



**DISSERTATION**

# **The Yörük Black Tent**

## **Adaption in Design in the Course of Changes in Production**

ausgeführt zum Zwecke der Erlangung des akademischen Grades  
einer Doktorin der technischen Wissenschaften unter der Leitung von

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## Kurzfassung

Im Zuge einer Feldforschung in der Westtürkei in der Region Selçuk wird der Bau eines traditionellen westtürkischen Yörük-Schwarzzeltes in Bild und Text genau dokumentiert. Diese Dokumentation stellt einen Teil der Datengrundlage für die Veranschaulichung optimaler Anpassung einer indigenen Architekturform an die gegebenen Umwelteinflüsse, verfügbaren Ressourcen, handwerklichen Möglichkeiten und soziokulturellen Erfordernisse dar. Für den Vergleich werden ältere Daten des regionalen traditionellen Schwarzzeltbaus gesammelt und analysiert. Das daraus resultierende Material bietet Grundlage zur gestellten Forschungsfrage: Welche Veränderungen hinsichtlich Design und Konstruktion erfolgen im Zuge von veränderten Herstellungsprozessen? Dies beinhaltet die Analyse möglicher Faktoren der Einflussnahme hinsichtlich Anpassung von Konstruktion und Design im Zuge von technischen und kulturellen Veränderungen im Produktionsablauf der einzelnen Zeltbauteile und -materialien.

Der Begriff „Schwarzzelt“ umfaßt in dieser wissenschaftlichen Arbeit einen bestimmten Typus indigener mobiler Architektur, der bisher nur im geringen Maße erforscht wurde. Hierbei handelt es sich um tensile Konstruktionen aus vorwiegend schwarzem, in Leinwandbindung gewobenen, Ziegenhaar, die von verschiedenen nomadischen Gruppen in Nordafrika, im arabisch-persischen Raum, in Kleinasien und sogar im tibetischen Hochland genutzt werden. Der historische Ursprung dieser Zeltformen wird zwischen dem 2. und 4. Jahrtausend vor unserer Zeitrechnung vermutet. Mit besonderem Hauptaugenmerk auf das Schwarzzelt der Yörük-Nomaden in der Westtürkei bietet die Dissertation hinsichtlich der verbreiteten Bauformen in dieser Kategorie einen Überblick, diskutiert technische und soziokulturelle Abgrenzung desselben zu anderen Schwarzzeltformen und erläutert dokumentierte Varianten.

Zusätzlich zur konstruktiven und bauphysikalischen Beschreibung des Yörük-Schwarzzeltes, findet auch eine vertieft anthropologische Auseinandersetzung mit der Lebensweise der Yörük-Nomaden und der Nutzung des Außen- und Innenraums statt. Hierbei bieten Daten aus der mehrjährigen Feldforschung neue Einblicke, die vorangegangene Studien Dritter ergänzen und erweitern.

Auf Basis der erörterten Wissensgrundlagen präsentiert die Dissertation den Kern der Feldforschung: Eine schrittweise Darstellung der einzelnen Handlungsabläufe im Zuge eines traditionellen Baus eines Yörük-Schwarzzeltes. Baustofftechnische, handwerkliche und prozessbedingte Informationen ermöglichen bisher undokumentierte Einblicke in den Ablauf der Herstellung und unterstützen somit eine fundierte Auseinandersetzung mit der Forschungsfrage.

Aufgrund der in der Türkei gut erhaltenen lebendigen Tradition handwerklicher Herstellungsprozesse parallel zu ebenso modernisierter Prozesse derselben Produktherstellung kann, zusätzlich zum literarischen Vergleich, eine Gegenüberstellung neuer und alter Herstellungsmethoden erfolgen. Diese Herstellungsmethoden werden auf Basis einer eingehenden Literaturrecherche und den gesammelten Daten der Feldforschung mit Schwarzzelten älteren Ursprungs sowie aktueller Bauweise assoziiert, diskutiert und nachvollziehbar gegenübergestellt. In Anbetracht der Forschungsfrage findet hierin eine architekturwissenschaftliche Auseinandersetzung statt, die den Einfluss veränderter Herstellungsmethoden auf die architektonische Formfindung und baustoffliche Wahl erörtert. Zusätzlich werden soziokulturelle und wirtschaftliche Veränderungen auf Basis der anthropologischen Auseinandersetzung in Betracht gezogen.

