scheduled airplane service several times a week, as they have today. With the higher standard of living – meaning higher income – the inhabitants of Kaktovik nowadays go shopping periodically in the cities of Barrow, Fairbanks or Anchorage. They have to go by plane – which is very expensive, so they usually combine the shopping with other errands such as visits to a dentist, specialist physicians, or a meeting in one of the different Inuit organizations. When shopping for materials for annugaat, they usually buy supplies for several garments, often not yet specified for particular persons in their families. A particular fabric might fit different persons, and

they buy a selection to choose from when somebody needs or wants an annuḡaaq. This supply had to last until the next time they have the opportunity to buy materials. Some of the seamstresses bought \$100-worth of bias-tapes and used all of them in less than a year (51-33.28). In February 1998, between my first and second fieldwork stay in Kaktovik, even one of the two stores in the village started to sell some fabrics and tapes for annuḡaat (51-03.30). Whether the easier logistics for supplying materials had any influence on the learning and making of Iñupiaq clothing, I do not know, because the permanent availability of these materials covered too short a time span to determine during my stay.

In recent years, the seamstresses of Kaktovik – in particular the experienced ones who mastered the most common techniques and materials as bias-tape and rickrack – had learned and practiced new techniques, such as machine embroidery and new materials like ready-made appliqué ornaments. Those techniques and materials were not originally intended for annuḡaat either – they were also adopted and adapted to develop a particular women’s Iñupiaq tradition. In addition to the used of these techniques and materials in the more common annuḡaat, they use them frequently on a newer version of the female atigi, which was ankle length, without the skirt, and made of



Figure 29 Ready-made appliqué ornaments and machine embroidery for qupak.

velvet (see Fig. 20b). This kind was particularly popular among younger people.

All the people from this wide Iñupiat area are closely related and socialize with each other frequently. New customs, materials, and ideas are rapidly spread among the Iñupiat because they move around in this huge area so much. Another argument for this theory of origin is that the trim from this area still remains particularly advanced, or one could even say flourishing, compared with other parts of the Iñupiat area (51-35.40).

The style of the trim has been developed in distinct ways in different districts, but the resemblance is striking. The informants told me that the Iñupiat from Anaktuvuk Pass in the interior made qupak with laces, even for men (21.2-24.29). On the west coast, as Point Hope, they used more shimmering colours on the qupak.

However, Kaktovik and the few villages in the vicinity found it difficult to distinguish the uniqueness of their style, from that of Barrow, ca. 500 km away. One reason might be that many of the inhabitants in Kaktovik have actually lived in Barrow, at least a few generations ago. Nevertheless, they told me that they were often able to recognise which particular seamstress had made a particular annuġaaq, even some sons who did not sew themselves told me they could pick out their respective mothers' work: "I can recognize my mum's sewing (76-12.22).



Figure 30 Qupak with laces in Anaktuvuk Pass style.



Figure 31 Canadian style of qupaat.

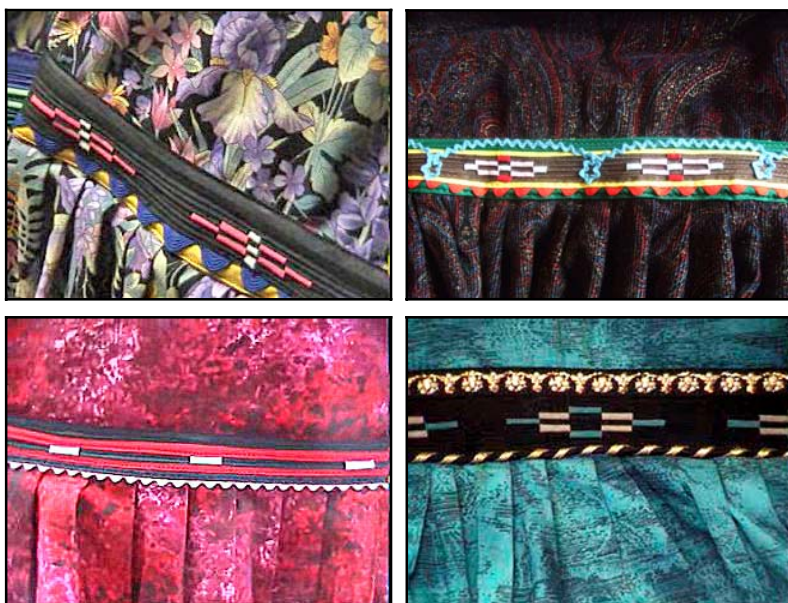


Figure 32 Kaktovikian style of qupaat.

Iñupiaq Clothing in Use

In this project, it is important to comprehend the use of the annuġaat in order fully to understand the design process that Iñupiat women undergo when they make the garments. A question is why do they wear and make Iñupiaq clothing at all? Is the reason aesthetic or practical, or even ethnic? I participated in many different occasions where the people used Iñupiaq annuġaat, at festivities and everyday life, where they seemed to be important, in different ways.

Most of the Iñupiaq women of Kaktovik wore fabric atigi for every day, in any case if it was cold, even at shopping trips to the city of Fairbanks or fishing trips to the mountains. It seems like they regarded the atigi as the most practical, and also the most beautiful clothing to wear. Without too much money or labour they could change the appearance of the atigi often, by just changing the thin outer cover – or actually an atikluk – outside the more expensive lining.

The Iñupiaq clothing can also be viewed as a sign of ethnicity, which is not a main theme in this thesis, although I will add some comments here. The annuġaaq trims they devise are unique as far as I know; as well, they have something common that make them Iñupiaq. However, I am not sure how conscious they are of the ethnic aspect of their clothing. It seems more like pride of custom. The clothing as ethnic sign (Martin 2001, Eicher 1995) is perhaps more important in connection with the Iñupiaq festivities and celebrations like Thanksgiving, Christmas and New Year's Eve, *Nalukatak* – the whaling festival, and the World Eskimo Indian Olympics, particularly at the Eskimo dance. At the WEIO all *Inupiat* who perform wear annuġaat; on other festive occasions Iñupiaq clothing is common but not essential. However, it looked like they are not quite comfortable at the Eskimo dance without their annuġaat.

One of the informants told she did not regard the annuġaat primarily as a fancy garment just for special occasions. This will be further discussed in the section entitled *Dialogue with the Materials*. In addition she did not think it was necessary to wear annuġaat at special Iñupiaq occasions like the Eskimo dance except: "...only if I am going to really perform" 51-21.00). This means when she participates in a formal dancing group performing at an official arrangement such as the WEIO in Fairbanks or Kivgiq, the midwinter festival in Barrow. Usually 'Patricia' wore Iñupiaq clothing at the Eskimo dance, though. She never wore atikluk apart from when attending the Eskimo dance,

she said, explaining "sometimes it is hot" (51-21.00). I do not interpret this literally but as an expression of a kind of discomfort. The fabric of the atikluk was thin cotton, which is not particularly warm. To the contrary, this kind of fabric was not as elastic as the kind of knitted fabric she preferred, like a thin cotton jersey sweater. She regarded the annuġaaq as ordinary clothing, not something particularly ethnically Iñupiaq. "I just make them to use," she said, "I just like to do it. Something for me to do" (51-21.00). For her, the pleasure of the design process is more important than the clothing as ethnic markers. One of the other informants expressed displeasure to me about people who participated in the Eskimo dance without Iñupiaq clothing.⁵⁸ Some of them did not have any annuġaat to wear, or their garments were worn out. A lot of people, in particular the youth, who did not wear Iñupiaq clothing at the Thanksgiving Eskimo dance in November, but did appear at the Christmas Day Eskimo dance in new atigit and atiklukiit. It seems as though Christmas Day was regarded a more important day than Thanksgiving, thus they dressed more formally for the Christmas celebrations. It is not clear whether this also had a connection to the Iñupiaq past, when they used to have great celebrations in the middle of the winter.

As in the past, the Iñupiaq women still carry their babies at the back underneath the atigi (Fig. 33b). It was an acrobatic exercise to put the baby on the back wearing the atigi. The hood of the atigi was formerly meant to cover both the baby's and the woman's head. Through time, the size of the hood has become smaller. The hoods on contemporary atigit only cover the heads of the carried babies, not the head of the woman who is carrying the baby. The mums cover their head with a fur cap. Actually, even the Iñupiaq women who preferred not to wear annuġaat did put their babies underneath their jackets. These jackets were a Western style of windbreaker (Fig. 33a).

The traditional whaling is still an important part of the expression of traditional substance and culture in Kaktovik. I was extremely lucky to be allowed to follow one of the whaling crews to sea in September 1998,

⁵⁸ Personal communication, 'Joanna' December 1997.



*Figure 33 a. Baby carried inside a Western style of jacket – and
b. inside an atigi*



Figure 34 Children celebrating the whale.



Figure 35 Wearing atikluk when cutting maktak with ulu (Women's knife).

although *taniit* usually do not participate in the Iñupiaq whaling; nor in general do women. Some of the whaling crews wore identical windbreakers with a logo with the name of the team at their backs, in typical American style. However, some few wore white atigit similar to those the Iñupiat made when they first gained access to fabric at the end of the 1800s. ‘Our’ crew caught the first whale that season, and I participated in the festival of sharing the whale at the beach. This was a celebration for all the inhabitants of the village. Some of the meat and the maktak – skin and blubber – were prepared and served at the beach by the catching crew’s extended family. On this occasion I noticed that some of them who usually did not often do so, actually dressed in annuġaaq. I understand this as an ethnic marking, because the whaling itself is an important identity idiom (Reitan 1988). Another reason could be that they just dressed up, and that their dressing up clothing was Iñupiaq.

The Iñupiat, whether young or old, wear clothing that is at least as modern as that worn by Norwegians. At the same time, they also wear their modern Iñupiaq garments. There does not seem to be any problem of mixing the different styles.

Sewing Season

Some traditions or customs of when and where the Iñupiat women make clothing have changed with the passage of time. In the 1800s, and maybe earlier, the *Nuataagmiut* – Iñupiat living mainly in the Upper Noatak area – had a sewing season at a specific site once a year, and there was a strict taboo against making clothes at other times or places (Burch 1998: 106). This sewing season – or clothes-making festival – was due to the period during a year when it was appropriate to spend time on sewing and when they had time enough to finish the necessary sewing of a year’s worth of clothing and other things for the whole family. This had to be a season without the semi-nomadic travelling for hunting, fishing or other subsistence activities. Many of the *Nuataagmiut* later settled in Kaktovik, and their descendant are Kaktovikmiut today (Burch 1998: 109).

Later, the sewing period has changed with the changing subsistence and income conditions. This was also confirmed by Iñupiat elders:

They called "Kaivirvik" what we now call Christmas. Before "Kaivirvik" probably in the fall time, the ladies would start

preparing with all their effort. They would try to finish the clothing they were to wear during this "Kaivirvik." The days without the sun would be called "Kaivirvik," they would have their months by the moons.

After making their clothing, they would call the month "Suliiqsaunik," they have finished. Then they would play their games on the month of "Kaivirvik," the month with no daylight. It must have been in November when they finished making clothing and just played games in December. (Rachael Nanginaaq Sakeak quoted in Edwardsen 1983: 24)

When people moved to Kaktovik and other villages to find employment with the US Army and Air Force after the Second World War, only a few continued to provide for their families by fulltime hunting and fishing. The nomadic lifestyle changed to a sedentary residential way of life, and the sewing traditions changed as well. From about 1870, the Iñupiat started to make fabric clothing, first sewn by hand but later by sewing machine. We know that Elizabeth Frantz' mother in Kaktovik had a sewing-machine at least by 1933 (Hutchison 1934: 166). After they settled down they could sew at any time during the year; they did not have to wait for periods between travels to the hunting or fishing grounds.

However, they continued the tradition of a fixed sewing season. Even though they have settled down and most of them were employed outside hunting and fishing, the Iñupiat tradition of hunting and fishing, and even whaling, continued. Most Kaktovikmiut went out in their spare time, during the spring, summer, and winter seasons, to camp in the wilderness while they hunt and fish, often by skidoo in springtime before the snow melts, or by small boat after the ocean-ice has broken up. The extended family went together, from great-grandmother to the most recent newborn baby, often travelling and camping together at permanent cabins or tents. Nobody seemed to have much time for sewing. During the winter, though, when it was dark due to the polar night, hunting, and fishing was difficult. Then, the women of Kaktovik could take their time to make new clothing for the year. Still, when I was there, they made most of the clothing during the sewing season between Thanksgiving at the end of November and Christmas. Some of them started to sew before Thanksgiving in order to have new clothing for that celebration, which was huge with a big feast for everybody in the village, held at the Community House with traditional Iñupiaq food. However, the period between the whaling season at the end of October and Thanksgiving, found the whalers' wives and the other women busy processing the meat and

maktak from the whale catch. The whale ‘we’ caught was approximately 10 m long and weighed 10.000 kg – 10 tons.

The whole village shared the whales they caught, usually three or four animals, according to a traditional, fixed arrangement (Reitan 1988). The whaling captain on the boat which had caught the whale got some specific parts, the gunner some other parts, the rest of the crew some, the crew on the other boats some, and at last the others in the village, in particular, the elders, and in addition even some of those who had moved away from Kaktovik. This means that the women were faced with processing a lot of labour-intensive meat. To store all this meat for use until the next whaling season, they put some meat in the freezers in their houses. However, most of the meat and *maktak* they stored in ice-cellars dug three or four meters down in the tundra, where the permafrost keeps the storerooms as cold as a freezer all year round.

The Thanksgiving holiday could be seen as a celebration of the end of the whaling season. Traditionally this celebration used to be *Nalukatak* and was held during the spring. On the northwest coast of Alaska where most of the Iñupiat live, they traditionally had whaling both spring and fall. This was not possible in Kaktovik, due to the ocean ice which does not break up until June, or even later. In spite of no springtime whaling, the Kaktovikmiut still followed their relatives to the west and celebrate *Nalukatak* outdoors in June. However, Thanksgiving was even a bigger celebration with a lot of traditional food served for everybody in the Community House. The participants even brought zip-locked plastic bags and plastic boxes in which to carry food home. This meant days and weeks of food preparations by the whaling families, and in particular by the women. Due to this annual period of intense labour they did not have much time for sewing before Thanksgiving.

When Thanksgiving was over, the sewing season started. While I visited Kaktovik on my first trip, ‘Joanna’ made two different atigi covers, as well as helping me to make mine. Partly, she made the two atigi covers simultaneously, without finishing one before she started on another. Mainly, they made all the atigit and atikłukiit they needed for the whole year within the weeks between Thanksgiving and Christmas. Exceptions could be made, such as for the atikłukiit used as dancing uniforms for the dancing-team from Kaktovik, which participates in competitions at the World Eskimo Indian Olympics or the *Kivgiq* – the messenger feast, a mid-winter festival held in Barrow. Sometimes they also made male atigit during other seasons of the

year, because the men did not change the covers for their atigit every year for Christmas, perhaps not until every third year or even more rarely. The men did not use the traditional atigit as often as the women; many of them only used them for special dress-up occasions. Therefore, they did not wear them out so fast. Another reason is perhaps due to the fact that the trim on the male atigit is much bigger and more complicated, and time-consuming to make. Alternatively, because the women did not make male atigit as often, they tended to spend more time on each garment. Conversely, due to the relatively small amount of labour time involved, they sometimes also made atigit for children outside the main sewing season. Because the children used their atigit for everyday life, also for playing, most of the year, the garments sometimes did not last a whole year. Thus, the mother or grandmother had to make two or three covers during a year.

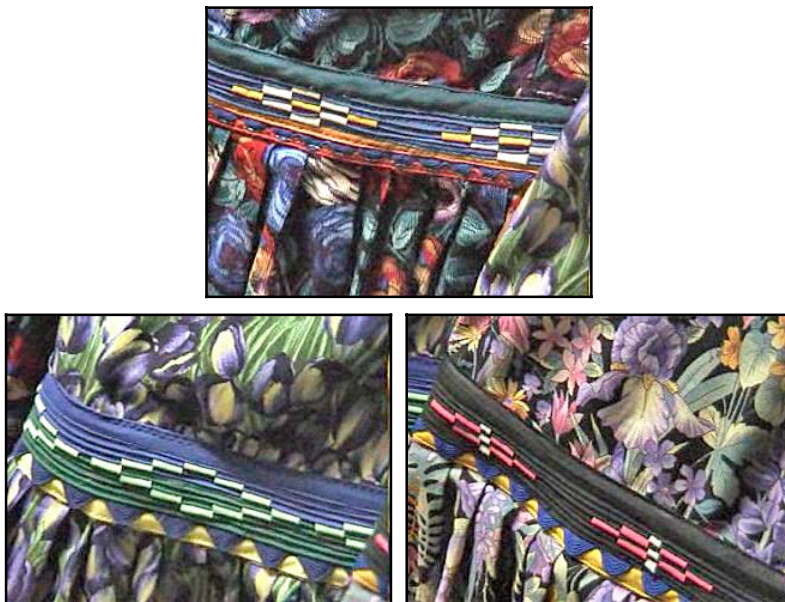


Figure 36 Three different atigit made by one seamstress of Kaktovik.

Some of the seamstresses also took up sewing as either a part-time or full-time job to earn money, and they made clothing also outside the main period of the calendar usual for sewing, of course. These garments were occasionally sold in the stores in Kaktovik or privately to other Iñupiat or *taniit*. Sometimes these were advance orders. Several of the seamstresses said they often used a simpler style when producing for sale to people outside the family. The degree of interest in sewing *annugaat* also varies among the seamstresses. Some of them enjoy *atikluk*- and *atigi*-making so much that they manage to find time to make more *atigit* and *atiklukiit* than the basic one for each member of the family. Usually, the seamstresses made more than one *atigi* a year for themselves, as well as for the children, especially the small girls.

In this chapter I have described the Iñupiat in general and the village of Kaktovik in particular, as the context within which the practice and the learning of designing and making of *annugaat* takes place. Within this context, as well as through the historical context, the fabric *atigi* and *atikluk* still play an important part, both in everyday life as well as in ceremonies such as the Eskimo dance. The different kinds of Iñupiaq fabric clothing are mentioned, with the focus on the female and male *atigi* and *atikluk*, which often are trimmed with *qupak* made of fabric tapes. Finally I describe in detail the designing and making of *qupak*, which are built up by adding small pieces of bias-tape to rows of continuous bias-tape in a contrasting colour. These border designs are intended to create a composition with a pattern unit repeated along a continuous border. After this discussion of important issues regarding *annugaat* with an emphasis on the textile, I continue to present interpretations of practice and learning based upon the previous discussion of issues regarding Iñupiaq clothing and their actual textiles.

Practice and Learning in Iñupiaq Vernacular Design

The interpretations of how the women of Kaktovik practice and learn to design fabric *annugaat*, based upon the empirical enquiries from Kaktovik have been inspired by *reflexive methodology* (Alvesson and Sköldbberg 1994, 2000, Alvesson 1996), implying dissimilar theoretical starting points: Schön's theory of *the reflective practitioner* (Schön 1983, 1987) and Wenger's theory of *communities of practice* (Lave and Wenger 1991, Wenger 1998). The frames of reference that lie behind these various theories are presented in the separate sections that follow. Common to these approaches are critical views on the concepts of *practice* and *learning*, and their interrelationship.

According to Jensen (1999: 7) a change has occurred regarding the opinion of knowledge and learning, from the logocentric tradition to the linguistic-pragmatic turn. This critique of the conventional view of knowledge and learning, especially from the points of view of different professions, has contributed to the development of theories of learning that are alternatives to the logocentric tradition, she continues. Two of these approaches are Schön's theory of *the reflective practitioner* (1983, 1987) and Wenger's theory of *communities of practice* (Lave and Wenger 1991, Wenger 1998).

It is perhaps remarkable to recall that none of these theories has been developed within the fields usually concerned with learning and knowledge – pedagogy or psychology (Kvale and Nielsen 1999: 18). The conventional research and theories on learning attached to these fields usually regard learning as a product of teaching in pedagogical institutions like schools. The development of these alternative theories of learning from outside the conventional paradigm shows that interest in understanding a phenomenon often occurs from a critical point of view, outside the main field of research.

One of my intentions is to look at the design process from the *vernacular* point of view to contribute to a more adequate understanding of the designing process in general.

In this section, I focus on the first context of interpretation: Donald Schön's theory *the reflective practitioner* (Schön's 1983, 1987).

IÑUPIAQ DESIGNERS AS REFLECTIVE PRACTITIONERS

In this first of two sections of interpretations, the focus is on relatively free interpretations, inspired of Donald Schön's theory *reflective practitioner* (1983, 1987). It is particularly interesting here to discuss how vernacular designers, such as the seamstresses of Kaktovik, practice and learn designing as reflective practitioners.

During his long-term and productive contribution as a researcher and theorist, the philosopher Donald Schön has developed important theories about various topics, including the following three most influential fields (Waks 2001, Smith 2005): learning systems in learning societies and institutions (e.g. Schön 1971); double-loop and organizational learning in collaboration with Chris Argyris (e.g. Argyris and Schön 1974, 1978, 1996); and *reflection-in-action* in relationship to professional activity (e.g. Schön 1983, 1987, 1991). These theories have similarities in the epistemological fundamental idea about learning and knowledge. The main focus in the following interpretation is the reflective practitioner.

Schön's theory on the reflective practitioner seems relevant to an investigation of the *practice* and *learning* of design of Iñupiaq clothing, although it is not obvious to regard the seamstresses of Kaktovik as belonging to a profession, which Schön mentions in the subheading *How Professionals Think in Action* (1983). However, I do not regard Schön's main point in this theory to be whether or not the practitioners belong to a formal profession (Schön 1987: 32). Many of the examples in the explanation of his theory are based on practice of everyday life. Schön's main focus is on the *practitioners*, a category that includes both professional and lay participants. His mission is a critique of how practical knowledge in the professions is treated in the universities with their emphasis on theory, not about the differences between practical knowledge inside and outside the formal professions. He focuses on the similarities between practical knowledge

inside and outside the professions, and investigates what can be learned from the practice of everyday life that is relevant to professional life. Thus, whether or no the making of Iñupiaq clothing is a profession in Schön's view is not crucial, because the work activity of the seamstresses of Kaktovik seems homologous with his theory of practice and learning.

Schön also refers several times to Christopher Alexander's account of the making of the Slovakian peasant shawls (Schön 1983: 52, 77; 1987: 23). As mentioned above (Section *Status Questionis*), Alexander was taken by the high quality of hand-crafted products made in the pre-industrial epoch. What he found fascinating was the fact that the form of the product had evolved over a long period, and had gradually fitted itself to its function. Alexander wanted to combine the traditional design methods – like the design of Slovakian peasant shawls – based on intuition and experience – with new methods by making a synthesis of the best from industrial and pre-industrial design processes. His design methods did not succeed, as he himself admitted (Cross 1984: 304, Alexander 1984: 315), and one can ask if the reason was that he never really investigated the pre-industrial design process. Alexander does not mention the dichotomy between professional and non-professional. However, in his book *Notes on the Synthesis of Form* he distinguishes between *unselfconscious* cultures and *selfconscious* culture, as far as I can see, synonymous to the professional – non-professional distinction. As mentioned (p. 49) he calls a culture *unselfconscious* if its form-making is learned informally, through imitation and correction, and *selfconscious* if the form-making is taught academically according to explicit rules (Alexander 1964: 36). The term *selfconscious* can be seen (Merriam-Webster 2006) as either “conscious of one's own acts or states as belonging to or originating in oneself: aware of oneself as an individual” or “intensely aware of oneself”. It is not clear whether Alexander considers that people from an unselfconscious culture designing and making things are not conscious of their own acts or states – that is not aware that these acts belong to or originate within themselves – or whether they are not aware of themselves as individuals. Neither does Schön discuss whether he regards the designers and makers of the Slovakian peasant shawls as conscious reflective practitioners. In what follows, the question is if the seamstresses of Kaktovik are reflective practitioners, and if so, how? Are they reflective and conscious of their actions when they are practicing vernacular design?

My main focus of the interpretations of the practitioners of Kaktovikmiut design is the concepts of *practice* and *learning*, with the emphasis on the first concept, as already mentioned, within the theory of the reflective practitioner.