Die erarbeiteten Ergebnisse der wissenschaftlichen Arbeit bieten einen Einblick hinsichtlich architektonischer Veränderung im Zuge traditioneller Weitergabe von Kulturgut im Spannungsfeld äußerer und innerer Einflüsse. Darüber hinaus wird in diesem Rahmen eine detaillierte Dokumentation handwerklicher Erstellung indigener Architektur in dem Maße wiedergegeben, dass eine spätere praktische Rekonstruktion der Prozesse denkbar ist.

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for my children

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with many thanks to

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## Chapter 1

# About the Research Project

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Sometimes projects happen at the right time at the right place without having been planned that way in advance. Just shortly, before the last tents of the Yörük were about to disappear in the region around Belevi and Ahmetli Köy, the project of this thesis took place there. And it not only turned out to be the possibly last historical documentation of the regional nomadic architecture. Rather, its mere existence turned events around and initiated a new awareness in Yörük culture around Ahmetli Köy. After the research project was finished, one of the main local supporters, Mehmet Şimşek, used the reconstruction project as impetus of a new awareness of traditional Yörük life.

This chapter describes how the research project had evolved slowly over the years and pictures how sensible the opportunity for the doctoral thesis had grown by establishing social links and learning by trial and error. Written on a personal level, these passages also depict the emotions and actions that happen when humans interact. Additionally, the events that followed after the research project had been finished, will roughly be mentioned.

The research project had its earliest start in the year 2001 when I still was a student at the university trying to gain the diploma in architecture. I had the great opportunity to spend my summer job in Turkey working for the Austrian Archaeological Institute. Specifically, I was integrated in the Kazı Evi (excavation house) of Selçuk, being part of an archaeological group who documented the Mausoleum of Belevi. The mausoleum was connected to the Ephesus excavation site. The aqueduct of Ephesus ran through the area of the Mausoleum and thus linked it theoretically and practically to the ancient city. My task was to document certain building parts in detail, in particular the columns. Architect Reinhard Heinz had developed and implemented this reconstruction project. He published its results in his doctoral thesis at the Technical University of Vienna.<sup>1</sup>

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1 Heinz 2013

We, the excavation group, had each day a trip of 7 km eastwards from Selçuk over the local highway to our working place, the Mausoleum of Belevi. That trip always led us past a black tent set up next to the highway. From my studies at the university, I knew that this kind of tent was rare to encounter and I also knew that only few photographs existed in these days. I remembered how Ao.Univ.Prof. Dipl.-Ing. Dr.techn. Erich Lehner gave us students the advice that, if any of us would see a black tent by chance, he or she should go there, talk to the people and take some pictures, because it was a rare opportunity in life. I planned to do what he recommended. But it was not as easy as I had expected.

First of, I asked my Turkish colleagues if any of them could help me getting to that tent. The reaction was quite distressing. They told me, that these black tent sites are generally quite dangerous because the owners keep fierce dogs that attack anybody who tries to approach their place. It took me several days to convince my colleagues that I was serious about visiting the tent. Generally, I did not want to go there alone because back then, my knowledge of the Turkish language consisted of 200 humble vocabularies only. Finally, the Turkish craftsman Salih Elden offered to help me. He opposed to the common opinion about the camp site to be dangerous and explained to me that the tent dwellers were Yörük like he was himself and that they were very helpful to visitors. Regarding the dogs, he recommended to approach slowly and to show oneself quite openly to the tent owners so that they can calm their dogs down. Normally, the dogs are well educated and any person with good intentions has nothing to fear.

In fact, the dangerous dogs turned out to be one puppy barking in a high pitched voice and hiding soon from anybody who got near the tent. A woman welcomed us and offered tea and a place to sit. She apologized that she had little time because she was alone at the tent while her men were working on the fields and there was plenty of work for her to do until the evening. Therefore, we stayed at her place only for a short time, drinking three rounds of black tea, as it is the minimum custom of the Turkish tea ceremony. I made use of the precious moment and took photographs and asked questions.

Regarding the tent, Salih Elden and the Yörük woman told me that it is cooling, storm-resistant and rain-impermeable. This statement coming unanimously from two different people puzzled me. I found it difficult to link these imputed features to a tent that was black, remarkably open-pored and graceful in design. Contrary to my doubts, I

had the chance to feel the cool air inside the tent on a sunny day that bore 40°C in the shadows. On that day, I decided that the Yörük black tent was so interesting to investigate that it should be part of my diploma thesis. Therefore, I needed to verify the tent's features and survey whether the statement of my Turkish companions was precise.

Thus, my first encounter with a black tent was a significant influence on the diploma thesis which is already written and accredited since 2004<sup>2</sup>. Back then, I was able to prove or support all the three pronounced features of the tent. In order, to present a complete overview about the subject in this doctoral thesis, the three features in question are presented in chapter 3.1, as well.

In 2002, that was the year after my first experience with the black tents, I was lucky to get another opportunity to work for the excavation site during the summer months. Again, I was able to collect further information about the nomadic culture of the Yörük people and their tents. By the help of Salih Elden, I could retrieve 4 sqm of used black tent cloth. That cloth was my basis for the samples of the rain-impermeability-test which I pursued for the introductory part of the diploma thesis. As well, I was able to visit 3 families of Yörük nomads living in black tents situated at the foot of the Keçi Kalesi mountain range near Belevi. In those days, I established first contacts with the families who later, in the years to follow, turned out to be my most precious acquaintances for the research project.

In particular, from these old days, I remember a little girl from the Çetinkaya family called Hatice who was speaking a remarkably perfect English for her age. She was the only one to whom I could speak without encountering my limits in Turkish and she tried to be very helpful. She was an astonishing cheerful girl whom I remember well.

The following year, 2003, I fell sick just before the summer months had started and needed a surgery. Thus, I was not able to travel to Turkey but nonetheless the pursue of the study of black tents did not cease. Via phone I asked some friends at the excavation site to retrieve an old black tent for me from the bazaar. I knew that former nomadic families sometimes sold old tents there after they had settled. My friends succeeded dearly and in the same year we, my colleagues at the institute<sup>3</sup> and me, were able to set up a Yörük black tent on a private estate in Austria. Later on, this tent was pitched up with students at the campus of the Vienna University of Technology. As well, we repeated this annually at a workshop for university students that was offered by the institute.

2 Ambrosch 2005

3 Institute of History of Art, Archaeology and Restoration, Vienna University of Technology

In 2004, I was fully recovered from my surgery and thus visited the families in Turkey again. Hence, I also got to know the fourth family who was living at the mountain site of Keçi Kalesi, the Şurgun family. The Yörük people gave me a warm welcome, asked me about my whereabouts and told me how things went since my last visit. Therefore, also bad news came my way: I had to learn that the girl Hatice of the Çetinkaya family had died in 2003 of measles. I was shocked by these news and the fact that measles caused her death was just the same a surprise to me though it was not an unfamiliar reason for infant death in Turkey.

In the same year, I was able to finish my diploma thesis which got published during an exhibition event in Vienna in 2005. The thesis showed how a mobile accommodation for archaeologists can be formed based on black tent design and modern technology. To my surprise, people were particularly interested in the black tent subject and soon I got invited to give lectures on various occasions presenting the black tents and talking about my new studies for the doctoral thesis.

In the year 2005, my later to be husband Herbert Pfeifer und me travelled again to Turkey. The reason for the visit was to thank all people involved for supporting the diploma thesis. On that occasion, one of my contacts in Turkey offered me to organize the construction of a new black tent. Hoping to run more technical tests on black tents in Austria, I was happy by that offer. My contact, a Turkish craftsman, explained to me that it was necessary to order at least 3 new tents at the cost of 1.200 Euro each, so that it was worth for his people to start the work.