As a point of departure, I will look at some particular aspects of Schön's theory.

The Concepts of Practice and Learning in Schön's Theory of the Reflective Practitioner

Donald Schön's original intention was to write a book on professional knowledge and education (Schön 1987: xi), which, as the project evolved, he decided to split in two. The first and better-known of the two, *The Reflective Practitioner*, (1983) he calls "a new epistemology of practice" (Schön 1983, 1987: xi). He regards his theory of professional knowledge as an opposition to the common view of practice in the universities, a view based on technical rationality derived from positivist philosophy (1987:3), which gives preference to systematic, scientific knowledge. Schön, on his side, claims that what is crucial to the understanding of professional knowledge is the *reflection-in-action* in the *artistry* of skilful practice:

If it is true that there is an irreducible element of art in professional practice, it is also true that gifted engineers, teachers, scientists, architects, and managers sometimes display artistry in their day-to-day practice. If the art is not invariant, known, and teachable, it appears nonetheless, at least for some individuals, to be learnable (1983: 18).

In the second book, *Educating the Reflective Practitioner* (1987), he continues with an interpretation of what kind of education his new epistemology of professional knowledge involves. Schön views the design studios in architectural education as samples of a better professional education, which he calls *reflective practicum*. Studios of art and design, conservatories of music and dance, athletic coaching, and apprenticeship in the crafts are similar examples (1987: xii), where learning-by-doing and coaching both involve reflection-in-action.

A constructionist view underlies the theory of the practitioner's reflection-in-action, which means that the practitioner constructs the situations of his/her practice. (1987: 36). Schön's exploration of professional knowledge is based on his own experiences as a practitioner and a teacher; as well, he analyzes other practitioners, like architects, psychotherapists, engineers, planners, and managers (1983: viii). Schön regards the design studio in architectural education as a prototype for education that other

professions might well adopt. This empirical case is actually a *teaching* situation more than a *designing* situation, although the teaching is on designing. To Schön, the architect, like other practical professionals, is a reflective practitioner; the architect's "...reflective practice takes the form of a reflective conversation with the situation..." (Schön 1983: 295). Schön sees *design* as a prototype, as he says in his (1987) subtitle *Toward a New Design for Teaching and Learning in the Professions* in general, which he claims as 'designlike' and 'artistic' in greater or lesser degree. After interpreting the practice and learning of architecture education in the design studio, he continues to test the theory from this interpretation by applying it to, among other professions, musical performance (Waks 2001: 41). The difference to which he calls attention is the fact that the music performer *executes* the design of the composer, but still designs, employing her own interpretation of the original design of the composer. This kind of *redesign* (Michl 2002) is not so far from the design of products or architecture, which, in my opinion, is almost always an interpretation drawing upon the common and individual repertoire of previous design.

As mentioned above, the empirical material on which Schön based his theory of the practice of the reflective practitioner was actually on *learning*, not on the practice of the architectural profession. Schön's investigation is a protocol analysis of an architecture teacher ('Quist')⁵⁹ as a senior practitioner coaching an architect student ('Petra') as a junior practitioner in a design studio (1983: viii). Such detours are sometimes necessary methodologically to get rid of what actually is going on in a particular situation. The detour I made in Kaktovik, involved becoming a learner and a seamstress myself, and asking one of the expert seamstress to make me an atigi. Architects usually apply tacit knowledge; frequently they do not verbalise what they think while designing. In a teaching or coaching situation verbal articulation of the thoughts within the actions are more common. When the teacher or senior architect ('Quist') in the design studio coached the student or junior architect ('Petra') he verbalized by talking and making explicit points in the design process that architects often keep tacit. By this, Schön was able to recognise the senior architect's thoughts while designing – the reflection-in-action. Based on this protocol analysis of 'Quist' and 'Petra' from the design studio in the architect education Schön says, "Drawing and talking are parallel ways of designing..." (Schön 1987: 45) which, considered together, he regards as the language of designing.

59 'Quist' and 'Petra' are fictional names invented by Roger Simmonds who originally observed the studio in which this dialogue took place, as part of a study of architectural education... (Schön and Wiggins 1992: p 156, n 1).

I do not doubt that architects occasionally talk when designing, in particular as a means for communication in collaborative designing. However, in the empirical case of the experienced architect 'Quist' as a teacher and coach and the architect student 'Petra', one finds that most of the talking is actually coaching in the teaching situation in the studio, not primary 'Quist's talking during the practice of designing. Nevertheless, 'Quist's talking when coaching gives Schön, as well as the readers of his books (Schön 1983, 1987) a glimpse into 'Quist's thinking while designing – reflection-in-action. In Schön's terms, this is an artistic-like situation, which means that the situation is uncertain, unstable, unique, and often involves values in conflict (Schön 1983: 50). The designer sees this unique, unfamiliar situation both as something already present in, and different from, his familiar repertoire or previous experiences, as a precedent, or a metaphor (Schön 1987: 67). The problem is ill-defined, and thus different from other problems. The problem and the solution develop in a reciprocal process. To explain the design process, it is necessary to show the design simultaneously with presenting a discursive, verbal explanation. Schön further mentions a language *about* designing, a meta-language, in which the supervisor describes some features of the design process (Schön 1983: 80).

Reflection-in-action

Reflection-in-action is a major concept in Schön's theory of the reflective practitioner. When practitioners act on something, they often think *while* doing, not only before and after the action. With reference to everyday life, as well as to the professions, Schön (1983: 49) refers to the phenomenon that we all do things that presuppose knowing. The "...competent practitioners usually know more than they can say. They exhibit a kind of knowing-in-practice, most of which is tacit" (Schön 1983: viii). Often we cannot articulate verbally what we know, or we even give a wrong description of the knowing we utilize in the action. This implies that the knowing is tacit, and incorporated in the action – *knowing-in-action*. Occasionally the practitioners *think* about what they are doing, in particular when something unexpected or surprising occurs – *thinking-while-doing*. Often this thinking occurs during the action – reflection-in-action. Schön (1983: 51, 1987: 22) is inspired of Ryle's statement:

'Intelligent' cannot be defined in terms of 'intellectual' or 'knowing how' in terms of 'knowing that'; 'thinking what I am

doing' does not connote 'both thinking what to do and doing it'. When I do something intelligently, i.e. thinking what I am doing, I am doing one thing and not two. (Ryle 1975 [1949]: 32)

Schön considers *designing* "...as a conversation with the materials of a situation" (1983: 78), and I would add: when composing. This conversation with the materials in the situation is, in a metaphorical sense (1987: 31), usually a tacit relationship – tacit designing. However, sometimes parts of the design process can be explicitly articulated, that is, verbally, as in a teaching or coaching situation such as that which Schön chose as his empirical study for developing this theory. In this thesis the concept of *tacit knowledge* is only touched upon without a profound interpretation. I chose to reserve a more thorough discussion concerning the concept of *tacit knowledge* related to design learning to a future research project because I regard this as a huge and complex field of research that goes beyond the confines of the present project.

Designers sometimes make the final product, as do the seamstresses of Kaktovik. More often designers make representations, such as drawings, of artefacts, as industrial designers and architects. The design situation at hand is particular and often complex, and this complexity often causes unintended consequences. When these surprises occur, the designer reframes the situation by making new proposals to be tested as an experiment in the particular situation, which again 'talks back' and the designer responds by accepting the proposal or not. "In a good process of design, this conversation with the situation is reflective" (1983: 79), Schön states. The reflective conversation "...spirals through stages of appreciation, action, and reappraisal" (Schön 1983: 132). The competent practitioner is able to reframe the original problem of the design process when necessary. On this reframed problem, he conducts an experiment by reflection-in-action to discover what consequences and implications can be made to follow from it. In this experiment, the practitioner also produces unintended changes, the "...situation talks back, the practitioner listens, and as he evaluates what he hears, he reframes the situation once again" (1983: 132). In different contexts, as in designing, the reflection-in-action can last for just one moment, minutes, hours or longer.

It is difficult to articulate explicitly the rules involved in designing; on the other hand, to describe the deviations from the norm is much easier. Schön also links reflection-in-action to John Dewey's concept of learning-by-doing,

as an argument for the idea that "...we can think about doing something while doing it" (Schön 1983: 54). Although Schön's theory is inspired by Dewey's concept, these theories differ in many aspects, as in the view of positivism, which according to some researchers Dewey supported (Waks 2001), an interpretation with which others disagree (Erskine, Carter-Tod and Burton 1997).

Schön considers the term *practice* ambiguous. Practice refers to "performance in a range of professional situations" (Schön 1983: 60) – as what a lawyer does – or as "preparation for performance" (Schön 1983: 60) – as the repetitive or experimental activity of a piano player. A professional practitioner does both kinds, Schön says; "he is able to 'practice' his practice" (Schön 1983: 60). Through this, the practitioner develops "a repertoire of expectations, images, and techniques" (Schön 1983: 60). From this repertoire, the designer can compose new variations (Schön 1983: 140). Schön, a jazz musician himself (Waks 2001), states that improvisation – by "varying, combining, and recombining a set of figures within the schema" (1983: 55) – is a typical example of reflection-in-action. The schema is known to all the musicians, and each of them has an individual repertoire to pick from when improvising. To make this even clearer, he also mentions verbal conversation as a kind of collective improvisation (1987: 30). We find a similar approach in the work of sociologist Dorothy E. Smith. In a section entitled *Telling the Truth after Postmodernism*, Smith's argument about the social nature of using language to arrive at a degree of common understanding is much like what we find in musical improvisation; that is, the way human beings use language to arrive at common reference points and interpersonal meanings is interactive and social. Whenever we are trying to establish meaning, we practice a social dialogue, the contours of which are the general body of accepted knowledge and reality in which we as members of society conduct our practice. Smith refers to the works of George Herbert Mead and Mikhail Bakhtin – and to some extent, implies Wittgenstein's later work – on the sociality of knowledge, saying:

I have presented an account of reference as an interactional sequence relating word and object in a practical process of telling, finding and recognizing. This is a social act implicating more than one consciousness; each participant could perceive things differently; their perceptions are coordinated in it. Knowledge joins consciousnesses whose perspectives are necessarily divergent, giving us what can be known as known in common. Perspectives are subdued to the virtual of what we

can treat as there for you as it is for me – the water flowing over Helen Keller’s hand becomes the water which she can ‘know’ as what is known both to her and her teacher (Smith 1999: 128).

A key concept that emerges in Schön’s theory of design practice is *dialogue*. In his most quoted book *The Reflective Practitioner* he talks about “Design as a Reflective Conversation with the Situation” (Schön 1983: 76). In his books, both from 1983 and 1987, he uses the term *conversation*, which I perceive to be synonymous with his sense of *dialogue*. Schön confirms this conversational interpretation in an article, although the term he used was *dialogue*. “In a designer’s dialogue with a situation, types can function both to transform the situation and to be transformed by it” (Schön 1988: 183). So far, in this interpretation of Schön’s theory I have used the term *conversation*, because this is the one he uses in his major books. In the following, I prefer to use the term *dialogue*, which seems to me has richer connotations for an exploration of the design practice involved in Inupiaq clothing. Dialogue is employed here in a broad sense, referring to the designer’s connection to the materials of the design situation and the body of design principles s/he carries with him/her, principles acquired either from experience or training and which may be either consciously or unconsciously held. The term conversation in Schön’s sense, if utilized here, could lead to the misunderstanding that the connection between the designer and the materials of the situation is exclusively *verbal*, that is, oral, as a kind of mystical supernatural connection. Dialogue, on the other hand, usually applied to a broader, often more metaphorical context denotes a meaningful, but not necessarily verbally expressed exchange between a person and something else – in this instance, the material of the design situation, into which impinges the socially constructed aesthetic values of the local community as well. This corresponds to Schön’s interpretation of conversation in a metaphorical sense in his books (1983, 1987).

Critique of Schön’s Theory

Schön’s theory of the reflective practitioner does not seem to have been exposed to extensive critique. Those who do not agree with him perhaps have chosen to neglect rather than attack his thoughts. However, parts of his theory have been criticised by some of his adherents, in particular within teacher education. One of them, Newman (1999) has reinterpreted Schön’s epistemology of reflective practice through Wittgenstein’s later work, in

particular the concept of language games, in the context of teacher education. Newman states that Schön's theory lacks the essential requirements of a new *epistemology*, something that Schön ought to take account of since he describes his theory in epistemological terms: "a theory of meaning and an account of language" (Newman 1999: 183). Schön claims to build on Wittgenstein's work, but Newman asserts that Schön did not extend Wittgenstein's theory. Newman sees Schön's notion of reflection-in-action as redundant. Rather than supporting Schön's theory, Newman's reinterpretations of Schön's empirical investigations show that these case studies actually support Wittgenstein's view, in his later work, that meaning in language is determined by use, and that rules depend on the social, that is, the taken-for-granted practices or customs of society. Be this as it may, Newman is perhaps right that Schön has fallen short of his ambition to make a quite new epistemology of practice, but for the present investigation his ideas remain highly interesting, especially with regard to reflection-in-action.

Russell (2005), another teacher educator, who has advocated Schön's theory of the reflective practitioner for years, actually criticises his own utilization of Schön's theory. For years he and his colleagues have *talked* about the importance of reflection in the practice of teaching. However, the students of education had problems to grasp the meaning of reflective practice, and consequently they had difficulty practicing reflective practice. Not until quite recently, did Russell managed to develop an arrangement to teach reflective practice. He requested that during their program of studies, including their ten-week practicum, the education students send him short reflections on their own practice by email according to "questions intended to foster thinking about professional learning" (Russell 2005: 202), although this may possibly constitute after-thoughts as reflection-on-action rather than actual reflection-in-action. Russell's story indicates that teachers and teacher educators, as well as perhaps other professionals, have been attracted to Schön's theory as theory, without applying it in the sphere of practice, which, after all, was probably Schön's primary purpose.

Dorst and Dijkhuis (1996) have compared different paradigms for describing design activity, and Schön's theory of the reflective practitioner is one of them. Their conclusion is that, "Seeing design as reflection-in-action manages to describe the design activity without totally severing the close link between the content and process components of design decisions" (Dorst and Dijkhuis 1996: 269). However, in a critical comment to the theory they suggest that the theory should be developed by building a taxonomy of

design problems and frames to make more rigorous, systematic and generalized conclusions, something with which I concur.

While I am aware of these objections and shortcomings in Schön's work, I still find it inspiring and relevant to my interpretations of the designing of Iñupiaq clothing.

Look at the Designers of Iñupiaq Clothing as Reflective Practitioners

My intention is to look at Schön's interpretation of design *practice* primarily, and secondary design *learning*, in relation to my empirical material from Kaktovik. The focus in the following interpretation inspired by Schön's theory is the conversations – as I prefer to term dialogues – involved in the design process of annuġaat. As I have already indicated, I find it more relevant to use the term dialogue about the 'back-talk' (Schön 1983: 78) between the designer and the design situation – in particular because this relationship usually is silent. On the other hand; the conversations between members of collaborative designing, and in design education, aloud talking is a parallel action to e.g. designing by drawing. In the following, designing of Iñupiaq clothing made by women of Kaktovik are interpreted as dialogues between the designers and the design situations, mainly a silent dialogue assessing all the factors involved in the process – and knowing, perhaps intrinsically, that their design decisions, manifested in their finished garments, will be open to evaluation and assessment by their community of peers. They are reflecting back and forth to themselves about that cloth, visualizing what they intend to do with it. For the purpose of interpretation, the dialogues between the designers and the design situations are divided into two distinct dialogues; first with *the materials* and second *the shape and colours*. In real life, these dialogues occur in an intertwined and simultaneous manner, more like one dialogue with several interlocutors.

Dialogue with the Materials

There is really no exact starting point of the design process of a new Iñupiaq garment. The process has traces of previous processes, of previous experiences on which the present process is built. These experiences are their repertoire, according to Schön's theory (1983: 60). The repertoire has both a collective and an individual dimension. These experiences could be from the last annuġaaq made, but often the seamstresses have different experiences

gained from various previous design processes. The experiences could deal with such issues as the strength of a special material, the width of the tapes, the composition of the qupak, or how a special combination of colours appeared. Because the seamstress usually experienced the results of her design herself, and could observe the result when either she herself, or somebody in her local environment wore the garment, she was able to judge her previous design and could correct her mistakes and strengthen weaknesses in future designs. Alexander (1964: 49) mentions this as one of the reasons why design, in what he terms unselfconscious cultures – without formal education in design – often maintains a better quality. Usually the distance between the designer and the user of the design is short, both in time as well as in distance. This allows the seamstress to make the corrections immediately. She does not make the same mistakes twice. Other people sometimes could learn from these mistakes as well, whether they are present and watching her mistakes, or whether they observed the results in finished garments worn in the local community.

Although the criteria used in choosing materials for a new atigi are built on the previous experiences – both the collective and the individual repertoire – I decide to look at this as a starting point for the design process of an Iñupiaq garment. In Fairbanks, which is a city of about 100,000 inhabitants, there are many quite large textile or fabric shops. All of them had a broad range of fabrics and different kinds of tapes. A substantial proportion of the customers were *Iñupiaq* women, both from the different villages all over the North Slope of Alaska, who travelled by air to Fairbanks, and Iñupiaq women living in Fairbanks. However, the materials they used for making annuḡaaq and qupak were intended for *patchwork*. This means that the seamstresses of Kaktovik and the 'patch-workers' had different dialogues with the same materials, because they used the material for quite different purposes.

The seamstresses had what was usually a silent dialogue about the function of the materials when they chose fabric and lining. Usually the fabrics of the cover for the atigi or for the atikluk were made of cotton. For men and boys they chose thick, single-colour cotton fabric, for women and girls they preferred thinner and patterned cotton fabrics. For atigit, they sometimes used corduroy or velvet, the last especially for women or girls, plain-coloured for male and usually patterned for female. All these materials had a good functionality based on long experience. Sometimes the seamstresses of Kaktovik also used materials other than cotton, like thin viscose. These materials had very bright colours but often were more slippery, which made them more difficult to work in the cutting and sewing

processes. The consequence was that the seamstresses did not choose these kinds of materials very often, because the difficulties with the slippery cloth made it necessary to expend extra labour time.

When I joined 'Victoria' at the fabric stores to choose the materials for an atigi, her reflection-in-action was obviously present. When we entered the various fabric stores to look for materials she talked to me about some of these experiences. She was a skilled master seamstress with much experience, since she had started to make annuġaaq as a little girl fifty or sixty years earlier. Although I am not a child or woman of Kaktovik, I was a kind of novice in the current project, namely, the making of a qupak; at that point in time I had only made one atikluk and some samples of qupak. In addition, I had experiences that arose from my previous sewing of trimmed clothing items in Norway. 'Victoria' and I had a verbal dialogue about the different materials and colours during this shopping session. She would look at one particular fabric, examine it, feel the quality of the fabric, walk over to another fabric, and repeat the same actions. She reflected-in-action in the dialogue with the fabrics, sometimes reflecting aloud, addressing comments to me, but usually silent, without speaking.

I had similar experiences some months earlier when 'Ruth' helped me to buy fabric for the atikluk I made by myself. I assume that this kind of dialogue also took place when 'Victoria' and the other seamstresses of Kaktovik bought materials for the making of annuġaaq. Usually this dialogue was wordless, that is, silent when they visited the fabric stores alone. When I went by myself to the fabric stores on another occasion, to buy tapes and threads, I recorded on video the dialogue I had with myself. I had to talk loudly in the store while recording. The other customers in the store started to talk to me because they thought I was talking to them. This indicates that it was not usual to talk aloud and to oneself when having this kind of dialogue with the materials.

I have interpreted the way they chose the materials for sewing as an improvisation within the tradition. Apart from when they made dancing costumes for a whole team from Kaktovik (see p. 125), the seamstresses usually never bought the same kind of fabric for more than one annuġaaq. An exception could be for a mother and her little daughter or a grandmother sewing for her little granddaughter. Although the fabrics they used in making these garments were not similar, I regard them as related in some respect. For women they usually chose flowered fabric, and the flowers were neither very small nor very large. Somebody said that the older women preferred smaller



Figure 37 Assortment of materials in a fabric store in Fairbanks.



Figure 38 A seamstress picks out fabric at the store.

flowers than the younger (Martin 2001), but this was not universal. Some of the older women, like ‘Victoria’ had at least one atigi patterned with flowers that were larger than usual. One reason why she chose a different pattern was perhaps that she is one of the best seamstresses, maybe the best seamstress of Kaktovik, and thus has been one of the initiators with the competence to develop and change the rules within the tradition. The patterns on the fabric of annuġaat have changed over the years. One reason is obviously the assortments available.

The seamstresses of Kaktovik seemed to consider the functionality of both the *annugaaq* and the *qupak* to be very important. 'Victoria' was particularly concerned with the functionality of the materials. When she appraised the materials for a new *annugaaq* she had a dialogue with the materials about whether they satisfied her demand for functionality. This dialogue was based upon the individual repertoire she had built up from her own experiences, as well as the collective repertoire she had learned from others. The dialogue was a reflection-in-action on the spot, in the store as she confronted each material. Usually this dialogue was silent, but when I asked her questions to learn about these dialogues, she was usually able to explain in words at least some parts of the dialogue going on in her head. However, the dialogue often contained much more than it was possible to tell, because her knowing-in-action was built on her repertoire, which included the totality of her own experience as well as what she had learned from others. When I asked her if she thought I should buy the more expensive fabric, she answered: "The expensive one lasts longer, they last 10-15 years" (71-10.30). When I continued to ask her if a golden bias tape I had used on one of my experiments was in Kaktovikmiut style, she answered: "No, because this doesn't last long. You can't wash them in the washing machine. You have to dryclean it" (70.1-19.48). She also mentioned the quality of the zipper. "I don't use those plastic zippers. They are no good, see. I buy my good zipper for parkie. They last long" (70.2-03.56). Concern for the quality of materials seems to be an important aspect of the design process. When 'Victoria' spent her time making an *annugaaq* she chose materials that 'last a long time', which means that she did not have to make a new one very often.

Another aspect of saving time was that they usually made use of the same lining for up to ten or fifteen years, and just created a new cover every year or so, for a new look or because the thin used cover had become worn out. The lining was stitched to the cover to make it easier to separate the two materials: "...so, any time if you want to wash it you could just take it off, and sew it back" (3.2-00.01). This arrangement was of special importance when they used fur lining, in particular for kids, for travelling and for working outdoors during wintertime. When hunting or working outdoors in wintertime they prefer an *atigi* with fur lining. Today some *Iñupiat* do not have any *atigit* because they do not know anybody who can make them. To buy one is too expensive for many people. This means that some, especially single men wear only Western style of clothing, also for outdoors activities during wintertime.

The main function of the cover of an atigi is the appearance, while the lining's function is to keep the wearer warm in cold weather. When I was in Kaktovik in 1997-98, quilted lining was most common for atigit, except when hunting and for children during wintertime, who usually wore lining of purchased fur (sheepskin). Previously it was not difficult to get thick quilted lining in regular fabric stores. Gradually, the fabric stores, now primary dealing with the patchwork trade, only stocked *thin* quilted lining intended for bedcovers or blankets. This quality was too thin for lining atigit, and of insufficient fibre content for protecting the wearer from the cold. This meant it was hard to find good quality quilted lining, and as already noted, they had to obtain expensive lining from special stores that outfitted clients for polar expeditions. All the informants seemed to agree that the function – the use of the garment – was a primary concern, that is, the purpose of the *annugaaq*. 'Patricia' said:

I make them for wearing. If they get dirty – or anything...I'm always mad at people when I make them jackets (and) they hardly wear them. I make jackets to wear and not to store. I don't want them to be hanging up in a closet (51-18.25).

The function of the *annugaaq* influences the kind of *qupak* chosen for each. *Atigit* for men to use hunting or travelling often have no *qupak* or may have simple ready-made tapes sewn on. 'Victoria' suggested ready-made tape for the atigi she made for me when I was on my way to Barrow. "They do not put much trimming on the atigi they travel with" (71-32.00), she said. Also for the children, they put less trim on the *atigit* for everyday use, especially for the boys. When two of the seamstresses talked together, one of them said: "Simple for boys, because they get dirty" (51-59.48). The other answered: "I never make fancy ones for my boys anymore" (51-59.48). Because Kaktovik is a small isolated village without special stores and services for sewing, some special problems arose during the processes of designing and making garments, problems of limitations of materials that made their situation different from that of seamstresses in bigger cities. This limitation on the design process also challenged local improvisational abilities, as I will come back to. First, I intend to explain what I understood to be one of the common, usual ways for the Kaktovik women to get materials for their sewing.

When making a new *annugaaq* the seamstresses had a dialogue with their repertoire according the shape of the *annugaaq*. This repertoire is built upon what has been common among *Iñupiaq* seamstresses through time, in a word,

their collective repertoire. In addition, each seamstress had her own experiences and preferences, and these together built her individual repertoire. The shape of an atigi and an atikluk for a person was approximately the same, usually varying only with size, something that has much to do with the atigi's lining.

According to the shape of the annuḡaaq, which could be seen as a frame or a background for the qupak, the seamstresses usually used an old or a previous made annuḡaaq of the same kind, as a pattern. Sometimes they just copied the shape of the annuḡaaq but more often they had to adjust it for the size of the person that the new item was intended to clothe, or because the fabric was thicker and they then needed more space. Occasionally the reason for the adjustment was that the new annuḡaaq was to be an atigi and the sample was an atikluk, and the lining inside the atigi required that the cover of an atigi had to be bigger than that of an atikluk. When 'Victoria' cut the fabric for an atigi intended for me, based on the atikluk I made in Kaktovik, she said, "It looks so skinny, though – this" (70.2-00.17). She continued the dialogue with her repertoire: "Let me see. It's going to be tight, all right. But, see, right here." She continued, directing her words to me, "Your parkie is going to be tight, see, and the lining. This is just atikluk; it's not cover for parkie".



Figure 39 A seamstress cutting atigi with an atikluk as 'pattern'.

The seamstresses from the North Slope of Alaska did not use paper for prototypes when they cut the fabric for a new annuḡaaq, which is usual in sewing when the seamstresses buy a paper pattern as a model. If they hypothetically had applied paper shaped as the parts of the garment, they could have done the adjustments of size and shape on this paper prototype before cutting the fabric. As already described, they usually used an old annuḡaaq as their pattern prototype. "This is my old parka, I use it for pattern," (80-09.20) was a common statement. There was a skilled process involved in turning the old atigi in different directions to cut the new fabric. This particular method, once mastered, is faster than making a paper prototype first and then cutting the fabric. The cutting process directly from the old annuḡaaq to the new implies a dialogue the seamstress has with herself in relation to the old and new annuḡaaq. On the spot, the seamstress applies her repertoire and her knowledge about and judgment of the new annuḡaaq, and which adjustments she has to make. "I have to make it longer than this. This is just a summer parkie". 'Victoria' considered when she cut my new atigi by using the one I had made as a prototype (71-40.40). She also wanted to change the shape of the hood to a better shape, according to her skilled repertoire (72-02.55).

The dialogue with the materials seems particularly important according to the function of the Iñupiaq clothing. Now I turn to the seamstresses' dialogue with the shape and colours where the materials are in play in the composition or design of the Iñupiaq garments.

Dialogue with the Shape and Colours

A similarity between Kaktovik in Alaska and the knitters I observed at Selbu in Norway was the kind of instant design they made. That means the clothing-makers designed simultaneously as they sewed in Kaktovik, just as knitters designed simultaneously with their knitting in Selbu – they both designed with materials, not by means of drawing. This can be seen as *improvisation in the tradition*. They had a theme, which was the custom of the tradition, as well as the materials and tools available, and based on the theme they improvised at different stages during the making of the work, according to their individual and collective repertoire. In Selbu, the shape and technique of the mittens or gloves were fairly fixed, but with there were possibilities to create and improvise within the patterns of ornaments built up during the knitting process. The same kind of gradual building up of the patterns of ornamentation was found in the design process of qupak on annuḡaaq in Kaktovik.

To interpret the practice of designing the qupak on an annuḡaaq I will first use one such design process, with a subsidiary glance to others. ‘Joanna’ did not make any drawings or sketches on paper before she started forming and sewing the qupak on the annuḡaaq. A few of the younger seamstresses made simple sketches (51-02.06, 80-11.25), often on graph, or squared paper, about where to put the different pieces of bias-tape to make the composition of the qupak. The sketches did not prevent a later improvisation during the sewing process. Often they found better solutions to the design problems later on, and then changed the composition during the sewing.

In my view, ‘Joanna’ was improvising when she made the qupak, but improvising from within the tradition. Before she started to sew the tapes for trimming on to the fabric, she sat quietly for a while without doing or saying anything. ‘Joanna’ was looking at her store of tapes in her sewing box. To me her sewing box looked almost like an artist's palette, a lot of different colours and different kinds of tapes. Most of them were bias tapes and rickracks in different sizes, made either of cotton or some synthetic material. She also had some ready-made tapes and fabric flowers as well. I did not ask her what she was thinking because I was afraid to interrupt her design process. However, I assumed that she was considering what materials, size and colours she should choose for the composition of the qupak.

‘Joanna’ had a piece of a sample or prototype for her work (Fig. 40), which was made by one of her sisters, who was regarded to be one of the best seamstresses of Kaktovik. This sample I regard as the theme on which she was improvising. She did not make an exact copy of the composition on the sample. The use of colours was the most important difference between the sample and the qupak she was going to design. She adapted the colours of the qupak itself according to the colours on the fabric she was sewing the qupak on to. However, there were infinite possibilities of choice when she was making the qupak, as in improvisation of music. Another similarity with music is that the improvisation took place while she was making the work.

The fabric of the atigi cover ‘Joanna’ was making was of a floral pattern in green, blue and some yellow hues. I watched ‘Joanna’ picking up a *dark green* bias tape and putting it on the fabric to see how it looked, and then putting it back again, talking to herself. Then she picked up another *lighter green*, looking at it on the fabric and putting this one back, too. After a while ‘Joanna’ found a third bias tape, maybe the same colour as the last one, but narrower, putting it together with the *yellow* bias tape she already has sewn

on, and finally putting that one back, too. It seemed as though she was looking for something special, maybe a colour she could not find. Her visiting baby grandson was screaming in the background. All the family was present, talking and laughing. She found some dark blue rickrack. "Let me see, which...?" (6.2-14.25) 'Joanna' said, picking a darker yellow bias tape. Then she picked a dark blue bias tape and tested it relation to the fabric, and the yellow bias tape she had already chosen, and a dark green bias tape again, like the first one. Finally, 'Joanna' chose the dark blue rickrack and the dark green bias tape.



Figure 40 Reflection-in-action when designing qupak

‘Joanna’ did not talk much during the designing process. She did not say much about her thoughts and ideas while she considered and reconsidered the different tapes for the qupak. To talk while this process was going on would perhaps disturbed the designing. My own experience of the design process in Kaktovik was that talking while designing interrupted and disturbed the designing process. It looked like ‘Joanna’ chose the green bias tape, but was not sure about that choice, and then tried different other alternatives. Finally, she was sure that her first choice of the green tape was the best. She reflected in the action, reframed the situation by putting another colour in, judged that alternative to be poorer than the first one, and then went back to the original frame. Whether ‘Joanna’ already had an idea of the whole composition when she sewed on the starting yellow bias tape, I do not know. She did not reveal anything about that. She had perhaps a hazy picture of the composition. By experience she had probably learned to pick one of the not prevalent colours in that first row, to make a good background for the tapes she would put on this ground colour in the final composition, to make a contrast so the patterns would “stand out” (80-19.10) as one of the seamstresses stressed, or “take the colours to bring it out” (21.2-11.05) as another said. When she then chose the dark blue rickrack, it was as though a jigsaw piece fell into place; it looked right according to the fabric and the trim as a whole. ‘Joanna’ then seemed sure also about the dark green bias tape, which was an extremely important part of the whole composition because this bias tape would be the main colour or bottom colour of the composition, although it was possible to change to another colour later in the processes, if desirable or necessary, as we will see further.

‘Joanna’ always started to sew on one bias tape, and then sewed on one rickrack, in a contrasting colour, simultaneously applying another bias tape in still a different colour for the next row. The sewing technique influenced the composition in addition to the materials applied; it was important that the seamstress sewed as perfectly as possible. The rows of bias tapes and the seams would be mutual parts of the composition. The seamstresses should avoid stretching the bias tapes when they sewed it on. They should hold it loose, stretch the previous one to make the qupak straight on the annugaaq, and not curved, as one of the experts told me. To choose the right kind of materials is very important for a successful result. Narrow bias tape is considered better, because it does not make the qupak too thick when the bias tapes are laying layer upon layer. ‘Joanna’ took measurements for the pattern unit – or the motif that is repeated – in the composition of the qupak. She used the cardboard inside the package of a bias tape and made a cut with scissors as a mark for the length of the pattern unit. This is an example of

how they often creatively take what they have to make what they want or need, which also counts as a kind of improvisation.

The next stage in the process of designing and making the trim is to choose the colours of the vertical small pieces of bias tape to 'breed' into the horizontal bias tape, which 'Joanna' in this particular case had chosen to be dark green. "Let me see," she reflected while working, "I don't know what to put in here." One of her daughters, watching her, said: "Maybe pink, mum? Since you don't have purple you use pink, maybe" (6.2-32.20)? The purple colour was pronounced in the pattern of the fabric. It seemed as though her daughter had some knowledge of how to design the composition of the qupak, as well, although she did not sew herself. She continued, thus: "Red or pink maybe?" 'Joanna' did not answer her daughter, but tried a very light green tape on the fabric. She finally chose the very light green bias tape for the small pieces to make the pattern. This first row was time-consuming to make, because she had to measure the pattern unit all the way around the trunk of the garment. In addition, this first row was most important for the composition of the design and more or less set out the premises for both shape and colours for the rest of the trim composition. The next rows would follow the pattern unit of this first one.

At this stage of the sewing process, it might appear to some that once 'Joanna' had started to sew in the small pieces, the design process was finished. However, the design process continued to develop. Once again 'Joanna' looked through the tapes in her sewing box, or pallet. What was going on? She found another pack of very light green bias tape, because the first one was used up. Then 'Joanna' began to add more colours as she continued the designing process of the composition. She then stopped again, reflected and tried out a *blue* bias tape. When 'Joanna' started the next row, the bottom colour was changed from green to blue. Did she think of this before she started or not? 'Joanna' also changed the thread to a blue colour matching the blue bias tape. When the seamstresses did not have, or ran out of, the colour they initially wanted, they reframed the situation and used a colour that was not very different from the original preferred one, in this instance from dark green to dark blue. Some of the inhabitants greeted everyone 'Good evening' over the CB radio, as many of the Kaktovikmiut's customarily did every evening. "Oh, I like the colour you put on it," 'Joanna's daughter said. "What?" 'Joanna' asked, she did not understand what her daughter meant. "Qupak!" the daughter replied. "Why I ran out of that green so I put in this blue," 'Joanna' said, to explain. Her daughter obviously enjoyed what her mother did: "It's ok. It got blue on." And then,

"To finish it, thus," 'Joanna' concluded. In addition to a design situation, this was a *learning* situation for 'Joanna's daughter, as well as for me.

In the design process of annuḡaaq, the composition of colours is important. When I asked what was important when they chose colours for the qupak, all the seamstresses mentioned *matching* and *contrast*. "What I do is I try to find colours that would match this pattern and use those colours" (80-21.03) 'Lynne' said. Usually the seamstresses expressed uncertainty when they talked about the design process of annuḡaaq. Therefore, it was conspicuous that all the seamstresses I questioned, from Kaktovik as well as from Barrow, answered immediately and clearly the same words *matching* and *contrast*. These terms seem to be the main aesthetic concepts intrinsic to their design process when creating annuḡaat. These concepts are interconnected; but usually the seamstresses mentioned *matching* first, and then later in the conversation, they mentioned *contrast*.

In the design process when the seamstresses chose colours for the qupak, they first looked at the colours of the pattern of the fabric and then picked colours of tapes that would match these colours. The not so skilled seamstresses chose colours that were as similar to the colours in the fabric as possible. However, the more skilled ones had a greater repertoire, and preferred colours that would match the colours in the fabric, but in different nuances from the ones in the fabric. The latter I regard as a more exciting expression in the design of the qupak on the annuḡaaq. The annuḡaaq usually were viewed from a certain distance, such as when people met on the road, at the store, or at an Eskimo dance in the community house. I said to 'Victoria' that she was like a painter and artist the way she mixed different colours, to fuse together, instead of just choosing fewer colours, as the less expert seamstresses did. "Then you could see them better," she replied (76-20.30). Just as one often sees in paintings, the compositions of colours of the qupak on the annuḡaaq made by the most skilled seamstresses, when viewed from a distance, gave the illusion of matching, but were richer in the nuances of colour-matching than were the more simple ones.

When I asked 'Victoria' which colour I should buy for the bottom tape of the qupak of the atigi she made for me, she said: "Brown" (73-14.30). I was surprised, because the bottom colour of the fabric actually was black. When the atigi was finished, I could see that she was right. From distance, the colours of the pattern of the fabric were mixed with the black colour of the fabric itself, and the result was brown. As an experienced designer she had seen this immediately. Similarly, when 'Victoria' designed the qupak of my

atigi I was surprised when she put a light pink tape on the fabric to explore the effect. "That would match this little right there. If we put that, I mean right there" (75-26.40). I could not see any pink colour in the fabric and I did not understand what she meant. Then, from a distance, I could see that the golden colour, mixed with the burgundy, seemed like pink. To me, as a novice, matching still meant one colour as identical to the colour in the fabric as possible. After a while, I acknowledged that matching also could mean the same colour but lighter, such as burgundy brightening up to a light pink.

When 'Joanna' chose the colours for the qupak she made, she told me that she just watched carefully, while pointing at some of the flowers on the fabric that were light purple and pink. Then, she also put a white tape in the composition of the qupak (Fig. 36 b). "It didn't show, so I put it on," she stated (11-29.22), which I interpreted to mean that the colours she had already added before the white tape did not make enough contrast to the fabric. This shows that 'Joanna' was reflecting consciously upon why she chose the specific colours. It seemed as though she were acting within a whole, a holistic process, and was not engaging in separated, module-like actions. She was able to verbalize explicitly the reason for choosing the particular colours because her repertoire was only partly limited to *tacit knowledge*.

From all the seamstresses, I received polite appreciation of the qupak I had made for my own atigi. According to the Inupiaq culture it is not polite to criticize another person directly. 'Victoria' said, "That's pretty cool, I think", watching my qupak. "Red, I like red – matches this red" (70.2-00.17), while pointing at the red colour on the flowered patterns of the fabric. When we came to know one another better, she nevertheless suggested I add a light blue 'baby-rickrack'⁶⁰ as well, to match the blue colour at the fabric and the blue tape at the qupak, as well as make the composition more complex. That means that she was not really satisfied with my qupak but the result, like its maker, passed muster as a novice attempt. As a skilled seamstress, she could complete the composition according to her more extended repertoire built on her extensive experience acquired while making literally hundreds of annuḡaaq.

⁶⁰ Narrow rickrack



Figure 41 Improving the qupak of my atikluk.

At the fabric store ‘Victoria’ had said about the material we had chosen for my atigi, all kinds of colours would match. This was confirmed during my shopping for tapes later on. The designing of the qupak was not just to pick the colours matching to the fabric, and then put the tapes together. Different choices of colour would allow for different expressions or effects (74-06.56-11.54). When I returned from a trip I made by myself to the fabric stores to pick tapes for the qupak she planned to make for my new atigi, ‘Victoria’ was not satisfied with the selection I had made. In her eyes I had been too much concerned with *matching*, and paid too little attention to *contrasting*.

When she made this atigi for me, ‘Victoria’ was very engaged with *my* wishes, finding out what *I* would like. When she examined the different tapes in her reservoir of tapes at home, she asked, "Maybe this colour? Let me see – if you like pink" (75-25.30). It seemed to be difficult for her to make any choices on my behalf. She usually made annugaaq for customers made to order, which meant that customers had preferences for different colours. She usually wanted them to buy the materials for the annugaaq themselves, including the materials for the qupak, or at least they told what colours they wanted for the annugaaq. My purpose was different; I wanted to observe how *she* made choices of colours for the design. I came to realize that I would have to observe ‘Victoria’ when she chose colours for making annugaaq for herself or her own family, but that was impossible when I was filling the role of a customer. She was not able to behave as if this were her design process exclusively, because she knew that I actually had preferences. The customers' preferences were also part of the framework repertoire inside which she improvised; like a kind of 'co-design' between the seamstress and the person who intended to wear the annugaaq. However, she did not accept the bias tapes I had chosen. I did not buy enough light colours, she indicated, only dark (74-10.20). I picked colours as similar as possible to the pattern of the

fabric, but not the contrasting colours, to make the composition clear. That means that I still was a novice with an insufficient repertoire and knowledge of colour in the designing of annugaaq.

'Patricia', one of the younger seamstresses said: "I always take the colours to bring it out" (21.2-11.05), pointing at the pattern of the fabric. Probably, she meant to articulate the elements of the composition of the qupak by putting together contrasting colours. She continued:

I put colours where you could see the trim. And then you can see the material, too. It got no blue, so I put the blue (the bottom tapes). But there is green and there is purple, there is pink, and there is a little bit yellow. In that way, it brings out more. I couldn't put a darker colour here (the light pink rickrack), because you wouldn't be able to see the trim (21.2-13.30).

I understood her statement, "It got no blue, so I put the blue" to mean that she could use the blue colour as the bottom colour because this colour was missing in the fabric, and then this colour would make a contrast to the fabric, and the trim thus 'brings out more', as she said. The bottom colour was supposed to bring the other colours out, through contrast. Dark colours were most common as the bottom colour of a qupak. Usually the colours of the fabric they preferred were not so dark, which means that the dark colours, often black, usually made a contrast to the colours of the fabric, to make the qupak 'stand out'. As one of the informants said, "The black is my favourite colour. Especially if you have trimming that is different colours. Because black really make things colourful. I mean it's against something that has different colours" (80-33.46). At the same time, they often take care of the ideal of *matching* by choosing a dark colour present in the pattern of the current fabric. One of the seamstresses of Kaktovik said: "What I like to do is to use this background right here, the navy blue....Like over here, I use black, to match. So whatever colours I use will come out better" (50-27.00). The bottom colour of the trim seemed to be important to make sufficient contrast to 'bring out' the colours in the tapes that were added to the trim design. Sometimes the bottom colour was a contrast to the colours of the fabric; other times, the bottom colour of the qupak matched the fabric; in the latter instance a contrast to the fabric colour was made by adding the other tapes.

One of the most skilled seamstresses had machine-stitched embroidery in black thread to moderate a white bias tape, which prevented the white tape

from dominating the other colours. The colour of the thread repeated the black of the fabric. Sometimes the thread matched the colour of the tape, while on other occasions, the colour of the thread contrasted, to repeat and match other colours in use, to match them and make a connection in the composition of colours and form (3.2-06.40). This shows the importance of the balance between matching and contrast.

The task of balancing the matching and the contrast was difficult. When I made my atikluk, my adviser 'Joanna' agreed that the red bias tape I had bought in Fairbanks was not right for the bottom colour. 'Ruth' and I chose the red colour to match the red in the fabric, but the result was that the qupak would merge into the pattern of the fabric, especially when the other colours I had bought also matched the colours of the fabric (see Fig. 42). A problem about the red bottom colour was to find contrasting colours in the additional tapes, to 'bring out' the composition of the qupak. Another problem was the lack of contrast between the fabric pattern and the red bias tape, which prevented the qupak from standing out from the fabric. Consequently, I had to utilize what was available in Kaktovik at that moment, a few days before Christmas. At that time they did not stock any tapes at the stores in the village, and I could not leave Kaktovik before I had finished my work. Conforming to local custom, in order to make a good composition, I borrowed and bartered different colours of tapes from several seamstresses in the village. I decided to choose black as the bottom colour of the qupak (16-36.06) after considering both blue and purple (16-32.00). I did not measure the black bias tape to make sure I had enough for all the rows or lines. The result was I ran out of black bias tape. 'Joanna' helped me to call some of the seamstresses in the village to ask for help. Nobody had black bias tape left because this was both the most utilized colour and the busiest period of sewing during a year, the last days before Christmas. I visited some of the seamstresses to look for colours I could use. Among the supplies of one seamstress I found a dark blue bias tape that could match the black and still provide contrast to the other colours⁶¹. At another seamstress I found a purple tape, suitable for concluding the composition of the qupak, again balancing between matching and contrast. When I asked the seamstresses later if they preferred the qupak of the sample #2 (p. 174) with all black bias tape in the bottom, or the *one* on the atigi (sample #3), where some of the bias tapes were black and some blue, most of them said the latter. One reason could be that I had replaced the blue top row with a purple bias tape, which matched the colour of the fabric better. An answer I got was that they could hardly see

61 This part is not recorded on video because the occasion was spontaneous and improvised.

the difference between the black and the blue bias tape, which might support the previous explanation. Another possible interpretation is that they hardly saw the differences between the way the dark blue and the black tapes make the effect richer since the differences are almost invisible. If the two colours had been more different, they could have blurred and messed up the composition. Not unusually, the seamstresses of Kaktovik utilize different colours in the horizontal bottom bias tapes in the qupak. When I asked them why, they explained that they ran out of the colour first chosen. One of the seamstresses mixed green and blue as bottom colours (Fig. 40). The shift from green to blue was not in the middle of the qupak, but the row after, which means the diamond ornaments were not symmetrically mirrored. The green and the blue had almost the same value of light, the same brilliance. The small vertical tapes in light yellow together with the light green, which form the pattern of the qupak in contrast to the dark bottom tapes, had a common brilliance as well. To complete the composition, the dark blue rickrack had a quite different brilliance. The colours make a good composition, they do not stand out too insistently, nor do they disappear, but rather form a clear composition. The qupak is in proper harmony with the atikluk, balancing the matching and contrasting (8-48.00). The seamstresses accepted the mixing of colours in the horizontal bottom tapes of the qupak, although they did not really approve of doing so. They usually stated the reason for the phenomena was the lack of sufficient primary colour tape. In my opinion, the mix of the colours made a more complex and exciting effect for the qupak. Perhaps this is their experience too, but left to the realm of tacit knowledge of which they are not conscious. If they had not liked the mixing of the colours of the bottom tapes, it would have been possible for them to estimate in advance the correct amount of tape need for that particular primary bottom colour. A final explanation is simply that they spoke out of a sense of politeness: when I asked if they liked my qupak in preference to the other small sample, they simply said they preferred mine.

While the Iñupiat still lived their nomadic life as hunters and trappers, before the 1950s, another possible feature common to both hide and fabric garment-making was presumably that the trim had long been made from whatever valuable and scarce materials were left after the main garment had been cut and sewn, so that in the holistic sense, the project was also bounded by making use of everything. There is an extremely strong ethic among hunting peoples everywhere: nothing must be wasted (Daly 2005)! In everything one does, including one's aesthetic endeavours, there should be no scraps. Nothing should be thrown away. Hunting cultures are sustained by what is considered to be a living sentient environment. If one does not use up

every scrap of the animal, the fish or the tree being consumed in daily life, one is showing disrespect to Mother Nature, and courting her displeasure and future bad luck. By way of example, it may be worth citing the importance of respect for the fellow creatures of nature as has been explained by an anthropologist in relation to hunting societies in northern British Columbia:

The worldviews of those living in nature in a foraging, kinship society reflect the basic reciprocal principle that governs day-to-day social relations in the society itself. On the one hand, nature's life force is seen to nurture the people; on the other, nature exacts its price on the people, its life force feeding upon them and their society, consuming them, causing death, and nurturing rebirth (Daly 2005: 271).