In order to meet the demands of the craftsman, I put efforts in collecting money until the summer of 2006 came around. Then, again, Herbert Pfeifer and I travelled to the region of Selçuk hoping to retrieve 3 new black tents. Here, it is interesting to mention that one tent weighs about 80 kg and needs at least 1m<sup>3</sup> transportation volume. We already had bought an old VW bus and travelled to Turkey by passing through Hungary, Serbia and Bulgaria.

Having arrived in Turkey, we had to learn that the tents had not been finished yet. It did not matter much in the first place, because we had planned to stay a little bit longer anyway. But soon it appeared to us that the date of finalisation was nearly expiring our visiting time and I had to put a bit more pressure on my contact to hurry up. My contact also did not want to show us where and how the tents were done. Here again, after a long polite debate lasting for days, I also had to raise my demands that I, paying

a ton of money and writing about a research, ought to get at least a glimpse of the production. Well, finally we got that and it was quite a revelation to us. The old aunt and uncle of the craftsman were sewing the tents alone. As well, the tents were laid loosely on the floor while being sewn<sup>4</sup>. I already knew back then that a proper black tent needs to be spread out and fixed on the floor during production. Otherwise it would not gain a balanced surface.

The old aunt and the uncle were the only people in the family who knew how to do a black tent. And I could not help noticing that they were very angry about my contact who asked them to be working quicker. Soon, I learned that they earned only few money.

Trying to get a better insight on the situation, my husband and I continued our investigation. My contact told us that he had bought the black tent textile in the city of Tire paying an extremely high price. We doubted his words and, by asking several people, we gathered that all black tent textiles were produced in the mountains near Denizli.

As we had plenty of time left, we travelled to Denizli with our bus. There, we again asked people for the production places of black tent cloths and most of them answered that they had no clue. But here and there some people had a vague idea where our desired destination would be. Finally, in the city of Bozdoğan, a market salesman suddenly explained to Herbert that the villages for the black tent textile production are just 8 km western to the city. And indeed, we had found the rather unknown villages for the main black tent textile production of Turkey!

So, we drove to the villages on the same day. There, we were dearly welcomed and the weavers showed us around and were eager to explain everything. In chapter 4.2, I will give a detailed explanation of the production processes within these villages.

On that day, we as well gathered the information how much the black tent textile would cost a tourist and where else people would sell the cloth. The price was way below the costs of the black tents I had ordered.

I confronted my contact with our newly gathered information which indicated that most of the money ran into his pocket in an outbidding way and he soon had to admit to our impression. Anyway, in the end, we got the black tents half finished as the old couple was not able to do wonders. There, I drew the line that I could not ask my main contact for help in the future again.

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<sup>4</sup> see image 5.011 in chapter 5.1.2

Hence, we finally packed our bus full with huge black tents and decided to visit once more the four Yörük families at the mountain of Keçi Kalesi. They welcomed us again with wonderful tea, food and interest in our whereabouts. Ayşe, the female head of the household of the Durabay family, discovered the black tents inside of our bus and asked us instantly in a surprised way how we did get these. We told her our story without mentioning names but telling the fully paid price and she and her family were quite excited hearing that. Then they told us that they could construct such a tent for just 500 Euro. I again was very astonished by that friendly offer. Firstly, they knew already how much we had paid my contact for the tents and secondly I knew, after having gathered all the information from the black tent villages and knowing generally how much a Turkish craftsman earned these days, that their price was a really fair offer to me. We told them that we were very interested but that we had to collect the money until next year.

After having visited the four Yörük families, Herbert Pfeifer and I started our previously planned trip to travel through whole Turkey within three weeks. That was quite an adventure because we still transported the three heavy tents in our old bus. The journey took us to the cities Aydın, Denizli, Afyon, Konya, Adana, Şanlıurfa, Dıyrbakır, Bitlis and to our most eastern point Van. From there, we made it a quick ride back home through Ağrı, Bayburt, Trabzon, Samsun, İstanbul and to our last stop in Turkey: Silivri. During this route I had the opportunity to gather a bit of data about Yörük black tents and the economic links of the black tent textile weavers near Bozdoğan. The small but interesting data will be presented in this doctoral thesis in chapter 4.2.6.