The dialogue between the seamstress and the shape and colours was a continuing spiral process (Schön 1983: 132) during the whole design process. The design of the qupak was not fixed before the sewing of the tapes; on the contrary, they 'talked' to the colours, and the colours 'answered' back until the last seam of the qupak was sewn. The seamstresses were often interrupted or disturbed by duties or work during this dialogue. 'Victoria' asked, "What are we going to put next"(75-34.16)? Then she continued, "I have to go and make some food." While she was making food, I asked her if she wanted me to go and buy some other colours of tapes. "I don't know," she continued. "We have to think. We have to look what we are going to put on next, maybe. Maybe we got enough. Maybe blue"? This shows that the design process continued also when she was interrupted of other duties. She was reflecting-in-action during the sewing process as well as reflecting-on-action even when she was not sewing. The most skilful seamstresses were not only concerned with the contrast of light and dark, they also applied the complementary contrast⁶² (Itten 1961: 78). When 'Victoria' made the qupak for my atigi she chose the contrasts red and green (32-19.00). This combination of colours makes the qupak especially visible because of the maximum complementary contrast between red and green.

The concepts of *matching* and *contrast* especially concerned the trim or qupak of the annuḡaaq. However, actually matching and contrasting also appears to be an important aesthetic feature in terms of contrast and matching between the different annuḡaaq a person wears at the same time, as well as between the annuḡaaq of different people appearing simultaneously in the

62 Komplementär-Kontrast

same social space. When 'Victoria' joined me when I looked for fabric for my atigi, she said, "This is pretty, but too much like your atikluk" (71-21.00). She wanted the fabric for the atigi and atikluk to match, but not too closely. The fabric for the new atigi should also contrast with the atikluk, to make the two pieces of annuġaaq unique. When 'Lynn' made atigit for her daughters and actually for her husband and herself as well, she designed them in the same colour, but used different nuances of *blue*. This was a practical matter, because neither she nor her daughters liked the other colours in corduroy that were available in the stores in Barrow. In addition, she enjoyed making all the atigit of the family matching, but contrasting by making slightly different designs of qupak on each particular atigi (80-15.55).

Final Comments

Following the vernacular design and production of Iñupiaq clothes, this interpretation indicates that the practical processes of doing and learning included reflection *in* and *on* the practice in many contexts. The seamstresses of Kaktovik reflected on the materials, and the shape and colours, through the design process. Their reflections also regarded conditions in their everyday life in the village community, as well as knowledge attached to their tradition. I regard the Iñupiaq seamstresses' dialogue with the design situation as an ongoing condition of improvisation within the tradition. My interpretations show the following conclusions from this Schön-inspired interpretation of the annuġaat design:

- The dialogue with the materials seems particularly important according to the function of the Iñupiaq clothing.
- In the design process of the qupak, which is the main area for improvisation in tradition, the composition of shape and colours is important.
- The interconnected terms *matching* and *contrast* seem to be the main aesthetic concepts of their theory.
- The dialogue the seamstresses engaged in with the colours was a continuing spiral process throughout the whole design process.
- The design of the qupak was not fixed before the sewing of the tapes; to the contrary, they 'talked' to the colours, and the colours 'answered' back until the last seam of the qupak was sewn.
- The seamstress was *reflecting-in-action* during the sewing process as well as *reflecting-on-action* while she was not sewing.

- The dialogue between the seamstresses and the shape and colours was often interrupted or disturbed by duties or work.
- Simultaneous to a design situation, this was a *learning* situation in particular for the children. They watched what the seamstresses did – *learning-by-watching* – and listened to their comments in the dialogue they had with the design situation.
- Learning by coaching was rare but did occur.

Some of these points will be further discussed in the chapter *New Perspectives on Design Practice and Learning*.

My interpretations according to the vernacular design and production of Iñupiaq clothes indicate that the practice and learning included reflection *in* and *on* the practice in many contexts. The seamstresses of Kaktovik reflected on the materials and the shape and colours through the design process. Their reflection also regarded conditions in their everyday life in the village community, as well as knowledge attached to their tradition. I regard the Iñupiaq seamstresses' dialogue with the design situation as an ongoing condition of improvisation within the tradition.

I do not see *learning-by-watching* as a contradiction to Schön's highlighting of coaching. My contribution is to extend the concepts of practice and *learning* in theory of the reflective practitioner. Learning as watching is important, as will be further discussed in the next section – in addition to coaching.

In the interpretations inspired of Schön's theory of reflective practitioners (Schön 1983, 1987), I notice that the *social* aspect of the practice and *learning* of designing Iñupiaq clothing is underestimated. This is something that I regard as crucial for understanding the learning process involved in designing in Kaktovik. In the next section, devoted to interpretation, I extend the *social* aspect of the design process of annugaat.

IÑUPIAQ DESIGNERS AS A COMMUNITY OF PRACTICE FOR LEARNING

In this section⁶³, I focus on the latter context of interpretation: the *community of practice* (Lave and Wenger 1991, Wenger 1998), which I think is particularly relevant to an enquiry into vernacular design practices and design learning, because this social learning theory fits the social practice of vernacular designing, although the approach of Lave and Wenger deals with general theory of learning, and does not apply it to design learning. How do the women of Kaktovik practice and learn designing of contemporary Iñupiaq clothing as a community of practice?

In clear distinction to Schön's focus on the individual's practice and learning, the focus of Wenger's theory is steeped in a social theory where the practice and learning are carried out within the community. In the interpretations inspired of Schön's theory of reflective practitioners (Schön's 1983, 1987), in the previous sections, the social aspect of the practice and learning of designing Iñupiaq clothing was underestimated. I regard the social environment and interpersonal interaction as crucial for understanding the learning process of designing in Kaktovik. As far as I am concerned the missing link for a deeper understanding of the designing of annuġaat as a case of vernacular designing, is found in Wenger's theory of communities of practice.

Wenger's theory of learning is particularly interesting for my interpretation because this theory stresses that learning goes on everywhere in everyday life, not merely in institutions made for learning – as in schools, which are usually the focus of learning theories. The learning of design of annuġaat goes on within the practices of the Iñupiaq community, and is not taught in schools or courses. The present Wenger-inspired interpretation focuses upon viewing the seamstresses of Kaktovik as composing a community of practice.

My intention is not to conduct an interpretation of the designing community of Kaktovikmiut clothing based on Wenger's framework of a social learning theory as a whole, but rather, as mentioned, to present a relatively free interpretation (see Alvesson 1996: 95) inspired of Wenger's concept of practice and learning, and the social aspect of design knowledge. Distinct from the Schön-inspired interpretation in the previous section, the

⁶³ An abridged version of this section is published in (Reitan 2006).

concept of *learning* is emphasized in this section, in relation to *practice*. First, I want to clarify some points about Wenger's view of the concepts and its implications in the theory of communities of practice.

The Concepts of Practice and Learning in Wenger's Theory Communities of Practice

According to Wenger, communities of practice are not a new method of organizing learning; rather, this method of learning, and of developing knowledge, came into being when people first began to obtain food collectively and socially, and band into groups thousands of years ago (Wenger, McDermott and Snyder 2002: 5). "Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott and Snyder 2002: 4). Certainly, as Wenger points out, all people belong to different communities of practice (Wenger 1998: 6). We create such communities naturally without outer formal frameworks. A community of practice can be the gang on the corner, the family bringing up children, a research network on the internet, designers who wish to share knowledge and learn from each other in a large organization, or the seamstresses of Kaktovik. A community of practice is characterised by the participants having a common engagement in, and a common understanding of the intention of the enterprise.

Although the experience of *communities of practice* is old, the term is new (Wenger 1998: 7). It was developed within an actual community of practice, that of the Institute for Research on Learning in Palo Alto, California in the 1980s⁶⁴. Based on this work, the social anthropologist Jean Lave and the IT theoretician Etienne Wenger introduced the concept community of practice⁶⁵ in their book *Situated Learning* (Lave and Wenger 1991), in which they tried to draw together themes for a general theory of learning based on studies of apprenticeship, particularly Lave's studies of apprentice tailors in Libya in the 1970s (Lave forthcoming). Wenger developed from this foundation a complete learning theory in his book *Communities of Practice* (Wenger 1998), stressing that *learning* is integrated within the *practice* of a community. This is a learning theory that is quite different from the common views in learning theories in the sense that

⁶⁴ About the collaboration and the development of the community which resulted in the theory of *communities of practice*, see Lave and Wenger 1991, Wenger 1998, Kvale in Lave and Wenger 2003.

⁶⁵ Neither of the co-writers remembers who came up first with the term *community of practice* (Wenger 1998: xiii).

Wenger considers learning as primarily a social matter, not an activity of the *individual* as is usually the case (Wenger 1998: 279). Another significant distinction is the understanding of how people learn. Wenger and Lave consider learning as an integrated part of everyday life, not just as primarily a result of teaching. The investigations of apprenticeship opened up an understanding of learning that was not connected to schools and teaching – as conventional theories of learning usually are. As early as 1988 in the book *Cognition in Practice* Lave criticized the de-situated understanding of learning within behaviour and cognitive psychology (Kvale 2003: 7)⁶⁶.

Lave and Wenger's book *Situated Learning* (1991) has had a considerable influence on the pedagogical understanding of learning and education internationally (Kvale 2003: 7). However, it seems like Wenger's development of the theory in the subsequent book *Communities of Practice* (1998) has been less used in pedagogy, despite the fact that this is a more comprehensive learning theory. One reason could be that it is more complicated than the previous book, and the ideas of the first book are perhaps more accessible to researchers. It seems as though scholars have not criticized Wenger's book, they have instead simply neglected it – or at least overlook it – and have done so for the nearly ten years since its publication. On the other hand, researchers into how learning takes place in management and organizations have applied Wenger's theory to a great extent (Wenger, McDermott and Snyder 2002: x).

As I understand Wenger, his theory is a critique of previous learning theories. He finds that many earlier theories mostly focus on the individual, and on what is going on within the individual's head, during learning. However, Wenger does not intend that his theory can be a substitute for all other learning theories (Wenger 1998: 3) – even though he does see it as a complete conceptual framework (Wenger 1998: 4, 279). His learning theory primarily focuses on the external social aspects of learning and not the internal psychological aspects. In Wenger's view, the most interesting aspect is that learning primarily occurs *between* the individuals within a particular community of practice. Lave and Wenger criticise the common concept of learning as *internalization* of knowledge, because it is “too easily constructed as an unproblematic process of absorbing the given, as a matter of transmission and assimilation” (Lave and Wenger 1991: 47).

⁶⁶ Lave, and later Wenger, have been in Denmark several times. They have been connected to the University of Copenhagen and the University of Aarhus. Both *Situated Learning* (Lave and Wenger 1991) and *Communities of Practice* (Wenger 1998) are translated to Danish (Lave and Wenger 2003, Wenger 2004). In addition, Danish scholars have published books connected to the situated learning theory (e.g. in Nielsen and Kvale 1999, Nielsen and Kvale 2003, Nielsen 1999).

In his social theory of learning through communities of practice, Wenger includes four main components; *community, meaning, practice* and *identity* (Wenger 1998: 4), characterizing different aspects with the learning process. Although he mentions that these components “are deeply interconnected and mutually defining” (Wenger 1998: 5), in the structure of the book he highlights the latter by dividing the book in two parts; *Practice* and *Identity*. In my interpretation of designing annugaat I have utilized some, but not all, the components of Wenger’s study. I begin my relatively free interpretations⁶⁷ with the concept of practice related to learning, as an integrated part of Wenger’s social theory of learning communities of practice.

To be able to learn within a community of practice it is necessary to obtain permission to participate, what Lave and Wenger call *legitimate peripheral participation* (Lave and Wenger 1991), which means: “learners inevitably participate in communities of practitioners and that the mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of a community” (Lave and Wenger 1991: 29). They “...characterize learning as legitimate peripheral participation in communities of practice” (Lave and Wenger 1991: 31).

In her study of apprenticeship of tailors in Liberia, Lave (Lave and Wenger 1991, Lave forthcoming) mentions that the apprentices learned their trade without any recognizable teaching – whether executed by masters, journeymen or others (Lave and Wenger 1991). This observation led her to conclude that learning was not a result of instruction by a teacher or master, but a side-product of the practice itself. The newcomers learned by *legitimate peripheral participation* to successively becoming participants in a community of practice. The Liberian tailor apprentices’ learning process was not similar to the practices of Liberian tailoring – actually, it was quite reversed (Lave and Wenger 1991: 72). The apprentices started with the finishing stage of the production process, sewing buttons on the garments that were almost completed. This, she argued, made them familiar with the whole process – from handling the nearly finished product – before these apprentices learned to make the different pieces from which the final product was composed. The last thing the apprentices learned was to measure and cut the fabric, which actually was the starting point in the practice of the tailoring. Lave also discovered that the apprentices usually did not learn from the master directly – as is often assumed in apprenticeship research – but

⁶⁷ For a similar kind of interpretation, see Alvesson 1996: 95.

rather, from other apprentices and journeymen (Wenger, McDermott and Snyder 2002: 233).⁶⁸ Lave's field observations, as well as other the results of investigations of apprenticeship, and their theorization, inspired Wenger to contribute to a new theory of learning – what he has called communities of practice (Wenger 1998: 11). Wenger developed from this foundation what he regard as a complete learning theory, focussing on learning occurring in a community, regardless of whether there was any form of teaching (Wenger 1998). Wenger's theory emphasizes that learning occurs everywhere in daily life, not only in institutions created especially for this purpose. Learning is thus integrated into everyday practices in the community. Learning as social participation refers to an “encompassing the process of being active participants in the practices of social communities and the construction of identities in relation to these communities... shapes what we do and who we are and how we interpret what we do” (Wenger 1998: 4). In the learning process the individuals develop, along with the community of practice. Normally greater alterations happen with novices than masters, but alterations happen to both when the participants in the community of practice develop identity – or learn.

Lave mentions that, “Doing and knowing are inventive ...: They are open-ended processes of improvisation with social, material, and experiential resources at hand” (Lave 1993: 13), referring to the article of Keller and Keller (1993) about blacksmithing. Further, Lave (1993: 14), calls attention to the same character of improvisation in researching in artificial intelligence (Suchman and Trigg 1993: 146), and in research on newcomers in situated learning (Fuhrer 1993: 197).

The learning of annuḡaaq design in Kaktovik is not a formal kind of apprenticeship. However, the learning process of the designing of annuḡaat has a lot in common with the way learning occurs in apprenticeship. Wenger has developed a theory of learning in general, not a theory of learning by apprenticeship in particular. I regard the seamstresses of Iñupiaq clothing from Kaktovik as a community of practice. This is not a formal guild with apprentices and masters, as sewing was, and partly still is in Europe and some other places like parts of Africa (Lave and Wenger 1991). In Kaktovik the seamstresses form an informal community of practice. The members of this community share the concern of designing and making Iñupiaq clothing – they share knowledge about designs, materials and techniques. Because the

68 This social learning, in which the learners learn from one another, and measure their knowing against the socially received body of knowledge represented by masters or more experienced practitioners is what the social psychologist Lev Vygotskij called “the zone of proximal development” (Vygotskij 1978). Lave and Wenger owe a debt to this view, as they admit indirectly (1991: 48).

learning process is informal, the learning within the frame of the community of practice is easier to notice. There are no schools or teachers to observe, although young people are obviously learning the skill of designing annugaat. The next step, then, is to look at the practice itself in order to investigate the learning process.

Critique of Wenger's Theory

A common critique to the early development of this theory of learning based on apprenticeship, was the lack of explicit distinction between learning, on the one hand, and social practice on the other. As already mentioned, Lave and Wenger developed this alternative theory of learning as a critique of the conventional learning theories, which they regarded as a reified understanding of learning (Nielsen 1999: 55). However, the concept of learning developed by Lave and Wenger was criticized as a mere erasure or absorption into the concept of social practice (Nielsen 1999: 55, Lave 1997). To address this criticism of their learning theory based on apprenticeship, they introduced the concept of *trajectories of participation* (Lave 1997: 148), so as to differentiate activities in their analysis, "...so learning is perceived as movements in practice with a direction of becoming more of something, doing things differently in ways that gradually change the way you are understood by others, and in terms of how you see yourself as a socially located subject" (Nielsen 1999: 55).

Situated learning theories in general, in contrast to learning theories of cognition and artificial intelligence, have been a central theme of discussions in the USA, as in the journals *Educational Researcher*, particularly during 1996-7, and in *Mind, Culture and Activity* (Kvale 2003: 9). However, in 2000 some of the main debaters (Anderson, Greeno, Reder and Simon 2000) wrote a joint article summing up some points of agreement based on an assuming that the situational and the cognitive are two different perspectives on learning, both of which are important in research by casting "light on different aspects of the educational process..." (Anderson, Greeno, Reder, and Simon 2000: 12). They further claims that the main focus of the situated approach is the social aspect, although the different trajectories of participation are considered the individuals' particular way of learning. Neither Lave nor Wenger contributed to this particular discussion.

Situated Learning has been criticised because the analyses are not always clear enough (see, e.g. Kvale 2003: 9); this is a view with which the authors

agree (Lave and Wenger 1991: 42). This was an important reason for Wenger's development of the theory in his book *Communities of Practice*: "The concept of identity and community of practice were thus important to our argument, but they were not given the spotlight and were left largely unanalyzed", he states (Wenger 1998: 11).

Another main focus of critique has been the lack of application of the concepts in *Situated Learning* to educational recommendations (Kvale 2003: 9), which have occasioned "misguided implications for education drawn by the situated learning movement", although, "It is not always clear that the original situated authors would endorse these implications (Anderson, Reder, and Simon 1996: 10). Lave and Wenger agree with this criticism as well, by "reserving the analysis of schooling and other specific educational forms for the future (Lave and Wenger 1991: 40). This is a critique Wenger partly has met in *Communities of Practice* in the Epilogue of the book, where he talks about *Design for Learning* (1998: 225) and *Learning Architectures* (1998: 230).

Still, I think Wenger's ideas need further development and empirical research to satisfy others of the benefits that the theory can have in practice, both in schools as well as in non-school learning situations. This is an important task for researchers in education, as well as in design education, in the future. I regard the present dissertation as a contribution to this task.

Now, inspired by the parts of Wenger's theory that I find most interesting, I continue my enquiry in order to examine more closely how lay people, or 'just plain folks' (Lave 1988: 4), *practice* and *learn* design – vernacular design.

Look at the Designing of Iñupiaq Clothing as a Community of Practice

The interpretation of how women of Kaktovik in northern Alaska learn to design Iñupiaq present-day traditional clothes is a very suitable case for the wider discussion of design learning inspired by Wenger. In Kaktovik this design process corresponds to a high degree with Wenger's perspective on learning, and stands in opposition to the conventional view of learning. Wenger characterises the conventional view of learning thus:

Our institutions, to the extent that they address issues of learning explicitly, are largely based on the assumption that

learning is an individual process, that it has a beginning and an end, that it is best separated from the rest of our activities, and that it is the result of teaching... To assess learning we use tests with which students struggle in one-on-one combat, where knowledge must be demonstrated out of context, and where collaborating is considered cheating (Wenger 1998:3).

In the following, I will discuss the observations from Kaktovik inspired by Wenger's opinion on learning, which is contrary to the conventional view of learning practiced by most educational institutions Wenger has characterised above.

The Vernacular Design Learning Process as an Individual Process

When one sees an Iñupiat group of women, men, and children in atigit or atiklukiit, one will quickly notice that the garments have a 'family resemblance', a unique style, distinct from other items of clothing – but mutually related. This common style of the clothing identifies the special Iñupiaq garments. On the other hand, the garments are not copies of each other, but have their individual unique design, different from all others. The seamstresses design every annuḡaaq individually, although the degree of dissimilarity between garments should not be too great. Deliberately building on others' work is the rule and not the exception. This is definitely not seen as cheating!

The tradition encompassed an intrinsic frame or boundary within which the designers were allowed to create. I call this *improvisation in tradition*. This means that the designers did not have total freedom to create whatever they wanted when they made Iñupiaq clothing. The seamstresses thus built on a common knowledge, a collective repertoire, even though every annuḡaaq was unique. In fact, the common knowledge implied that every annuḡaaq had to be unique. One of their informal rules was never to copy, either one's own work or that of others. Other researchers seem to regard this as an exception to the rule, not an instance of the functioning of the actual rules. Issenman states about Inuit clothing in Canada that, "...exceptions to general rules



Figure 42 My sample of qupak #1.



Figure 43 My sample of qupak #2.



Figure 44 My sample of qupak #3.



Figure 45 My sample of qupak #4.

abound as the artisan produces clothing from materials available and out of her own creativity” (Issenman 1997: 98).

By way of investigating this issue of qupak, I made some experiments when I was in Kaktovik. I designed and made a few samples of trimmings that were supposed to fit on atigit or atikłukiit for women (15, 42 and 43). I tried to examine the borders/ boundaries or frames for the identity or style of the qupak on annuġaat. Consciously, I designed some of the patterns for what I assumed were within the tradition, and some that were just outside it. I tried to follow, what I regarded as the Iñupiaq style of trim. Then I asked some of the seamstresses to assess my samples and tell me whether they could pass as Iñupiaq qupak or not.

“This is pretty”, ‘Victoria’ said, pointing at sample #1 (Fig. 42). I asked: “Could this have been made of some people from Kaktovik?:

‘Victoria’: This? I don’t know. I can just tell. Everybody making them different colours, different design.

Janne: Is this Kaktovik style?

‘Victoria’: They do that too, yeah.

(70.1-19.15)

One of the other seamstresses said about the same sample #1:

‘Patricia’: This is how I used to do. Wide. When you first start out they come out wide but as you go along they get smaller.

Janne: So this is not so good?

‘Patricia’: Probably. I don’t know. It is up to the people. I don’t touch other people’s but...

(51-26.10).

She seemed to regard sample #1 as typical for a novice seamstress, as me. When I asked one of the other seamstresses:

Janne: Could somebody in Barrow or at North Slope have made this kind of trimming?

‘Lynne’: Yes. Somebody could have made that design. But the colours are probably different.

Janne: What’s wrong with the colours?

‘Lynne’: Nothing is wrong

Janne: But what is different?

'Lynne': The colours would be, I think, whatever colour you would prefer, and if it might match. Sometimes people will pick colours that will match with whatever colours are in your pattern. Just like mine is over here. What I do is I try to find colours that would match this pattern and use those colours.
(80-23.03)

She probably did not think the colours of the qupak matched the fabric according to the Iñupiaq tradition.

And then she continued about sample #2 (Fig. 43):

'Lynne': That one is pretty. This one is dark. I would use something like this if I was going to sew. I try to find colours... depending of what colour background you use I try to find colours that will stand out, just like the way you have done over here.
(80-23.09)

This sample she regarded as more like her own practice, and then more suitable within their tradition. Another informant compared this sample #2 with sample #3 (Fig. 44), which was my atikluk. She could not tell which one she preferred (51-25.40), although the latter had a mix of black and blue bottom colour. This indicates that this kind of mixing was not regarded as poorer than the plain-coloured background of a qupak.

A typical answer when I asked for evaluations of my samples #3 (the qupak on my atikluk) was:

Janne: Do you think this trimming could have been made in Kaktovik?

'Patricia': Everybody starts their own designs. So yeah.

Janne: But do you think this is Kaktovik style?

'Patricia': It could be made all over the North Slope
(51-24.50).

The answer indicates that the qupak on my atikluk was within an Iñupiaq style but not very typical, because she emphasized that this was my own style.



Figure 46 My sample of qupak #5.



Figure 47 My sample of qupak #6.



Figure 48 My sample of qupak #7.



Figure 49 My sample of qupak #8.

When I asked about the golden one #4 (Fig. 45) one answer was:

'Victoria': Ah, this is pretty. That's a new design. I've never seen them that flashy! It's pretty.

Janne: You don't think the colours are Kaktovik style?

'Victoria': No, because this doesn't last long. You can't wash them in a washing machine. You have to dry-clean it.

(70.1-19.48)

In addition to the shape and the colours of the qupak, the functionality of the materials also seems to matter, at least for some of the seamstresses. One of the informants from Barrow expresses the following about the same sample:

Janne: Could this one have been made in Barrow or at North Slope

'Lynne': This may be could have been made towards from Point Hope. I have noticed Point Hope uses a lot of, or they seem to use a lot more metallic colours.

Janne: But for Barrow this is too metallic

'Lynne': Yeah, it is too metallic

(80-24.10)

This indicates that the style of Iñupiaq qupak have regional differences, in particular between the south and north part of the Iñupiat's territory in Alaska. The Canadian Iñupiaq style is even more different (see p. 123 Figure 28)

When I asked about #5 (Fig. 46) one of the informants from Kaktovik said:

'Patricia': I have seen somebody almost did something like this...doing your own patterns.

Janne: Somebody made something like that?

'Patricia': Yeah they made their own design

(51-28.30).

Some of the informants I asked in Barrow answered about sample #5

'Lynne': That one is different.

'Jill': It is! Usually they use these small ones for kids (pointing at the flowered tape) or sometimes the older women prefer the small ones.

'Lynne': That was a lot of work with a lot of different colours. I have never seen one like this here. That's a lot of colours to use

'Karen': Usually on men's ...

Janne: So this is not inside your tradition?

'Lynne': No, I have never seen that many different colours

'Karen': They use smaller rickrack

(80-25.05).

It seems like different characteristics of this sample belong to different areas of the Iñupiaq style of trim; the flowered tape belongs to small children or old ladies, while the use of so many different colours belongs to the men's qupaat. Within the Iñupiaq tradition you do not mix these, to them, quite different characteristics.

Regarding one of the samples #6 (Fig. 47) with random pattern, 'Patricia' bursted out:

'Patricia': What were you thinking on this?

Janne: I try to find out what is the frame, what is the border. When is it outside the Iñupiaq style, or North Slope, or Kaktovik style?

'Patricia': It just matters all on who is sewing it.

Janne: Do you wonder about what I thought about? What do you think about it? Just say it. That's why I made it (laughing).

'Patricia': I don't know. To me it doesn't matter. People may be wearing it? I don't mind.

Janne: Why were you asking me? What were you thinking of?

'Patricia': See, on your trimming? What are you trying to...like this (pointing on #6).

Janne: You miss a kind of pattern?

'Patricia': Yeah, design or something. This one is like (pointing random)

Janne: Messy?

'Patricia' No it's not messy. To me it is like sprinkles.

(51-29.10)

About sample #7 (Fig. 48) she continued:

'Patricia': (trying to find a line with her finger) I see you could do designs like this.

Janne: So, do you miss a kind of system?

'Patricia': Mhm

Janne: You try to find a line, or zigzag or something?

'Patricia': Mhm. Sometimes I do like this, and sometimes I split them. Like flowers.

Janne: So this could not have been made in Kaktovik?

'Patricia': No (laughing)

Janne: I tried to make outside the Kaktovik style. But like you I thought this was almost a zigzag (51-31.00).

None of the seamstresses I asked regarded this sample #7 as a design within the Iñupiaq culture.

However, the sample with stripes like a rainbow #8 (Fig. 49), was an item that many of them thought could pass as a kind of Iñupiaq style:

'Patricia': A rainbow. Some people they do that. They could put their trimming something like this. Me, I never tried it. I just stay with one colour. But if I ran out of trim or something, I would put something in-between, and it will come out. Yeah, people always, you will see some people to have them. And they also use this kind to trimmings (ready-made tapes) (51-32.30).

My conclusion is that the frames for the creation were relatively clear and unambiguous; the seamstresses agreed on which samples were inside and which were outside the Iñupiaq style of trim – or the tradition. They also had reasons for their judgements, which reveal a collective knowledge built on experiences from many people through time.

One argument for a repetition of a pattern unit of approximately 10 cm length was to save time during the designing process. The seamstresses practiced the designing and making of annugaat in between, and in addition to other duties.

Janne: When do you have time to sew?

'Patricia': When I feel like sewing, I sew, but...

Janne: But you are in the store every day, even Saturdays?
'Patricia': It doesn't take me long to do. I had this one done in a couple of days, so it doesn't take long. It is just a matter of making myself sit down there.
Janne: Do you use evenings or?
'Patricia': Until two or three in the morning. And some times I drop eating and start sewing until I have to go to store, when I am really in to it
(51-07.02).

This implied that they did not have too much time for this activity. If they should manage to create annuḡaaq, they had to develop effective methods of doing designing and making. In most of the qupak they had to design a border existing of pattern unit and then repeat this sequence all the way around the garment. If they were to make a 'free' composition without repetitions, as my sample #6 and #7 (Fig. 47 and 48), they had to spend much more time designing the whole circumference of the garment, or the whole area of the trim. The consequence would have been to design the whole border as one pattern unit, without any repetitions, which would have lead to a trimming ten times as large as the 10 cm they usually designed for every new annuḡaaq.

Another reason they used to justify the repetitive design was the visual aesthetic result. To make a good design composition that is one meter long instead of ten centimetres is much more difficult, and the risk of not creating a good enough design, much greater. They regarded the sample #6 (Fig. 47) I had made, which was not repetitive, to be messy and without rhythm. "That one is very different. I have never seen one like that. There is no – what do you call it – organization or pattern to this. It is just sewn randomly" (80-26.49). To make design with some order was even more important when they added the trim on floral-patterned fabric for the female garments. Other seamstresses also expressed this ideal of order. As some of them said: a good design should in the first place "stand out" (80-23.09) or "come out" (50-27.00), (51-04.03) – to make contrast between the pattern and the background, and for the second be "matching" (2.3-08.32-10.00), (32-01.50) – to make order and not too much mess.

The trim on every annuḡaaq is composed of a ribbon of *mosaic* made of small pieces of fabric tapes in different colours. These mosaics are again added to fabrics in different patterns and colours. When a group of people dressed in annuḡaat is gathered – with all the different patterns, the different

mosaic trims and colours – the principle of repetition and system on each trim seems even more important. Without a rhythmic repetition the overall effect of the gathering would merely be a chaotic mess of small pieces of coloured fabric.

Consequently, building consciously on the work of others means that the seamstresses built on a common knowledge – a common repertoire – although every annuġaaq was unique. Actually, the common knowledge required that every annuġaaq be uniquely designed and somewhat different from all others. One of the informal rules they followed was never copying, neither one's own designs nor others. Nobody accused others of copying, as far as I know, just because it was obvious that one created every annuġaaq uniquely, within the framework of the tradition. The seamstresses did not even want to copy others', or copy themselves for that matter. I asked some of the seamstresses if they ever copied, and 'Ann' admitted she did one time, because one of her daughters and sons-in-law wanted her to make similar trim on their atigit. She made them – both short in single colour fabric, which is common also for ladies' garments nowadays – but she did not like to do it. She thought it was boring just to copy the last one from the first. Then she missed the fun work of designing something new while simultaneously making the annuġaaq. One of the other seamstresses I asked, answered:

Janne: Can you try to tell me why you never make them exactly the same?

'Victoria': Because we want to be different like, you know.

People don't like to be even, I mean same, same. Even though, we don't like to copy somebody's stuff. We try to make different.

I make different design than them (pointing at my atikluk). I make jackets, different design than them.

(27.2-40.20).

Different than *them*: It seems as though I asked a stupid question. To them it was natural, a matter of course to make each one different. The idea to copy exactly is maybe from the mindset of industrial modernism. 'Victoria' did not understand what I was asking for.

In terms of the community of practice involved in sewing Iñupiaq clothes, not all the women of Kaktovik belonged to the sewing community of practice. None of the *taniit* who lived in the village made annuġaat and belonged to this community of practice, as far as I could see. Most of the white women were middle-aged teachers staying in the village only for some

years before moving back south to the ‘Lower 48’⁶⁹. They rarely, if ever, attended Iñupiaq ceremonies in which the annuġaat played an important role. Only some few of them participated in Eskimo dance occasionally – especially those of them also staying in the village during the holidays, as Christmas and summertime, when most of them left Kaktovik for vacations in their home areas.

In order to learn to design and make Iñupiaq clothes one had to have access – so called *legitimate peripheral participation* (Lave and Wenger 1991: 29) – to the Iñupiaq family’s home, where the practice was taking place. I was able to learn to make and use Iñupiaq clothes by virtue of my role as a member of an extended family, even though I was non-Inuit. I was allowed to learn to make annuġaaq as well as wear them when I was in Alaska. I am not sure this means that every white woman would be accepted as a maker and wearer of annuġaat, although I think so. Actually, I think they would regard an interest in their sewing skills as an appreciation of the Iñupiaq culture and values. The Iñupiat have long experience of white people pressuring them to import White values and institutions, and little encouragement to export an appreciation of the Iñupiaq culture.

However, not all the Iñupiaq women made annuġaat themselves. Some received Iñupiaq clothes from family or friends; others never wore Iñupiaq clothes on any occasion. All the Iñupiaq women had the option of *legitimate peripheral participation*, but not all chose to take part. Some of those who did not use Iñupiaq clothes at all did not want to, while others did not use them because nobody made clothing for them, most of the latter were single men. To buy annuġaat at a store was extremely expensive but possible. Some of the seamstresses sold some few atigit at the stores in Kaktovik but often with readymade trim, not one that was individually designed and made by the seamstress. Taking part in this community of practice was a choice that each individual woman made. She faced no strong negative sanctions if she chose not to participate. Thus, it seemed like all the Iñupiat women of Kaktovik had the option of legitimate peripheral participation in the community of seamstresses, but not all participated. There were probably various reasons for certain women deciding not to make annuġaat. Today the youth from Kaktovik have the opportunity for education up to and including senior high school (upper secondary education) within the village. One middle-aged Iñupiat woman told me that she missed the opportunity to learn the practice of the making annuġaat because she was out of the Iñupiaq area – and for

69 Alaskan name of the main USA, meaning the 48 states on the continent between Canada and Mexico

some of the women, they were even away from the state of Alaska for long periods of time – for education during their late teen years, which is a particular important age for initiation into the making atigit and atiklukiit. Then they lost some of the most important years for becoming *legitimate peripheral participants* within the community of Iñupiaq seamstress practitioners. Some of the young girls those days managed to learn these skills despite their absence of many years, while others did not.

*'Karen': When I first started to make trimming like this I had to watch. I had never done this before. And I was a teacher and when we had to hire a person who was a seamstress, that did the trimming, I was watching to see how they really did it. And then one time I tried it and this isn't so hard to me. But it's just the way you handle it, the way you measure it. You can make any design, using any kind of colour. Colour for rickrack, bias tapes (pointing at the ornament)
(80-34.13).*

These differences could perhaps depend on the degree of interest in sewing, which of course differs, as all activities do.

The policy regarding the Iñupiaq cultures when these middle-aged women were growing up, as well as the policy toward other non-white people was one of assimilation. As an example, the children in Kaktovik were not allowed to speak the Iñupiaq language at school. When the youth from Kaktovik went away for further education, they came to high school together with other American youth, raised in an Anglo-American culture. The Iñupiat youth vernacular culture did not have high value under these circumstances. During the years they spent away from home, the girls' opportunities for continuing their *trajectories of learning as peripheral participants* within the community of Iñupiaq seamstresses were limited to their few and short vacations from school. As I experienced, most of the sewing took place within the period around Thanksgiving in the end of November to Christmas at the end of December, which means approximately within one month a year. Usually the youth came home for Christmas, but just some days before the celebrations started. Some of the women made clothing close to the Christmas celebrations, and the girls coming home could participate in the practice. Others had finished the sewing and were busy with other activities, such as food preparations. The result was a lack of opportunity to participate in the community of seamstresses – and then the loss of possibilities to *learn* to design and make annuġaat. Today all the youth have the opportunity to

complete senior high school in the village, and thus, as opposed to the past, they can participate in the community of practice almost to the age of a possible debut as an Iñupiaq seamstress (see p 187).

When I talked to the seamstresses of Kaktovik they hesitated to give an opinion on the practice and learning of annuḡaaq-making. They were afraid to speak on behalf of the others. This tells us this practice is principally a collective matter. They were afraid to make statements that the others within the community might not approve of. I experienced the same reservation in my investigations about traditional Norwegian knitting in the middle of Norway. In both places many of the informants did not want to express any opinion without anonymity. In small and dense communities – as both Kaktovik in Alaska and Selbu in Norway are – to stand out could be difficult. This behaviour also could influence the practice of designing. The idea to create within the frames of the tradition could be regarded as an expression of fear of standing out, of not conforming to the rules and norms of the community. This idea of conformity is quite opposite to the main idea in Anglo-American visual art. Here the ideal is to stand out as much as possible. Whether or not this actually is the practice in Western art and design is another question, and perhaps one for further research. When the focus in Western design is on novelty – without a basis in the past – one can ask if the result often is to invent the wheel over again.

One of the younger seamstresses, who grew up with her single mother outside Kaktovik and the Iñupiaq area, married and moved back to Kaktovik where her father lives. She told me about how she learned to make annuḡaat:

Janne: From whom did you learn?

'Patricia': Watching my mother in law. I watched her and then I went home and I tried. And I just kept working and working. Course it costs too much to let people make them. So I had to make them myself, for all my kids and my husband. So...my mother-in-law. She is making really good. 'Peter' (her husband) watched too, so he gives me ideas (21.2-15.45).

Some of the older women told me about their fathers, two sisters said when I asked:

Janne: How did you learn to miquq?⁷⁰

'Nancy': From my mum? Just watching it. Then she let us miquq.

'Joanna': Atikhuk or anything. And my dad, too.

Janne: So your dad miquq also?

'Nancy': They had to know how to miquq, when they camping out somewhere.

(26-15.14)

The process of learning to design and make Iñupiaq clothes is a collective matter in Kaktovik. All the participants learn from each other all the time. Novices usually learn more than the experienced seamstresses, but the experts also learn from newcomers, as well as from each other. Everyone – in particular the experienced seamstresses – also learned by taking up and adapting new materials and adding new techniques to the common repertoire. Examples of this are ready-made ornaments for applying to the fabric, or machine embroidery (see Fig. 29).

The annuġaat had a unique style, distinct from other clothing but the garments are not copies of each other, but have their individual unique design. As already mentioned, not all the women of Kaktovik belonged to the sewing community of practice, although all the Iñupiaq women had the option of legitimate peripheral participation but not all chose to take part. The practice of making annuġaat were principally a collective matter, and some of the seamstresses were afraid to make statements that the others within the community might not approve of. The tradition made a frame or boundaries within which the designers were allowed to create, which meant that the designers did not have totally freedom to create whatever they wanted when they made an annuġaaq. The frames for the creation were relatively clear and unambiguous.

This indicates that the learning process was a collective process, and *not* primary an individual process.

The vernacular design learning process' beginning and end

The first phase of the learning process before newcomers made their debut as seamstresses of Iñupiaq clothes was a long one; it stretched from infancy to

⁷⁰ The women of Kaktovik used this *Iñupiaq* term for sewing when they talked about the making of *Iñupiaq* clothing.

the teenage years or young adulthood. The learning process started when the child was able to perceive by seeing and hearing what was going on when mother, grandmother or another of the seamstresses designed and made Iñupiaq clothes. As time went on, the child understood steadily more of the design and production process, until the girls as young adults were able to make their own garments. The debut usually did not occur until they themselves established families and it was expected that they made clothes for themselves and their husbands and children.

This means that, as they grew up, they could focus gradually, but consistently, on the different aspects of the processes, observing the problem areas that the experienced seamstresses stumble over, watching them and by listening to their outbursts towards their work when something went wrong. I witnessed several of such situations where the seamstresses expressed frustration over problems they encountered, not directed at me, but towards their work or the situation that they faced.

Each seamstress of Kaktovik made a certain number of Iñupiaq garments in the course of a year, perhaps anywhere between two and ten, depending on the needs of the family or the time each of them could devote to sewing in relation to other tasks. This means that each child observed parts of the design and production process of between twenty and a hundred different garments, made by various seamstresses such as grandmother, great aunt, mother or aunt until their own debut. This long familiarity makes it possible to learn complicated rules in the community of practice for what frameworks the tradition implies for the common repertoire at any given time, of learning only by observation, without practicing by sewing for themselves, or for that matter by being obliged to sew. It implies also to learn the rules for individual creativity within these frameworks – what features of the annuḡaaq should remain stable in contrast to the parts that are supposed to be altered for every new annuḡaaq – improvisation in tradition.

This first phase of learning-by-watching seemed to take into consideration the young children's lack of motor skills ability to technically manage sewing the narrow rows of tapes that are expected if one is to make a good qupak. What characterized a novice seamstress, actually, were rows of tape that were too wide, as was my first sample (Fig. 42). However, young girls often did some skin sewing, such as making yoyos or small seal figures. When I expressed my astonishment that they did not practice on parts before they

actually made an entire Iñupiaq garment, one of the informants⁷¹ afterwards told me that she actually got a sewing machine for children when she was about seven years old. She practiced on this, and she also sewed some Western style of clothing before she made her first Iñupiaq garment at about the age of sixteen. I did not find out whether this was a common experience.

When I was in Kaktovik, I was really concerned that the tradition was in the course of dying out because I saw no children or teenagers sewing Iñupiaq clothes. The women of Kaktovik, on the other hand, were not concerned, because it had always been the case that the young women had first started sewing Iñupiaq clothes and textiles as adults.

Janne: What do you think about next generation; will they make this kind? Do you think they will learn and make this style?

'Patricia' : They will probably come up with their own ideas.

Janne: What about your daughter?

'Patricia': She is pretty practical. She will probably start. She is 11, will be 12 in October. She is trying to sew, yeah (51- 38.10.)

In the second phase of learning, after the debut, adult seamstresses are constantly able to develop their knowledge of making Iñupiaq clothes by taking part in the community of practice. This means that the learning process has no beginning or end, and there is a constant supply of new participants from the new, growing generations.

The first phase of the learning process, before newcomers made their debut as seamstresses of Iñupiaq clothes, was a long one; it stretched from infancy to the teenage years or young adulthood. Through these years girls and young women could focus gradually, but consistently, on the different aspects of the processes of between twenty and a hundred different garments, made by various seamstresses. In this phase they learned only by observation, without practicing by actually trying to sew fabric Iñupiaq garments. This first phase of learning-by-watching seemed to take into consideration the young children's undeveloped dexterity needed technically to manage sewing the narrow rows of tapes that are expected if one is to make a good qupak. Although the children do not practice the making of annuġaat, the tradition is not dying out. In the second phase of learning, after the debut, adult

⁷¹ Personal communication 'Carol' June 2006.

seamstresses are constantly able to develop their knowledge of making Iñupiaq clothes as they continue to take part in the community of practice

Thus, the learning process appeared to be continuous, and had *no* beginning or end.

The Vernacular Design Learning Process as a Separated Activity

Neither practice – the designing and making of Iñupiaq clothing from textiles – nor the learning of this practice, happened through school or training centres in Kaktovik. The school in the village followed the normal curriculum of American schools; the only difference being that the pupils had one hour's lesson in the Iñupiaq language every day⁷². There are no classes devoted to making annuġaat, whether from skins and hides, or from textiles.

Spare time courses in traditional Iñupiaq sewing were arranged whenever the interest was great enough, but only for smaller articles in skin rather than for textile clothing. The seamstresses from the village who taught such courses reported that they taught only skin sewing techniques, not design. I asked one of the women of Kaktovik, who was supposed to be the teacher or instructor on a course in Iñupiaq skin sewing:

Janne: How do you teach them to make trim on the atiklukiit?

'Nancy': (pause) I never teach them how to make trimming.

But they always do it their own way. What kind of trimming they want.

Janne: So they know how to make it?

'Nancy': Some of them know how. But not young people. But they could learn. You have already learned.

Janne: Does the school ask you for this?

'Nancy': They usually do at Barrow. Part of their program.

They still have the 'Home make' at Barrow

(26-08.10).

'Nancy' has taught in the 'homemakers' course' in Barrow for a long time. This was the first time she did so in Kaktovik. In these courses they learned skin sewing, but not how to make Iñupiaq fabric clothing. The practice and the learning of designing Iñupiaq fabric clothing took place in

⁷² Very few of the *Iñupiat* under the age of forty or fifty actually speak *Iñupiaq* fluently. The main language is US English.

their homes, integrated into daily life. The seamstresses made clothing in the living room, the kitchen or in one of the bedrooms, during intervals between domestic tasks such as childcare or food preparation, or while engaging in pastimes such as watching television.

When I made prior arrangements with the various informants about when I could visit and watch them sew, things never transpired as planned. The women were constantly interrupted by caring tasks which took priority over sewing. There was no regulated work period for when they could concentrate upon designing and sewing. Because they were not full-time designers, as already mentioned, it was efficient to build on the tradition – the collective repertoire – developed by the community of practice through time, instead of beginning from scratch and creating an entirely new design for the annuġaaq, which would demand a considerably longer period of time. ‘Victoria’ commented on the sample #7 (Fig. 48) I made which was a composition without any pattern units repeated and compared this with the qupak I had designed on my atikluk, sample #3 (Fig. 44), and said:

‘Victoria’: Nice (watching my atikluk sample #3). This kind, we do it, easier (pointing at the kopaq). This kind is hard to design, like when you are in a hurry, you know. It's kind of to messy and stuff (pointing at sample #7).

Janne: Is this a kind of Kaktovik style, or?

‘Victoria’: No, not really. I don't know. Because when they hear me, oh you talk about.

Janne: This one is outside the frame of the Kaktovik tradition? They never make this kind? (the messy one sample #7).

*‘Victoria’: No
(70.1-21.32).*

I would suggest that this is one of the important reasons for the development of a tradition that they continue to build on, at the same time as there is room for their own creativity and *improvisation in tradition*. It means that the design of a new annuġaaq does not take a very long time, yet the women find an outlet for their need to be creative. The results are aesthetically and functionally pleasing, because they build on a collective repertoire tried and tested over a long period. The desire to always make new designs and never copy seems strong in the community of practice of annuġaat. ‘Victoria’ stated this, although in connection with showing me Iñupiaq skin sewing, but I assume this also concerns design of Iñupiaq fabric clothing.

As an example of a common day for an Iñupiaq seamstress, ‘Joanna’ usually had some time for sewing after her husband left for work and after her grandchildren, who were living with them, went to school at 8:30 in the morning. But first she had to prepare the lunch, when all the adults in her family came home to eat at 12 o’clock sharp. That included her husband, her son and daughter-in-law, a nephew of her husband, and other relatives occasionally, as well. The lunch was the main meal of the day. They had hot food, caribou⁷³-soup with rice in it, sheep⁷⁴-soup, or chops of boiled or fried meat. The preparation entailed fetching the meat they had stored, since the hunting season, in the ice-cellar on the tundra, or they might store the frozen meat temporary in the freezer in the *qanitchat*⁷⁵. Then ‘Joanna’ had to chop the meat with an axe and saw it into smaller pieces suitable for eating. If they ran out of meat from hunting, ‘Joanna’ had to go to store to buy meat that was expensive due largely to the cost of air freight. They usually had meat for lunch but now and then they had fish they caught by net in the Arctic Ocean just outside the village. In other words, the making of lunch for the family was a lot of work. The only time she had free for sewing was the interval between the food preparations described here and the time she needed to cook in order to have the meal ready at twelve o’clock. The lunch break was one hour, and after that she had to wash up. After lunch ‘Joanna’ also relaxed and took pleasure from watching TV soaps such as ‘Days of Our Lives’ while sewing. Her sewing table was placed in the middle of the room so she could watch while she sewed. When the rest of the family came home about five o’clock, she had to prepare food for supper, which was less work than for lunch. The youth often had some fast food, such as hamburgers. Usually her husband, and some of the others, enjoyed traditional Iñupiaq foodstuffs like meat or fat from seals or whales.

The sweatshirt was a common garment in Kaktovik, for both male and female, young and old. ‘Joanna’ usually wore jeans in everyday life. Then she wore a sweatshirt, which was hooded and had a pocket in the front, just like the Iñupiaq clothing. Which one came first, in terms of design of hood and pocket – whether the Iñupiaq clothing or the Euro-American style of sweatshirt – I did not find out. However, they are conspicuously similar, and both kinds of garments are very practical for the Iñupiat’s way of living.

73 Wild reindeer.

74 Dall-sheep, a wild sheep living in the mountains of the Brooks Range.

75 *Iñupiaq* word for a cold porch they use as a chilly working room next to the entryway.

Neither practice – the designing and making of Iñupiaq clothing from textiles – nor the learning of this practice, happens at school in Kaktovik. Spare time courses in traditional Iñupiaq sewing are arranged but only for smaller articles in skin rather than for textile clothing. The practice and the learning of designing Iñupiaq fabric clothing takes place often in the living room in their homes, and is integrated into daily life between domestic tasks or pastimes. Because the Iñupiaq women of Kaktovik are not full-time designers it is efficient to build on the tradition instead of beginning from scratch and creating an entirely new annuḡaaq design. It means that the design of a new annuḡaaq does not take a very long time, yet the women find an outlet for their need to be creative. The results are aesthetically and functionally pleasing, because they build on a collective repertoire tried and tested over a long period.

These interpretations indicate that the learning process seemed integrated into daily life, and was *not* a separated activity.

The Vernacular Design Learning Process as a Result of Teaching

When I made my observations in Alaska, I saw clearly that learning had taken place, since the women could certainly design and sew Iñupiaq clothes. However, I did not see any explicit instruction taking place. When the girls, or the young women, made their debut with the sewing of their first atigi, it was expected that without any form of instruction or help they would be able to design and make the whole annuḡaaq on their own– including the trim – and do so with satisfactory results. It was not usual that young girls practiced on parts of atigit before they made their debut as young adults. A learning process obviously had taken place without any explicit *tuition* from the skilled seamstresses.

‘Joanna’ was one of my main sources of information. ‘Joanna’'s daughters and grandchildren looked on while she designed and sewed several Iñupiaq garments whilst I was there. This I have chosen to call *learning-by-watching*, a form of learning which in my opinion is much undervalued in learning theories, including Wenger’s theory, in contrast to Dewey’s much used *learning-by-doing*. As already mentioned, Dewey himself criticized parts of the movement of radical education for their narrow understanding of the learning-by-doing as reduced to merely activity (Dewey 1979 [1915]: 255).



Figure 50 Learning-by-watching

Learning-by-doing is connected to John Dewey. However, my intention is not to discuss Dewey's theories here, but rather to mention some points relevant to my current theme of *learning-by-watching*. Dewey is known as a pioneer and leader for the movement of radical progressive education in the US at the turn of the twentieth century, together with his colleague and friend George Herbert Mead (Vaage 2001). Vaage regards the origin of the phrase learning-by-doing as, "Learn to Do by Knowing and to Know by Doing", which was the motto for the book *Applied Psychology* Dewey wrote together with J. A. McLellan in 1889⁷⁶. Later Dewey criticized parts of the movement of radical education for their narrow understanding of the learning-by-doing as reduced to activity: "Learning by doing does not, of course, mean the substitution of manual occupations or handwork for text-book studying" (Dewey 1979 [1915]: 255). Learning-by-doing thus seems to be a synonym for experience, and he stresses "the hands, the eyes, the ears, in fact the whole body, become sources of information..." (Dewey 1979 [1915]: 255).

Through *observing* practice in this way, the children from Kaktovik learned to a greater or lesser degree, depending on how interested or engaged they were (Wenger 1998: 100). One of the atigit sewn by 'Joanna' was for a grown-up daughter home for her holidays. The daughter herself tried to sew parts of the annuġaaq, and learned by practicing – learning-by-doing. The younger children learned only by watching, and by listening to the general chat among the grown-ups or when the seamstress talked to herself and to her work. Apart from this, however, they were never taught through explicit instruction.

I asked one of the other informants, who belonged to the first generation in her family making fabric atigit.

⁷⁶ This book is impossible to obtain through libraries in Norway.

Janne: Did your mum sew this fabric kind?
'Victoria': No, not really. Because we don't have that time that kind, when she was, you know. When we start getting things. And then she died. And when we start going to Fairbanks she died. She made us all mukluks, mittens, parkie, sleeping bags, everything. We always tanned when we were old enough to scrape skin. We scraped the skins and she...All year round, every day. Just for the family (32-50.40).

She learned to prepare skin and make skin clothing from her mother, but to make fabric atigit and atiklukiit she learned from other relatives, as her older sister.

Janne: When you learned from your sister, did she tell you what to do? Or how did you learn?
'Victoria': I watched my sisters making stuff. That's why I always did watching them. How they do it. That's why I learned.
Janne: So you don't talk much about it?
'Victoria': No... (70.1- 28.00)

Learning-by-watching was also important when they learn to sew skins, that is, in addition to learning-by-doing:

Janne: Did you think sewing was fun when you were a kid?
'Victoria': Yeah, ever since I started learning I helped my mum to thread her needles. Because we had seal lamp, and I could help her to thread her needles. That's why I helped her; to learn. As soon as I know how, that to do, I start helping and sewing.
'Suzanne': ('Victoria's daughter) How old you think...?
'Victoria': Maybe five or six, starting to help my mum sewing. Tan. To learn how to scrape skin.
'Suzanne': Did you like to do it, or?
'Victoria': Yeah, I liked to do it. Some old people, relatives on my dad's side came from somewhere and started living with us because they were old they could do nothing. His wife had TB. We knew that, they knew that. She doesn't come and visit us; she stayed in her house all the time. I used to go help them to

*put ice for water and haul wood for them. And I used to bring them some food every night, to feed them. He could come and visit my dad and he could tell stories long time ago, how they used to do lot of stuff. And I used to stay with her then when her husband visited my dad. And she used to tell me not to sit close to her, because of her breathing. I had to sit far. She used to teach me. I mean long time ago stuff. She used to start showing me how to do sewing too. When she trying to sew let me do it for her. Finish it for her. And how many years they were there, but she died
(29- 59.00).*

This is also confirmed by statements from other elders, such as Rachael Sakeak with the Iñupiaq name Nanginaaq, "When we were growing up, we watched our mothers make clothing, and tried to follow their footsteps" (Edwardsen 1983: 24).

Learning-by-watching is also important within learning-by-doing, to watch what you are doing yourself, experience what you do and reflect on it:

*'Lynn': Just from experience, when I got started my work wasn't as even or measured like I, maybe like some work like this. I did start out a little uneven here and there. And also with the gathering that happens when you begin to sew at first. But with time you'll learn that...you'll discipline yourself in watching (my emphasis) how much time you spend and trying to making everything more even. After you have sewn awhile you'll get better at piecing things together
(80- 29.25).*

'Joanna', who was a skilled seamstress also learned by *watching*. The sample or pattern for her work was a sample made by one of her very skilled sisters. She did not copy the pattern but used it as an example of a good composition for the trim work. She changed the composition of the shape of the trim very little (Fig. 36). She actually made two different atigit simultaneously while she used the same sample as her inspiration. The different garments show the variations of the shape, which do not vary greatly. However, the colours of the compositions are very different because they are adapted to the colours of the fabric of each atigi, according to the rules of the tradition that have to do with contrasting and matching. 'Joanna' followed the rules of composition by not deviating much from her sister's sample. By making a composition of

colours by adjusting them according to the fabric she improvised within the traditional framework.

‘Joanna’'s skilled sister did not always make trim on the atiklukiit. The seamstresses sometimes gave away an atikluk to others, who sometimes, but not always, added trim to it. I could not detect a pattern of production for anybody in terms of either always or never putting a trim on the annuḡaaq; production varied from annuḡaaq to annuḡaaq. However, some of them were regarded as better seamstresses than others. This included the ability to make good trim, both aesthetically and technically. ‘Joanna’'s experienced sister was regarded as one of several known to be top designers and producers of garments.

I assume ‘Joanna’ was learning from watching her sister’s sample, as well as from the doing of design and production. I do not know whether or not she later used that pattern when she created subsequent designs. While we in Norway might regard the use of a sample as a form of plagiarism or cheating, to these Iñupiaq ladies, this was an efficient method for creating good results in a short period of time.

Research methods I used in Kaktovik were investigations both by *watching* and by *doing*. In my own research – or learning – process, I followed ‘Joanna’'s example and borrowed the sample she used when designing and making an atiklukiit. Then I discovered the actual degree of difficulties involved in the performance of making this trim on a specific annuḡaaq. Although I had that sample for the composition, the results of my work were not particularly good. The challenge was to use the right colours to make the composition good, in the sense both being unique and within the rules of the tradition. I chose colours to match the fabric, but I was not well enough aware of the principle of contrasting – to make sure the composition “comes out more” (21.2-13.30). My trim was too monotonous according to the colours in play, the values were too similar. Besides, I came to see that some colours ‘stuck out’ and were too dominant, a fact that made the compositions fall into disharmony, I think. I did not develop enough knowledge about the composition of colours before I started the designing and creating, and I believe I would need much more experience by watching and reflecting before I could make a good composition. In this case I would regard painting or drawing with coloured pencils as a good and efficient method for me to develop this knowledge. To develop that knowledge without those remedies, as they usually do in Kaktovik, is impressive. That indicates a great deal of learning-by-watching, as well as reflection, involved

in making those new compositions of shape and colours on every annuḡaaq every time, with good results.

When I asked the informants who had taught them how to sew I often got no answer, and then after a while they came up with an answer. One reason could be that they really do not know how they learned to design and sew because nobody actually taught them explicitly. Some of them came up with who showed them how to sew skin, but more rarely how to sew fabric clothing. Because the learning process seems so integrated within the everyday life they are not aware of it themselves.

It seems like the way of learning-by-observation, and in particular learning-by-watching, has been a traditional way of learning among the Iñupiat. Before the school teachers and missionaries came to North Alaska, the children learned by continual observation mixed with regular instruction tempered by practical experience. During his observations of Barrow in 1881-82, the explorer Murdoch seemed impressed by the children's behaviour and states that:

The affection of parents for their children is extreme, and the children seem to be thoroughly worthy of it. They show hardly a trace of the fretfulness and petulance so common among civilized children, and though indulged to an extreme extent are remarkably obedient (Murdoch 1988 [1892]: 417).

The explorer also highlights the Iñupiaq way of learning:

The young children appear to receive little or no instruction except what they pick up in their play or from watching their elders.

Boys of six or seven begin to shoot small birds and animals and to hunt for birds' eggs, and when they reach the age of twelve or fourteen are usually intrusted (sic!) with a gun and seal spear and accompany their fathers to the hunt. Some of them soon learn to be very skilful hunters. We know one boy not over thirteen years old who, during the winter of 1881-'82, had his seal nets set like the men and used to visit them regularly, even in the roughest weather. Lads of fourteen or fifteen are sometimes regular members of the whaling crews. In the meantime the little girls are learning to sew, in imitation of their mothers, and by the time they are twelve years old they

take their share of the cooking and other housework and assist in making the clothes for the family. They still, however, have plenty of leisure to play with the other children until they are old enough to be married. (Murdoch 1988 [1892]: 417)

This shows that “watching the elders” without instructions was common also during the late 1800s. Murdoch calls attention to the learning by sewing clothes, which he describes as learning by imitation. I understand *imitation* here as “the assumption of behaviour observed in other individuals” (Merriam-Webster 2006), not as “something produced as a copy” (Merriam-Webster 2006).

Iñupiaq clothing is on display for observation in many situations in Kaktovik’s social life such as when Eskimo dancing takes place, when one meets another woman dressed in Iñupiaq clothes, often worn for everyday use – on the road or in the store. Moreover, when one comes through the front door when visiting people, one immediately notices many different atigit, in countless variations, but in typical Iñupiaq style. These atigit hang on rows of pegs by the entry to the house. The learning arenas and situations are therefore approximating endless, even for the people from a little village such as Kaktovik.

As mentioned, it was not usual for young girls to practice on parts of *atigit* before they made their debut as young adults. The children watched while the seamstresses designed and sewed several Iñupiaq garments. This I have chosen to call learning-by-watching, a form of learning which in my opinion is much undervalued in learning theories, including Wenger’s theory, in contrast to Dewey’s much used learning-by-doing. The experienced Iñupiaq designers also learned by *watching*, e.g. they some times used other seamstresses’ work as samples, not for copying but as inspiration. It seems as though the way of learning-by-observation, and in particular learning-by-watching, has been a traditional way of learning among the Iñupiat also in the 1800s when explorers reports that the Iñupiaq children were watching their elders. Inuit clothing is on display for observation in many situations in Kaktovik’s social life, meaning that the learning arenas and situations are endless, even for the people from a little village such as Kaktovik.

This shows that the learning process is, to a considerable extent, a result of close observation – or in other words – by learning-by-watching and *not* a result of teaching.

Local Assessment of Vernacular Design Learning and Tests

The evaluation of the first annuḡaaq a newcomer made was strict. The beginner had to make an entire decorated annuḡaaq without any form of tuition from the older seamstresses. I was told similar stories from several of my informants about the making of their first Iñupiaq garment. If the experienced seamstresses present at the event – the grandmother, the mother or an aunt – did not accept the newcomer’s handiwork, the newcomer was told ‘Do it over!’ The community of practice expected that a beginner should design and make a complete and worthy annuḡaaq on her first attempt.

‘Joanna’: ‘Emily’ has to learn how.

‘Joanna’: Just follow this line

‘Joanna’: Let me do it over.

‘Joanna’: You putting it too much down. (‘Joanna’ laughing to mitigate her reaction).

(11- 02.40 I)

This strict evaluation I was excused from, probably because I was an adult, I had several experiences from sewing in advance, and I was not an Iñupiat. To me, most of the comments on my first qupak were positive. My previous experiences in machine sewing also helped to make the qupak technically good enough for a novice.

Another important arena for the evaluation of Iñupiaq clothes was Iñupiaq ceremonies, such as Eskimo dancing that occurred over the course of the year. These were occasions where they usually wore annuḡaat and an opportunity to show the new annuḡaaq. If the seamstresses liked what they saw on these occasions they expressed it – if not, they usually looked, but said nothing. In a society as close-knit as that of Kaktovik it was not the custom to criticise others directly. The use of humour or the withholding of a response was both noticeable inputs into the learning process in the community of practice. If the person who commented on the quality of a annuḡaaq was regarded as a particularly important seamstress, the comments and evaluation seemed to be regarded by the others as having particular weight. Through these evaluations the community of practice, both novices and experts, developed the collective repertoire of how the garments should be designed and sewn.

The newcomers, and those who had still not sewn their first annugaaq, were also included in this community of practice. They were *legitimate peripheral participants* in different ways. All of those involved learned something of how an accepted example of an annugaaq could look. This depended in various ways on where the individual was situated in terms of their own *trajectory of learning* (Wenger 1998). Sometimes even boys and men, who would never themselves become full participants in the community of practice of Inuit seamstresses, gained a certain amount of knowledge about what the important features were in good products. This meant that even boys and men were sometimes present during annugaaq production, appraised Iñupiaq clothes, and occasionally gave advice to the seamstresses, preferably to novices such as myself. Still, men would never be legitimate participants within the community of Iñupiat seamstresses in Kaktovik.

‘Neil’ told me about his wife:

*She and her sister, they make kuspuk⁷⁷ like this, they show each other...lot of works cutting these little things. With a sewing machine they do it. In these you do your imaginations... And if something happens you tear it up. You use your own taste.
(2.3-08.32-10.00)*

Iñupiaq ceremonies, such as Eskimo dancing – also were important arenas for the evaluation of Iñupiaq clothes. Both experienced seamstresses and newcomers, who had still not sewn their first annugaaq, were legitimate peripheral participants in their different trajectories of learning in this community of practice. Sometimes even boys and men, who would never themselves become full participants in the community of practice of Iñupiaq seamstresses, gained a certain amount of knowledge about what the important features were in good products, and sometimes appraised Iñupiaq clothes.

From the interpretations in this section, I conclude that the appraisal of the learning process was integrated seamlessly into practice, – they did *not* use separated tests.

⁷⁷ Yup'ik word for *atigi*, also used by the Iñupiat when speaking English.

Vernacular Design Knowledge and the Context

Designing and making annuġaat is to a large extent tacit knowledge. It is expressed through practice rather than through words. This was particularly the case in the design process. This *visual* planning of the annuġaaq was seldom made explicit or articulated verbally. My informants therefore had great problems in expressing verbally what they thought and did when I interviewed them. This corresponds with my experience of my research into the design of traditionally knitted mittens in Selbu (Reitan 1992). The knitters spoke about technical problems, but not about aesthetic considerations when they designed new compositions of patterns for each pair of mittens. Nevertheless, the knitters demonstrated knowledge of design through practice. I consequently found the same phenomenon in Kaktovik. The garments they produced were clear evidence that they had a good understanding of design. When learning happens non-verbally, then, they had no great need to verbalise this knowledge. It is probably possible to verbalise much of what they know, but this will not happen as long as both learning and practice function inside the community of practice where verbalisation of the processes involved is not necessary.

Designing and making Iñupiaq clothing is to a large extent tacit knowledge expressed through practice rather than through words, particularly according to *design*, whose considerations are different from technical matters. When learning happened non-verbally – in particular through learning-by-watching, there was no great need to verbalise this knowledge. A further development of theory about annuġaat related to the huge research field of tacit or practice knowledge stretches far beyond the limits for this dissertation and will be an issue for further research.

These interpretations indicate that the knowledge was demonstrated through practice, and *not* demonstrated out of context.

Final Comments

As far as the vernacular design and production of Inuit clothes is concerned, my interpretation indicates that⁷⁸ :

- The learning process seemed to be a collective process more than an individual process.

⁷⁸ See previous versions in (Reitan 2004, 2005, 2006).

- The learning process was continuous and had no obvious beginning or end.
- The learning process was integrated into daily life and not a separated activity.
- The learning process was a result of observation, in particular learning-by-watching and not a result of teaching or organized tuition.
- Appraisal of the learning process was integrated into the practice and the everyday life – they did not use separate tests.
- Knowledge was demonstrated through practice of designing and sewing, and not theoretically out of context.

Some of these points will be further elaborated in the following chapter.

I see learning-by-watching as a broadening of Wenger’s learning theory of communities of practice. Wenger has not mentioned how the members of a community-of-practice actually learn. I regard learning-by-watching as a crucial way of learning within a community of practice, in particular, to a considerable extent, within a visual field as designing. In a more audile or ear-minded field as music I would regard learning-by-listening as most crucial. Both watching and listening, with a generic term I would call observation – learning-by-observation.

The newcomers learned through legitimate peripheral participation, successively becoming participants in a community of practice. The Liberian tailor apprentices’ learning process was not similar to the practical process of the Liberian tailoring – actually, it was reversed (Lave and Wenger 1991: 72). The apprentices started with the final stage of the production process, sewing buttons on the garments that were almost completed. This, Lave further argues, made them familiar with the whole process – from handling the nearly finished product – before these apprentices learned to make the different pieces from which the final product was composed. The last thing the apprentices learned was to measure and cut the fabric, which actually was the starting point in the practice of the tailoring.

As mentioned above, this is a perspective on learning that differs from the conventional one in educational institutions. Looking at design practice and learning in a context different from the conventional educational institutions can open new perspectives. To look at academic design education, and at education of lay people in primary and secondary schools, through the same six points, and inspired of Wenger’s social learning theory, in the future

might perhaps show more similarities than differences between the learning process of *vernacular* and *academic* design. Such research would help build a more thorough scientific foundation in order to develop a more functionally effective design education, and also to create a better dialogue between professional and lay people in the design field – and may indeed be a main theme for further research.

I have tried to extend the theory of community of practice by investigating what was going on in the social process of learning; this is learning-by-watching and is a highly visual process in the designing of *annugaat*. In a broader sense I see learning-by-watching as the visual part of learning-by-observation within a community of practice. However, I do not see learning-by-observation as the only ‘mechanism’ of learning (Lave 1997), rather, it is an important but underestimated part.

New Perspectives on Design Practice and Learning

In the course of these investigations and interpretations inspired by the theories of Schön and Wenger, I have discussed how the women of Kaktovik practice and learn designing of contemporary annuġaat. Here I want to discuss possible consequences of the designing situation in which practitioners exhibit a partial consciousness of their practice and learning of vernacular design. First, however, I recapitulate some of the conclusions and comparisons suggested from these interpretations (Alvesson 1996: 173).

At the outset of this research project I mentioned Afghanistan and my masters thesis about vernacular Norwegian knitting. I viewed these experiences as leading naturally to the present investigation in Kaktovik, North Alaska. The focus of research in this investigation was narrowed to how the Kaktovik seamstresses practice and learn designing of present-day vernacular Iñupiaq clothing. I began with a review of both design research – with a focus on the vernacular aspect – and a direct investigation of the Iñupiaq clothing. These were the foundations upon which this research project rests. An important part of the investigation is the context; the people – the Iñupiat, the place – Kaktovik, – and the case – annuġaat designing. In the course of this project, several qualitative research methods have been employed, such as ethnographic fieldwork to construct empirical material from Kaktovik and Alaska, and interpretive procedures inspired by *reflexive methodology*. The seamstresses of Kaktovik are seen as respectively reflective practitioners (Schön 1983, 1987) and as a community of practice (Lave and Wenger 1991, Wenger 1998).

THE INTERPRETATIONS INSPIRED OF SCHÖN VERSUS WENGER

In this study distinct interpretations arising from two different theories have both been presented to provide a rounded view of design learning in this local context (Alvesson 1996, Alvesson and Sköldberg 2000). The purpose has not been to synthesise or integrate the two approaches, but rather to see both the common reflections and differences between them.

In the Schön-inspired interpretation of the empirical material, the practice and not the learning of the annuġaaq design is the main focus, although Schön's major case (1983, 1987) actually was a design learning situation more than it was a design practice situation. However, Schön's primary focus in this design learning context is the *verbal* coaching, and the architect teacher's visual drawing is secondary. There was very little evidence of this kind of verbal coaching situations in Kaktovik. On the other hand, Schön's concept of reflection-in-action still seemed suitable to the interpretation of the practice of the annuġaaq designing.

My interpretations of the Iñupiaq garment designing indicate that the practice included reflection both *in* and *on* the practice during the designing, alternately tacit and verbally articulated. The seamstresses of Kaktovik reflected on the materials and the shape and colours throughout the process of making and designing an annuġaaq. Their reflections also had much to do with conditions of their everyday life in the village community, as well as knowledge attached to their tradition – integrated in the dialogue with the design situation. These reflections seemed quite conscious, although the seamstresses did not usually articulate this consciousness in words. The learning process was integrated into this design practice, while the children would watch the design practice and through watching, they learned to design annuġaat. Schön's emphasis on coaching as an important teaching method in design contexts, as in the context of virtual reality learning in an architecture education design studio, was less commonly seen in Kaktovik. Mostly, the learning was tacit. However, I do not consider learning-by-watching as in contradiction with Schön's highlighting of coaching. My contribution is to extend the concepts of *practice* and *learning* in the theory of the reflective practitioner. Learning as watching is important – in addition to coaching.

The dialogue with the materials seems particular important according to the function of the annuġaat. In the dialogue with the shape and colors where the materials are in play in the composition or design of the Iñupiaq

garments, the composition of colours seems important. The interconnected terms, *matching* and *contrast*, were mentioned by most of the seamstresses. These terms might be regarded as main aesthetic concepts, practiced perhaps more than articulated in words, in the local ‘theory of the design process’ regarding annuġaat. The choice of the bottom colour of the qupak seemed to be particularly important in order to make an appropriate contrast to ‘bring out’ the colours in the tapes subsequently added on when designing and making the trim. Sometimes the bottom colour was a contrast to the colours of the fabric; other times, the bottom colour of the qupak matched the fabric, but by adding the other tapes, a contrast to the fabric colour was made visible.

The dialogue between the seamstress and the colours was a continuing spiral process (Schön 1983: 132) during the whole design process. The design of the qupak was not fixed before the sewing of the tapes; on the contrary, they talked to the colours, and the colours answered back until the last seam of the qupak was sewn. They reflected-*in-action* during the sewing process and reflected-*on-action* when not sewing, although they often were interrupted or distracted by duties or work.

Schön called the *learning* situation when the teacher architect ‘Quist’ was coaching architect student ‘Petra’ a *design* situation. Also in Kaktovik the learning situations were integrated into the design situations. Where I depart from Schön, is in my stress upon the visual aspect of learning-by-watching, something that is of crucial importance in the learning situation, while Schön’s focus is on the verbal aspect of coaching between the experienced architect teacher ‘Quist’ and the novice architect student ‘Petra’. I too regard coaching as a highly important aspect of teaching. ‘Joanna’’s daughter and I both watched what ‘Joanna’ was doing and listened to her comments in the occasionally audible dialogue she had with the design situation. I also experienced learning-by-coaching, such as when ‘Victoria’ commented on what was missing from the composition of the qupak that bordered the atikluk I made for myself.

However, I think Schön fails to see the learning-by-watching in the learning situation between ‘Petra’ and ‘Quist’. His emphasis on the auditory, ear-minded sense which was in play in the coaching activity perhaps arose from his own experience as a jazz musician, and in the same manner, his lack of seeing the importance of the visual sense in the learning-by-watching might be due to his lack of experience in the visual arts and in designing. To me, with an inside knowledge of all that is visual in designing, the learning-

by-watching was obvious. In Kaktovik, where most of the practice and learning of annuḡaaq designing was tacit, the visual learning was conspicuous. The practitioners learned by observing the designing, including the reflection-*in*-action or reflection-*on*-action – reflections which were tacit or articulated verbally. The numerous examples of reflection *in* and *on* action in the empirical material indicate that the vernacular designing of annuḡaat is a conscious process despite the limited degree that it is articulated in words.

To return to an issue I raised in the section *Vernacular Design*: what Alexander really means by design in what he calls unselfconscious cultures is not unambiguously presented. At least the present investigation of the practice of the designing of annuḡaat in a culture that Alexander probably would describe as *unselfconscious* shows that this design process is not *unconscious*. The vernacular Iñupiaq clothing designers often engage in reflection-*in*-action during the sewing, and also reflect-*on*-action when not sewing – reflections I regard as conscious.

However in Schön's theory of reflective practitioners (1993, 1997), I missed the social aspect of the interpretations of the practice and learning of designing, which of course occur with the creation of Iñupiaq clothing. The learning situations I observed, included only one seamstress at a time. Regarding the learners, there were generally several persons present: small children as novices, young women who had made their debut as Inupiaq seamstresses, and sometimes more experienced adult seamstresses. In addition, the connection to the tradition of the annuḡaat – within which they improvised creatively – and the community where they lived was obvious to me. Perhaps I found this more noticeable because I was an outsider who was not blinded by the insiders' often taken-for-granted presuppositions. The social aspect of the practice and learning of the annuḡaaq design was certainly important. I could have extended Schön's theory by including the dialogues with the tradition and the community, social aspects Schön omits or fails to see. Instead, however, I found Wenger's theory of the community of practice to be more suitable for the interpretations of the social aspect of the practice and learning of Iñupiaq vernacular clothing design.

The relations between practice and learning in the Wenger-inspired interpretation show that learning to design annuḡaat was integrated in the community of practice. Iñupiaq females of all ages had the option of legitimate peripheral participation in the community of practice of designing and making annuḡaat – as everyday life gave rise to opportunities to observe such processes – but not all of them chose to take part in annuḡaaq-making.

Some of them did not make annuġaat even though they wore them with pleasure, while others did not want to identify primarily with the Iñupiat; rather they wanted to emphasise their American identity by not wearing Iñupiaq clothing. Here, learning to design Iñupiaq contemporary clothing was quite the reverse of learning processes in conventional educational institutions. This vernacular design learning seemed to be a collective and *not* an individual process; it was continuous, lacking both beginning and end; it was integrated into daily life and *not* a separated activity; it arose as a result of observation, in particular from watching and *not* from teaching, demonstrating or instructing; the appraisal of the learning process was integrated into practice – they did *not* use tests; and finally knowledge was demonstrated through practice and was *not* generalized, or considered to have many contexts. Design learning had its own specific context.

I want to go into further detail with some of these issues. I reiterate that the learning process was collective in nature and *not* individual. The Iñupiaq clothing had a unique, distinct style, different from all other clothing styles I have ever seen. The shapes of the annuġaat styles were quite similar to the neighbouring Yup'ik style, except for some details, such as the pointed hood on Yup'ik garments for girls and women. The striking difference, or what made the Iñupiaq style distinct from that of the Yup'ik, was the qupak, the trim made of different colours of bias tape sewn together in a unique mosaic pattern. Building on others' work was the rule, and not the exception. However, no annuġaaq is copied from others; within the cultural repertoire each designer has her individual unique expression of Iñupiaq design, adapted to the colours of the fabric of the garment.

Another argument in favour of viewing the learning of annuġaaq design as a collective endeavour is that all the Iñupiaq women had the option of legitimate peripheral participation in the sewing community of practice, although not all of them chose to take part. Even the males, young and old, had the option to learn by watching the seamstresses at their homes, although none of them actually made clothing, as far as I know. This was different from Selbu, where previously even some boys and young men participated as full participants in the community of knitters. The Iñupiaq male population served partly as advisers, like 'Patricia's' husband, or as 'assessors', like 'Joanna's' husband, who did an evaluation of the atikluk I made. The participation from almost everybody in the community, on different levels, seemed to strengthen the collectiveness of the practice and learning of the annuġaaq design.

The design tradition, which can also be thought of as the collective knowledge or repertoire, made a framework, a set of boundaries within which the designers were free to create. A part of this collective repertoire was to create – never copy – an original composition for the qupak on a new annuḡaaq. There was an informal rule about this design tradition in so far as seamstresses did not have total freedom to create outside their own culture, or borrow heavily from others when they made this kind of clothing. If the design they made was outside the boundary of the tradition, outside the framework of annuḡaaq style, the designed annuḡaaq or the qupak was regarded as no longer within the Iñupiaq style, as was demonstrated by some of the samples I made to test for the boundaries of the qupak tradition. The framework for clothing design turned out to be relatively clear and unambiguous, when I summed up the judgements I got from the different informants about my various samples. One argument for a repetition of a pattern unit of approximately ten centimetres in length was an appeal to pragmatism, similar to the principles of the traditional style, namely that this repetition saved time during the designing process; another argument was that it was easier to make a good design by just creating a repeatable composition of ten centimetres in length.

Because the learning process was integrated within the community of Iñupiaq seamstresses it was continuous and had no beginning or end. Before newcomers made their debut as seamstresses of Iñupiaq clothes, the first phase of learning started in infancy when for the first time as young children the prospective seamstresses first were able to recognise what was going on around them, by watching and listening. This was true for each individual who grew up in the community. They had access to the community of practice as legitimate peripheral participants just by being at home absorbing the way of everyday life lived by their families. This first phase ended when as young women they made their debut as participating seamstresses, usually in their late teenage years or as young adults starting their own families. The older seamstresses often made annuḡaat for many of their extended family, and even for friends, but usually the young wives and mothers made annuḡaat for their own husbands and children. This first phase was a long learning period of about twenty years where the girls could focus gradually, but consistently, on the different aspects of the processes involved in designing and making many different garments, observing how it was done by various seamstresses. However, in this phase they learned only by observation, without practicing the sewing of fabric Iñupiaq garments. This first phase of learning-by-watching seemed to take into consideration the young children's lack of motor skills, their inability to technically manage

sewing the narrow rows of tapes that are important components if one is to make a good qupak. Although the children did not practice the making of annuġaaq, the seamstresses did not think the tradition was dying out.

I did not find out really how they were able to make Iñupiaq garments – including qupak – without any previous practice working on parts of the annuġaaq. Nevertheless, I noticed that girls and young women occasionally made small sewn items from animal hide, such as yoyos or miniature seals. This was also an activity at the ‘homemakers’ course’ they taught from time to time. I even tried this kind of skin sewing myself, under ‘Victoria’'s supervision. I consider that I developed my sewing skills even in hand sewing rather well, but the skin sewing of these small items were a total challenge. This practice was really suitable for the development of precision motor skills, which is decisive to make a technically good qupak. However, to sew by hand is quite different from using a sewing machine, which is usually the equipment used when making present-day qupak. Unfortunately, during my fieldwork in Alaska I did not ask the informants about how they learned to sew with machines. Recently however I asked one of the informants. She told a story quite similar to mine, explaining that she had been given a sewing machine for children when she was about seven years old, and from the time she was a teenager she made some Western style of clothing on an ordinary sewing machine when she went at college in the ‘Lower 48’, in Oregon. I do not know whether her experiences are typical among Iñupiaq women, but I do know that my own relatively extensive experience making Western-style clothing over the years – was useful when I made my own atikluk, in particular its qupak in Iñupiaq style. The first sample I made, which several of the informants regarded as typical of a newcomer, had wide bias-tapes. To make the bias-tapes as narrow as possible is extremely difficult and requires previous experience of machine sewing. In the second phase of learning, after making their debut, adult seamstresses were constantly able to develop their knowledge of Iñupiaq clothes-making. At this stage of their activity they are learning-by-doing while immersed in the local community of practice.

The learning process was integrated into daily life and was *not* a discrete, separate activity. Neither practice – the designing and making of annuġaaq from textiles nor the learning of this practice – was learned at school or through courses. Spare time courses in traditional Iñupiaq sewing were arranged but only for smaller articles in skin, like the yoyos and seal figures already mentioned. The practice and the learning of designing Iñupiaq fabric clothing often took place in the living room of their homes; it was integrated

into daily life, sandwiched between domestic tasks and/or pastimes like watching TV. Because the Iñupiaq seamstresses were not full-time designers, not much of their time was socially devoted to designing. Instead they found it efficient to build on the existing tradition instead of beginning from scratch and creating an entirely new design for each new annuġaaq. This means that the design of a new garment did not take very long, yet the women found enough time to express their creativity. The results are aesthetically and functionally pleasing, because they build on a collective repertoire tried and tested over a long period, although every new product was a new creation.

The learning process was the result of observation, in particular watching, and *not* the result of teaching. Usually we think of learning as a result of teaching. In Kaktovik, in the course of childhood, youngsters looked on while the seamstresses designed and sewed several Iñupiaq garments. This I have chosen to call learning-by-watching, a form of learning that in my opinion is much undervalued in learning theories, including Wenger's theory, in contrast to Dewey's much used learning-by-doing. The experienced Iñupiaq designers also learned by watching, e.g. they sometimes used other seamstresses' work as samples, not for copying but as inspiration. It seems that the way of learning-by-observation, and in particular learning-by-watching, has been a traditional mode of learning among the Iñupiat. As far back as the 1800s explorers reported that the Iñupiaq children were watching their elders. Inuit clothing is on display for observation in many situations in Kaktovik social life, meaning that the learning arenas and situations are endless, even for the people from a village as small as Kaktovik.

The appraisal of the learning process was integrated into practice – they did *not* use separate tests to establish competence. As mentioned already, the evaluation of the first annuġaaq that a newcomer made was strict. This was clearly emphasized by several of the informants. The beginner had to make an entire decorated garment on her first attempt, without any form of tuition from the older seamstresses. However, there were different levels of quality for novices and experts, as I experienced when they evaluated the atikġuk and qupak I made. In my case, the result was satisfactory for a novice, they remarked. Similar comments were expressed regarding the very first sample I made, where the rows of vertical bias-tapes were really wide. After making her debut as an Iñupiaq seamstress, a woman finds herself facing increasing demands for aesthetic and technical quality improvement.

Iñupiaq ceremonies, such as Eskimo dancing, are important arenas for the evaluation of Iñupiaq clothes. Both experienced seamstresses and

newcomers, who have still not sewn their first annuḡaaq, are still legitimate peripheral participants, and thus learners in this community of practice. Each of them followed her individual trajectory of learning depending on the degree of experience in annuḡaaq designing. Sometimes even boys and men, who would never themselves become full participants in the community of practice of Iñupiaq seamstresses, gained a certain amount of generalizable or theoretical knowledge about what the important features were in good products; sometimes they entered aesthetic discussions and appraised Iñupiaq clothes. I did not observe or hear of any male designing and making annuḡaat, although some of them had theoretical knowledge gained through lifelong observations of several seamstresses. The lack of male annuḡaaq designers and makers seemed to be due to the occupational gender division of labour that did not permit men socially to engage in this kind of activity.

The knowledge was demonstrated through practice – and *not* out of context. Usually the designing and making of annuḡaat was to a large extent the result of tacit knowledge expressed through practice rather than through words. This was particularly true with regard to *design*, different from technical matters, which seemed easier to verbalize. However, the theory about matching and contrasting was expressed verbally by several of the informants independent of each other. This indicates that the designers actually, at least partly, are verbally conscious about conditions in play when they are composing the design of, for instance, a qupak. Nevertheless, even when the same person, the Iñupiaq seamstress, is both the designer and the maker, and sometimes even the user of the garment in question, she seldom needs to explicitly verbalize questions of the annuḡaaq's design. And when even the learning happened non-verbally – in particular through learning-by-watching – the community of practice of annuḡaaq design recognized no great need to verbalise this knowledge.

However, a common focus of the two learning theories is that learning takes place, integrated in practice, rather than as a theoretical, abstract form of learning separated from practice. Schön's prototype for a design of good learning is an artificial practice, at the design studio in a school, while Wenger describes an insurance company that is a real working place as the prototype for designing good learning. The problem of designing for good learning of design in different kinds of schools will be discussed below under the heading *Possible Consequences in Design Education*.

Schön and Wenger's joint focus on learning-in-practice have explicitly been inspired by Dewey's concept of learning-by-doing. Both of them refer

to Dewey (Schön 1983 and 1997, Lave and Wenger 1991, Wenger 1998). The present investigations of annuḡaaq design indicate that learning-by-watching, rather than doing, was the most common way of learning. I see this concept of learning-by-watching as a development of both Schön's and Wenger's theories of learning. According to Schön's theory of how to educate reflective practitioners, I think he misses the crucial aspect of visual learning, which is particularly important to the field of visual design – such as architecture and industrial design. Nor does Wenger mention the visual aspect of learning. He stresses that learning is conducted in the community of practice, but not *how* the learning actually takes place. The focus here is on how the learner learns – and not how the teacher teaches. The latter is often the major focus in learning theories.

Learning-by-watching is actually a new term related to an old phenomenon, as a parallel to Wenger and Lave's (1991) term communities of practice – “Although the term may be new, the experience is not (Wenger 1998: 7). As explorers and missionaries reported, watching their elders was a common Iñupiaq way of learning observed in the late 1800s. This indicates that watching was a usual learning method in their traditional society before the Euro-American teachers came to North Alaska. My intention is to extend the meaning of learning-by-doing to include learning-by-watching, not to deny the importance of the doing. As a matter of fact, Dewey himself criticised the misuse of the concept of learning-by-doing whenever he saw it being reduced to merely activity (Dewey 1979 [1915]: 255). He himself includes reading in the doing, although he does not mention the watching of processes and products as part of the learning-by-doing concept, as far as I know. I regard learning-by-watching as a crucial way of learning within a community of reflective practitioners, in particular within the visual field as designing. In the more audible or ear-minded field of music I would regard learning-by-listening as the most crucial feature. Both watching and listening can be highly important aspects of learning-by-doing. I would put them both within the generic term *observation* – learning-by-observation.

However, what do these interpretations say about the differences and similarities between vernacular and academic design?

VERNACULAR DESIGN VERSUS ACADEMIC DESIGN

Here I discuss the designing process of Iñupiaq clothing – as a case of vernacular design – against the academic view of practice and learning in design – as an attempt to develop a profession-critical discussion of design.

Now let me return to my scarlet thread: Christopher Alexander discusses the design process in what he calls unselfconscious cultures, which I term *vernacular* design. Alexander stresses that his distinction between design in unselfconscious and selfconscious cultures is artificial for theoretical purposes, and not a matter of evolution; he argues that unselfconscious cultures will not develop into selfconscious with the passage of time (Alexander 1964: 199). He continues that cultures are usually selfconscious in some respect and unselfconscious in others.

According to design *learning*, Alexander states that designing in unselfconscious cultures is learned “informally, through imitation and correction” (1964: 36). His description of design learning is not unlike my interpretations of the learning of annuḡaaq design. The design learning in Kaktovik was informal in the sense that it took place in the seamstresses’ homes and not at school or as the result of instructional courses. If Alexander by his concept *imitation* also includes creativity – here as improvisation – I would say that the Iñupiaq seamstresses imitate, but they never copy, when designing Iñupiaq clothing. The community’s assessment of the Iñupiaq garments was extensive, and the possibility for making changes, and avoiding previous mistakes the next time round was almost always possible. It is also possible to question whether Alexander’s description of the opposite of this – the design learning in what he calls selfconscious cultures, actually: “is taught academically, according to explicit rules” (Alexander 1964: 36). The present investigation did not include comparative design practice and learning in what Alexander calls selfconscious cultures, which implies that I do not have the answers to this question. I will only ask some questions that might be relevant for further research about what I call academic design as a synonym for Alexander’s design in selfconscious cultures.

Although Alexander never explicitly states that design in unselfconscious cultures is made unconsciously and conversely that design in selfconscious cultures is made consciously, one suspects that this is his meaning. Schön approved of Alexander’s fascination with the vernacular Slovakian peasant shawls. However, he never discussed whether the makers of these shawls,

hailing from what Alexander regarded as unselfconscious cultures, actually designed through reflection-in-action – which would indicate conscious action. It seems as though both Alexander and Schön, as well as such writers as Jones and Lawson, although they give this kind of design other and different names, regard vernacular design to be a matter of more or less unconscious copying.

One question that might well be asked here is the following: Is academic design usually learned according to explicit rules? Alexander made attempts to construct a kind of scientific mathematical system for designing which could be followed to improve the quality of design, but even he gave up after a while. Not possessing appropriate empirical data I would assume that design learning in design schools today often actually is learned “informally, through imitation and correction” – which is Alexander’s definition of design in unselfconscious cultures, or what is synonymous with what I term vernacular design. Other design theoreticians have also confirmed that in academic or professional design education, learning-by-doing is regarded as customary (Dorst and Reymen 2004), which I understand as learning that is not limited to following explicit rules. Also Lawson confirms this when he states that:

Conceptually the (design) studio is a process of learning-by-doing, in which students are set a series of design problems to solve. They thus learn how to design largely by doing it, rather than by studying it or analysing it. It seems almost impossible to learn design without actually doing it (Lawson 2006: 7).

And in addition, and linked to the previous question: is vernacular design never learned according to explicit rules? Alexander states that unselfconscious cultures must be introduced to ideas about “... how and why things get their shape” (Alexander 1964: 36). I would say that the Iñupiaq seamstresses to a great extent seem to have this kind of thinking. *Annuġaaq* designers seem to have some articulated rules, which several of the informants came up with – such as the theory of matching and contrast in the composition of the qupak design. This means that the dissimilarities between how academic and vernacular design is learned are not divided by an iron curtain. To know more about the differences and similarities in the purpose of developing the design for design learning would be an interesting question for further research. There is also a question of designers from selfconscious cultures always having these ideas about “... how and why things get their

shape". The shapes of many designed object change, but only minimally, over the years, as for instance motor vehicles and furniture.

Several design theoreticians have written about phenomena similar to Alexander's notion of unselfconscious cultures. One of them is Lawson, who in four editions between 1980 and 2006 has repeated the following thoughts in his book *How Designers Think* (Lawson 1980, 1990, 1997, 2006). Actually Lawson repeats the ideas of two of them, both great pioneers of design theory, Christopher Alexander and John Chris Jones. Jones, like Alexander, expresses his admiration for non- or pre-professional designing.

Lawson refers to an episode when his students spontaneously decided to build an igloo because it had snowed heavily the night before. He reports that: "The students immediately, and without any deliberation switched from the highly *self-conscious* and introspective mode of thinking encouraged by their project work to a natural *unselfconscious* (my Italics) action-based approach" (Lawson 1997: 17). The reason, according to Lawson, is that the students share a roughly common image of an igloo, although the students' igloo was not as good as the Inuit's'. In *How Designers Think* (1980) Lawson stressed the students' image of the igloo object, even though his main purpose in this book was to regard design as process. With regard to their igloo, the students seemed to have less image of the design process. According to Lawson they did not follow the Inuit way of building. After building their igloo, the students continued to discuss conditions they had experienced during the igloo building. Lawson thinks this kind of discussions is not normal among Inuit; he states:

Under normal conditions igloos are built in a vernacular manner. For the Eskimo there is no design problem but rather a traditional form of solution with variations to suit different circumstances which are selected and constructed without a thought of the principles involved (Lawson 1997: 18).

Probably, Lawson here confuses talking and thinking. While the seamstresses of Kaktovik rarely talked about the design process of their clothing, this does not mean that they did not consciously think about it. The talking among Lawson's design students reflects more the need for communication with each other, and the fact that they are urged to talk and think loudly about the design process, as Lawson actually stresses when he describes a student project for making a marble machine (Lawson 1997: 15). He views this as a contrast to the igloo building where the students obviously were not told to

think consciously about the design process. The design students are trained to talk to other designers, clients and producers because they take on only the role of designer and not that of maker of the object. On the other hand, because the vernacular designers usually both design and produce – and consequently are involved in a conception and production process that has a more limited division of labour, they have less communicative need for verbal expression. However, this does not mean that they do not consciously think when designing. They often design directly with the production materials, while making the garment, as shown in my investigations both here, among seamstresses in Alaska, and among knitters in Norway (Reitan 1992). They do not unconsciously copy their tradition, which seems to be a widespread idea among design scholars. One can ask if academically educated designers actually talk about their designing if they do not have to. Another question is if academically educated designers always understand the theoretical background of the designs they make (Lawson 1997: 18).

Lawson (1997: 18) seems to believe that Eskimos do not consider the building of an igloo as a design problem laden with general principles involved; rather, he seems to imply that they build on the basis of a traditional form adapted to suit different circumstances. This point of view does not correspond with my interpretations here. What characterizes professional design according to Lawson is the understanding of the theoretical background. He does not specify what this theoretical background means however. Design without this theoretical understanding he calls 'blacksmith design', defined as "the craftsman who traditionally designed objects as he made them, working to undrawn traditional patterns handed down from generation to generation" (Lawson 1997: 18). This lack of verbalizing, or as Lawson says, theorizing, may arise from the lack of need for communication with other persons, because the blacksmith both designs and produces the product himself. This does not mean that the blacksmith does not think or that he produces forms unconsciously. He does not verbalize his thought to outsiders because such communication is not necessary to the design and production process. His theorizing and thoughts are tacit knowledge in the sense of not being verbalized, even though they are to a considerable extent 'verbalizable'. The differences and similarities of design practice according to the degree of consciousness is also an interesting question for further research.

Lawson (1980), like Jones (1970), refers to examples in *The Wheelwright's Shop* (Sturt 1963 [1923]). Sturt states that much of the knowledge of the wheelwrights in the shop was handled from generation to

generation on the basis of experience. To learn the skill took seven to eight years.

There was nothing for it but practice and experience of every difficulty. Reasoned science for us did not exist. 'Theirs not to reason why'. What we had to do was to live up to the local wisdom of our kind; to follow the customs, and work to the measurements, which had been tested and corrected long before our time in every village shop all across the country. So the work was more of an art – a very fascinating art – than a science; and in this art, as I say, the brain had its share. A good wheelwright knew by art but not by reasoning (Sturt 1963 [1923]).

Sturt tells that it took years of doing a special work before he understood why it was done that way. But he, as well as the other wheelwrights could not explain why (Sturt 1963 [1923]: 20). When Sturt talks about science and reasoning he probably means knowledge expressed verbally and explicitly. This is a question of great importance in academic design: should all knowledge within design be expressed verbally and theoretically? Is this possible and is it convenient, or are parts of design knowledge always tacit and thus best taught and learned through practice?

Lawson further states that what characterizes the craft-based design process is that: "After many generations of evolution the end product becomes a totally integrated response to the problem" (Lawson 1997: 20), and the result is often that if the problem changes, the vernacular or craft design process does not cope with the new problem. I cannot see that Lawson's statement refers to any empirical investigations; he seems to repeat what Alexander (1964) and Jones (1970) have maintained before, also without really investigation these claims; Lawson seems mainly to rely on common sense rather than empirical interpretations. In terms of my own empirical data I argue that this is not true for the design of annuġaat. The seamstresses adopted the new fabric materials accessible in the late 1800s; they have continued to use the changing available fabrics and trimming materials ever since, and in this case they are no less innovative than the majority of Western clothing designers.

According to my empirical investigations vernacular design often is made without abstract conceptualizations rendered as drawings. The changes are often small from one product to another but the end product always differs

from its predecessors and from the work of other seamstresses. Adaptation of new phenomena, such as new materials, is typical in vernacular design. Product variation is not an ideal; rather, the aim is to build on the tradition by making small changes. The vernacular designers often design while producing. They do not produce design as a plan for others, working at a different phase of the process, to produce. This means they do not produce different solutions on draft drawings in advance of production, but rather, they make changes as they are working on the final product, here, an actual garment. The development of vernacular design occurs and changes during production. I agree with Lawson (1997: 20) that vernacular design process is closely linked to the making of the object. The separation of designing from making depends on a different context (Lawson 1997: 21). Lawson asks: "Does this separation of designing from making promote better design?" (Lawson 1997: 20). Drawing as the main act in the professional design process has been so important that we now regard drawing as constituting the traditional design process (Lawson 1997: 23).

In traditional professional design, drawings have been extremely important for at least three different purposes; 'presentation drawings', 'production drawings', and 'design drawings' (Lawson 1997: 24). To communicate with the clients, the designer has made 'presentation drawings'. These kinds of drawing are often drawn in perspective, to give a convincing representation in three dimensions. To a skilled designer, who is trained to look at the drawing as an abstraction of the real thing, there is seldom any problem to interpret this kind of drawing. What has been neglected at least in Norway is that understanding and interpretation of drawings constitute something you have to learn by experience. Such understanding is not a natural or congenital skill (Nielsen 2000). 'Production drawings' are instructions from the designer to the maker on how to materialize the design ideas. Unlike the client, the makers are frequently trained to read drawings. The 'design drawing', as Lawson states it, "...is done by the designer not to communicate with others but rather as part of the very thinking process itself which we call design." (1997: 24) This is the kind of drawing Schön (1983) discusses as a drawing the designer has a conversation with, which I discussed earlier.

Jones (1970) also regards drawing as essential in the design process, but he sees both the advantage and the disadvantage of design-by-drawing:

The earliest initiator of change in man-made things is not the maker-of-drawings but the maker-of-things, the skilled

craftsman, the 'designer' who takes over where natural evolution leaves off. It is both appropriate and helpful to compare new methods of designing not only with the recent tradition of design-by-drawing but also with the much earlier method of craft evolution (Jones 1970: 15).

Jones states that what can be seen as simplicity of primitive craftwork involve an information-transmission system that is comparable with new design methods after the method of design-by-drawing. I agree that drawings sometimes make it easier to change the design. When designing-by-making, one has to make a new object if he or she desires to change the design, and often there is more work to change the real thing than to correct a drawing. Some of the younger Iñupiaq seamstresses, who were familiar with drawing from school, draw sketches on graph paper before they start to sew the qupak, although a great deal of the designing continues to take place during the sewing process. The older seamstresses did not draw any design before they made the qupak. In their eyes, design-by-making was more efficient than design-by-drawing. This is quite similar to the design practice of the mitten knitters from Selbu. The composition of the design was accomplished without drawing the composition on paper prior to the making (Reitan 1992). The vernacular designer and the maker are usually the same person and then it is easier to change the design during the making process than in professional design where the designer has finished her/his work when the maker starts to work. The idea that drawing makes it easier to make more fundamental changes and innovations (Jones 1970) is often regarded as a fact in academic design, but does not always make a better result, just a different one, I would say. One advantage of design-by-drawing is the possibility of handling and managing the huge number of factors involved in professional design. As I have mentioned before, vernacular design such as that involved with annuġaat, differs from professional design in its degree of complexity. When the designer is the maker as well, the need of abstraction, either by drawing or by verbal language, is reduced. Another drawback with design-by-drawing is that it just presents the appearance of the product, without its function. A drawing is only a representation of the real thing, which means that the finished product sometimes looks quite different, even to the designer her/himself. To avoid these disadvantages of design-by-drawing, academic designers use different methods. These methods are quite similar to vernacular designing. Although academic designers usually do not produce the object they design, they often make models or prototypes of the product during the design process. In furniture design, from my experience with some

of them, the designer often even engages in design-by-making⁷⁹ (Deibel 2005). Either based on rough sketches or just from imagination the designer starts to work with materials, such as wood or steel, depending of the idea of the end product. The drawings are some times important only as production drawings, to communicate with the producer. In addition, presentation drawings are some times necessary to sell the design to a potential producer. However, the design drawings – either by hand or by computer – which is regarded as the major method for designers, is of less importance.

In present-day designing by computers this need for prototypes, although sometimes to scale, has been developed with huge computer systems as rapid prototyping, where the models or prototypes are made by suitable materials by the software and the computer (see e.g. Capjon 2004). Another similarity here with vernacular design is associated with one of the arguments for a repetition of a pattern unit of approximately 10 cm in length. The reasoning in both cases is to *save time* during the designing process. The Iñupiaq custom of building on the common repertoire – the previous work made by themselves and others in order to make a good design without spending too much time, is also becoming a more conscious factor in academic design practice and learning.

According to Lawson one result of the separation of the designer from the maker is that the design is seen as an individual achievement that "...can easily give rise to the cult of the individual" (Lawson 1997: 23). In other words, the design is not considered a part of the culture, part of the collective repertoire. It is instead viewed as the individual repertoire of the single designer or the designer group. By contrast, an Iñupiaq seamstress looks at herself as an individual designer within the collective culture of the Iñupiat. She usually uses the opportunity, and maybe also sees it as a duty, to always make new designs within the framework of the tradition. This frame is not fixed, but more like what Wittgenstein (2001 PI 66) calls "family resemblance" according to language. One can see that Iñupiaq garments are related, in the same family so to speak, but still all are individually different.

This individuality of the traditional professional designer led to the development of an education where the students had to design within the master's style (Lawson 1997: 23). This form of learning differs from the Iñupiaq way of learning designing. The girls from Kaktovik learned to design by watching the more skilled seamstresses – who function much like implicit

⁷⁹ Personal communications, Industrial Designer Terje Ekstrøm

master teachers. But during this process the learner recognizes that the master never makes two garments the same; she always designs a new *annuġaaq* different from the other in some way. That leads the young novice seamstress to make her own garments slightly differently from her master when she first begins designing the garments she then makes. But all the seamstresses were related to the tradition only so long as they were making *Iñupiaq* garments.

In light of this discussion, does academic design have anything to learn from vernacular design practice and learning?

POSSIBLE CONSEQUENCES IN DESIGN EDUCATION

What traditionally has been regarded as *learning* (Kvale 2003: 9) is students listening to a teacher who explains a phenomenon verbally by speaking to the whole class or to a single student, and perhaps writing on a board, and sometimes even drawing a sketch or a map. However, these activities are all intended to have a pedagogical purpose; they are not considered as activities for their own sake. From my experiences even these activities from the teachers have been rare in previous art and crafts education in Norway, named *Forming* from 1960 to 1997 – which included both drawing, textiles and woodwork (Nielsen 2000). In *Forming*, learning-by-doing was often the ideal, and the misunderstanding of the concept went even further, in my opinion, to often mean just *doing* with the *learning* left behind. In the lessons in *Forming* the students should be encouraged to express their inner feelings, not learn anything. There was nothing to learn, even by *doing*, the students just needed the opportunities to express themselves. One result of this doctrine has been that the teachers never demonstrated or instructed and the students rarely watched any samples, models, or patterns, neither artefacts nor processes. The importance of learning-by-watching – in this mainly visual subject – has indeed been overlooked.

This is in fact the opposite of design learning in Kaktovik where improvisation within tradition was important. By contrast, *Forming* in Norway was *creation without tradition*. The consequences for the knowledge of designing for lay people, a good subject for further research I assume, seem to be tremendous. In *Forming* the students received assignments, and had to find the answers by themselves, without help from the teachers. To help the students by showing them possible solutions has been regarded as exerting undue influence and was seen as an obstacle to the students’

expressions of their own ideas and feelings, which has been regarded as one of the paramount features of the subject. The demand for creativity has been extremely strong; the ideal was that each student should come up with a bright new design, different from everything made before. The results have often not matched the expectations. Because the students did not master the means necessary for good designing – due to ignorance of design knowledge – they were not able to express their ideas, I think. The results have led to many disappointments and experiences of failure, quite the opposite to the teachers' intention of unlocking creativity and expression of feelings. I am afraid this has not changed so much (Kjosavik et al. 2003) in the new subject called Art and Crafts⁸⁰ from 1997, although *design* actually plays a prominent part in the new curricula of 1997 (Det kongelige kirke-, utdannings- og forskningsdepartement 1997) and 2006 (Kunnskapsdepartementet 2006)

Allowing students to observe a real practice of designing and making – performed by arts and design teachers or by professional artists or designers – has been an all-too rare occurrence. This form of education, associated with apprenticeship, has been regarded as old-fashioned and thus an obstacle to contemporary creation. In a sense, immersing novice designers in a community of practice is analogous to exposing them to the gestalt or holistic experience of workshop learning, which is at the core of much vocational training (See Mjelde 2002, 2006). In Kaktovik, however, an apprentice-like kind of education was dominant. Explicit teaching or tuition of designing and making annuåat was uncommon. The children learned to design and make annuåat by observing – and thus absorbing – what the seamstresses did when they practiced the designing. During the learning-by-observation they particularly watched how the seamstresses made the design of the annuåat. In addition, they listened to the seamstress talking to herself or to the medium – the annuåaaq she was working on – as both 'Joanna' and 'Victoria' did when I observed them working. This talking I regard as an explicit verbal expression of what Schön calls reflection-in-action. In addition the children used their other senses, such as the sense of touch, on the fabric and the tapes, and smell, smelling the materials and so on. The importance of the different senses brought into use when learning to design and make annuåat is proportionate to the order presented here. Thus, watching is the most important sense in use when learning to design – a mainly visual practice – as distinct from in music, where I suppose learning-by-listening is predominant over watching.

80 In Norwegian: Kunst og håndverk.

I regard the knowledge inherent in vernacular design as relevant for rejuvenating and developing contemporary design education in Norway and other countries. In my opinion the main feature lacking in contemporary arts and design education – in Norway at least – is the lack of *knowledge* involved in the education. The main purpose in the art education is to create – which I agree is important – but the results would be of higher quality if the education were to pay more attention to knowledge as a tool for creation.

In my opinion, the artificial border between learning and socialization is a serious problem. Children learn constantly from birth until they start schooling. And once they have started school, they continue to learn both inside and outside the confines of the school. This is a fact that the school should be much more aware of. To train and educate decent persons⁸¹ it is important to provide youngsters the opportunity to learn in contexts outside the school as well within the school system. In order to improve learning, the school should make more intensive efforts to integrate what children learn outside the school with their actual school experience, and build on the knowledge they develop outside the school. Both inside and outside the school, children learn by participating in different communities of practice. Outside the school that community might be the family, the gang on the street corner or another informal group, organisation or club. Inside school the community of practice should be expanded to include the informal groups the students have access to, inside the classroom and within the school-yard. What the students learn within the classroom depends on what is going on inside the different communities. The teacher's role in such a situation would be to design situations which include as many of the students as possible in a community where (s)he is one of the participants, most often the one with the most experience. Both the students and the teachers in those informal communities will learn when the individuals in the group change their identity by developing knowledge in the group, together, in an intertwined process.

Because the focus of education research to a great degree has been on what is going on within schools, and learning has been seen as primarily a result of teaching (Kvale 2003: 7), the learning outside schools has often remained almost invisible to us. This separation of inside and outside school also has hidden to a great degree what actually is going on when we learn in any situation. The consequence has been that researchers and teachers have

81 In Norwegian: 'gagns menneske'

lost a great opportunity to develop methods for better learning – not least in the arts and design subjects, both for laymen and professionals.

This study of designing, and the way it is learned, in Kaktovik has provided a clearer picture of the process of learning – in particular the learning of design. The practice of designing as well as the learning of the practice here occur outside the normal institutions of learning. It was thus easier to discover and observe that learning of designing actually occurs, even in situations where there is no explicit teaching, instruction or tuition. This indicates that learning to design does not depend exclusively on teaching and teaching in schools. But what can we learn from how learning to design is achieved in Kaktovik?

Wenger's concept community of practice seems particularly relevant to the discussion of the learning process in design in Kaktovik. I do not believe that the ability to make annugaat was an intrinsic, born skill among the Iñupiat. There must have been a learning process for gaining design mastery and for gaining competence in the making of Iñupiaq garments. This learning did not occur in schools or courses but within the homes of the Iñupiat. According to Wenger, learning presupposes the access to a community or practice of the particular skill being learned. The practice of designing and making annugaat was going on in the homes in the village. All the people who had access to the homes also had access to the location for learning. Both the children and the adult members of the family – usually of the extended family – as well as visitors who came temporarily, had that access. The seamstresses did not usually stop sewing because a visitor came along; they just continued their work at the sewing machine. However, some of the seamstresses made clothing – in particular the cutting of fabric – in one of the bedrooms, where there was more open space on the floor for doing this. Then the access was limited to those who were more interested or curious, as children often were, or for people specially invited, like a good friend or a seamstress colleague. Thus those at the border of the community of practice are deprived of parts of the designing process and do not learn those parts by watching. They are then only peripheral participants but not legitimate because they were not invited to watch the cutting. They remain peripheral participants on the edge of the community of practice of Iñupiaq cloth designing.

Certainly it is possible to argue that academically based design education lacks contact with the makers of things, but ... The designers of today can no longer be trained to follow a set of

procedures since the rate of change of the world in which they must work would soon leave them behind (Lawson 2006: 6).

I agree with Lawson here, the design students should not learn a set of procedures, rather they should learn to create within the framework of different design situations by observing and watching experienced reflective designers in communities of design practice. What the design students need to grasp is the possibilities for creation and development even though there will always be boundaries set by the clients, the materials, economy, ecology, etc., in real design situations. And this creativity ought to build on previous knowledge, taken from both the designer's individual repertoire as well as the collective repertoire within the community of practice. In such an environment, the design student who intends to become a professional designer will build her/his individual repertoire upon and in connection to a collective repertoire, which implies the recognition of both tradition and diversity.

Perhaps further research will show that learning-by-watching is a more important part of professional design learning than the design educators are aware of today. If it transpired that such an idea were shown to be valid, that would probably lead to pressure for change in the way design is taught in design schools. One suggestion might be to introduce the students to actual design work in the real world of design practice at professional design firms, as a participation in the community of design practice. Perhaps this should become a regular part of the curriculum. The main purpose would not be the students' contribution to the work in the design firm; on the contrary, the students would benefit from observing – with their eyes and their minds – the more experienced designers in the firm. Gradually, the students could also learn by doing, of course, but still the learning would be the main purpose of this practice. To make this possible the professional design firms should be paid to accept the students to join them for learning, as is the common practice in teacher training, at least in Norway. This kind of practice would also contribute to solving a kind of problem Lawson indicated in relation to the focus on design education merely in studios at the college or university, where they lack the challenge of “clients with real problems, doubts, budgets and time constrains” (Lawson 2006: 7).

Another suggestion would be to make a virtual paradigm for learning-by-watching by making video films of real design processes conducted by professional designers, to be used by the design students. This would make it possible to watch the process, or special parts of the process, over and over

again, a way of making an instant version of the long learning process for the children of Kaktovik.

As mentioned above, this is a perspective on learning that differs from the conventional perspective prevailing in educational institutions. Looking at design practice and learning in a context different from the conventional educational institutions can open new perspectives. If we were to examine both academic design education, and design education of lay people in primary and secondary schools in light of these same six points, and if we were imbued with Wenger's social learning theory, we might in the future find more similarities than differences between the learning process of vernacular and academic design, which I regard as executed by equally conscious reflective practitioners, although in different contexts. Such research would help build a more thorough scientific foundation in order to develop a more functionally effective design education, and also to create a better dialogue between professional and lay people in the design field – something that could very well be a major theme for further research.

The neglect of learning-by-watching, as engaged in by the participants of communities of practice in arts and design education, constitutes a shortcoming in education of both design and art, and therefore for art and design *practice* itself, through time. When the learners do not build on the experienced knowledge of master craftspersons, the result will often be of poorer quality than if the learners come to a community of design practice and learn-by-watching. I believe this is comparable to the custom in research of building on previous research. Here, art and design education has something to learn from research. It is difficult to imagine interesting research results if the researcher does not build on previous experiences and theories. On the other hand, if the researcher does not create new knowledge in the field, the research is an uninteresting exercise in the reinvention of the wheel. In the same manner, in art and design education the focus on previous experiences and a collective repertoire through learning (both processes and products)-by-watching and learning-by-observation are of vital importance for the improvement of both design education and design practice. Through a better design education, coming designers will improve design quality. Such an improvement in design education in the compulsory school would probably also train better receivers and users of the design made by the improved designers. There is room for schooling to educate clients and customers qualified to communicate with the designers and demand better design. A better design education in compulsory school would also make it easier for ordinary people to compose their own design – as vernacular

designers – to express their desire for creative expression and their desire to make things themselves. This kind of designing is located between the tradition of copying; e.g. in folk costumes which on one hand allows for little if any creativity in the form of improvisation, and on the other, an ideal of so-called ‘free-expression’ – as improvisation in tradition.

A few of the better educated design students in compulsory school would certainly become better novice students in design schools as well, which probably would improve their quality as up-and-coming professional designers. Consequently, to improve the design education in both compulsory and academic design education, through learning-by-watching in communities of practice would make for reflective practitioners and better design in the long run.

FURTHER RESEARCH

This journey to the vernacular annuġaat designers of Kaktovik, Alaska, has come to an end. Our return flight is about to land us back at home. This investigation has shown that practice and learning of academic design probably have much to learn from vernacular design. In the future there are a lot of important and interesting research problems to follow up.



Figure 51 The flight back from Kaktovik to Norway (The Brooks Range).

The first research issue to follow up might well be to make an empirical investigation of design education in both primary and secondary schools, in addition to academic design schools – seen through the lens of vernacular design. The aim here would be to look at myths and facts about how these

forms of education actually work, since the development of design education – or design didactics – ought to include not only *what* to learn, *why* to learn it but also *how* to learn it. Interesting research questions might look into how and whether design students learn by doing, by observation, watching, or what? Another question is how design education on different levels can be improved. To make an international comparative research would make such an investigation even more interesting and useful. In the recent years there have been research projects and conferences in Norway (e.g. Borgen 1998, Kjosavik 1998, Nielsen 2000), also on the Sámi duodji (e.g. Dunfjeld 2001, Guttorm 2001, Fors 2004), and the Nordic countries (e.g. Lindfors 1992, Nygren-Landgårds 2000, Nygren-Landgårds and Peltonen 2001, Borg 2001, Guttorm and Sandven 2004) relevant to these further research on this issue.

To reiterate: to investigate empirically how academically educated designers practice designing – beyond the myths and assumption – would be of great importance in the improvement of understanding of design practice and learning. One can ask to what extent academic designers actually draw on paper or with computers and which other methods they use when designing, seen through the filter of knowledge about vernacular designing. Another interesting issue to investigate would be whether academically educated designers always understand the theoretical background of the designs they make (Lawson 1997: 18).

I see it as essential to examine more closely how people without a professional design education – ‘folk’ designers or vernacular designers – practice and learn design. This could also lead to a better understanding of how the dialogue between professional and lay people might be developed, by providing a better meeting place for lay and professional practice, a venue for creating better design and architecture together. If research into professional design is a young science both in Norway and internationally, then research into lay design practice is, so to say, non-existent. Folk design or vernacular design will therefore be an important area to build up, both nationally and internationally, as in the research network DesignDialog⁸².

I regard learning-by-watching as one aspect of learning-by-doing – understood as learning in practice. Another important research theme would be to go more intimately into Dewey’s theory of learning-by-doing – a concept apparently interpreted in different ways in different contexts – with

82 DesignDialog is a Norwegian research network focusing on design dialogues within business, education and the public.

an emphasis on design learning. The concept of tacit knowledge I regard as important in this connection. Since the 1980 there has been a great development of theory connected to this concept – or practical knowledge – not least in the Scandinavian countries (e.g. Johannessen, Danbolt and Nordenstam 1979, Johannessen and Rolf 1989, Rolf 1995, Göranson and Josefson 1988, Göranson and Florin 1992, Molander 1993). The concept, in contradictory interpretation has been discussed in different research within different profession, not least in nursing (Josefson 1991, Korsnes 1999). There is also an interesting discussion going on about tacit knowledge and visualization (Gamble 2004, 2006, Daly forthcoming). To go thorough into these research projects and discuss consequences regarding design learning would be of great value to develop the field both as research and as practice.

The present research project is only one case of vernacular design, and the investigations about the traditional Norwegian knitting (Reitan 1992) is another. Vernacular design – or design in what Alexander calls unselfconscious cultures – is an underestimated field within design research, but an important research theme. To Nordic researchers the clothing of our own First People – the Sámi – ought to be of particular interest. This kind of research on practice and learning of vernacular design would supplement the conclusions in the present research. It might lead to a better understanding of vernacular design in particular, and thus of practice and learning of design in general.

My ambition in the present research project has never been to build grand theory. Rather, I hope these interpretations of vernacular Iñupiaq clothing design inspired of Schön's theory *the reflective practitioner* and Wenger's theory of *communities of practice* can contribute to a adaptive theory about the practice and learning of vernacular design – with the focus on learning-by-watching in a reflective community of practice – in order to develop a better understanding of how design is learned and practiced in general. To fill the present rather vast holes in this patchwork of design research I have here suggested some research 'patches', some stitch work, that I regard as particularly important for strengthening and developing the fabric of design learning for the future.

Vocabulary

aaka -aakaat	Iñupiaq: grandmother
annuġaaq - annuġaat	Iñupiaq: piece of clothing – clothing
atigi – atigit	Iñupiaq: parka – parkie/parkas (Russian/Aleut origin)
atikluk – atiklukiit	Iñupiaq: snowshirt – snowshirts
avavsilaq	Iñupiaq: The skirt at the hem of the female atigi/atikluk
Inuit	Iñupiaq: Eskimo
Iñupiaq – Iñupiat	Iñupiaq: One Iñupiat, also used as an adjective, and name of their language – North Alaska Inuit (Eskimo), means 'authentic' or 'special' human beings"
Inuvialuit	Iñupiaq: Mackenzie Delta Inuit in Canada
Kaktovikmiut	Iñupiaq: People of Kaktovik
Kalaallit Nunaat	Inuit-Iñupiaq: Greenland
kamik – kamiit	Iñupiaq: knee-long footwear made of caribou fur often trimmed with geometric pattern of dark and light fur similar to the qupak on fur atigit.
Kivgiq -Kiviqiit	Iñupiaq: the messenger feast – now a mid-winter festival held in Barrow
Kuspuk (qaspeq)	Yup'ik word for atigi, also used by the Iñupiat when speaking English.
maktak - maktaat	Iñupiaq: Whale skin with blubber
miquq	Iñupiaq: To sew
mukluk	Boots in Yup'ik, also used by the Iñupiat when speaking English.
Nalukataq-Nalukataat	Iñupiaq: The whaling festival held in June, communal feast held outdoors
patchwork	To sew together small pieces of fabric in particular patterns, often geometric, to make blankets, pillow covers, duvet and quilt covers

	or other items.
qanitchak-qanitchat	Iñupiaq: cold porch they use as a chilly working room next to the entryway
qupak – qupaat	Iñupiaq: Trim on atigi or atikluk – trims
quyanaqpak	Iñupiaq: <i>Thank you very much</i>
tanik - taniit	Iñupiaq: White person – people, means clean or washed
ulu	Iñupiaq: A women’s knife – homemade
The World Eskimo Indian Olympics (WEIO)	Competitions in Fairbanks every summer in traditional Inuit <i>and non-Inuit Native American</i> sports and crafts from all over Alaska.
Yu’pik	Western Eskimo living in southwestern and south Alaska and the easternmost tip of Siberia in Russia

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