Before summer 2007 came around, I was very busy in Austria to prepare the black tent construction by the Durabay family. It all started like a vague idea and became a well designed movie project in the end. First of, I thought that, if we get the chance to observe how a real Yörük tent was built, we had to document the procedure in the most modern way that gets closest to reality. Which was, at these times, doing a movie with a HDTV camera. There was already some literature describing how a black tent is built in Turkey. Although these scientific papers described the construction process fairly thorough, I still was not able to reconstruct the handicraft by just relying on them. Therefore, I was sure that a movie can be the next best possibility to gain a documentation that allows the observer to get into detail about the craft. It was, in fact, my goal to describe the construction process in a way that, if the handicraft might get lost in the future, the documentation helps to save the traditional knowledge.

After having tried in vain to raise public funding on the project, I decided to invest my own money into it. In addition, I was lucky to find some friends who were eager enough to work for the project without demanding any payment and even paid the necessary trip to Turkey by themselves. They were the three brothers of the Daniel family: Andreas Daniel, Christoph Daniel and Florian Daniel. Andreas was an expert of professional movie making and trained us in the basic rules of a proper filming process. Christoph knew well how to handle heavy-weight cameras and movie equipment, and Florian assisted him in this task.

Andreas, Christoph and me invested in a Sony HDTV camera, after having gained the knowledge that renting the same model for Turkey would just have cost nearly the same prize. Altogether, the whole movie equipment had the value of 3.700 Euro. After all, I had found private sponsors for the project. At the same time, the architectural office Ostertag Architects agreed enthusiastically in paying one of the black tents that was going to be constructed. And, of course, my husband Herbert Pfeifer supported the endeavour right from the beginning. Everything evolved step by step without the need of extraordinary pressure.

The filming process needed a thorough planning. Andreas recommended to have two black tents built in a row which appeared deceitfully to be the same single tent in one single building process. In that way, we should be able to film various positions during action while using just one camera. This strategy turned out to be a wise one because that gave us the chance to film the necessary details during the second construction.

As a matter of fact, we could only do the movie in the hottest summer months. The Daniel brothers, my husband and I were only able to get plenty of time off from our jobs during July and August in order to stay in Turkey for a while. The summer months normally reach a daily maximum temperature of 45°C. Having worked for the excavation site before, I knew that we, the North-Western Europeans, would not stand working in that heat too long. Thus, we splitted the film crew into two groups. Each group stayed in Turkey for just two weeks while the project itself lasted for four weeks. Only I stayed there for the whole duration and I was quite finished off at the end of it. Our Turkish colleagues, the nomads, were as well not too thrilled about having to do the project during the hottest months. It was not an optimal time-setting for everyone regarding the climate.

In chapter 4, I describe how a black tent is built based on the story line of the movie adding it up with additional information that is not shown in the pictures.

In the summer months of the year 2008, I could start another tent building campaign with the same nomad families. I was able to pay another tent and also got sponsoring for a second one. This time we, my husband and I, used the opportunity to make photographs about the process. Back in the year 2007, we have been much too busy with the filming so that we lacked a lot of photograph shots about the significant steps. 2008 was as well the year of the big economic crash worldwide that happened in autumn. Previously, Andreas Daniel who was the cutter and second director of the movie, and me wanted to finish the project within one year. But the crisis forced us to put the project aside and deal with the economic loss that haunted our environment. The following year 2009 was a year of recovery.

Shortly before the economic crisis, I had applied for public sponsorship. But it got cut down due to the economic changes. Therefore, I was not able to finance the technical tests on the new black tents. Because of that, I stopped the pursue for technical tests which may have costed 80.000 Euros minimum.

Finally, at the beginning of 2010, Andreas Daniel and I were capable again of reactivating the movie project. On the 4<sup>th</sup> October 2010, the movie was presented the first time at the Top Kino Vienna and further dates at this cinema followed. Shortly before the year ended, my husband and I were lucky to welcome our first daughter Veronika to the world. In 2011, the broadcasting company ORF<sup>5</sup> presented the movie via the broadcasting network Bayern Alpha<sup>6</sup> on the 2<sup>nd</sup> of August. Furtheron, the movie was sold as DVD via the platform amazon.de by the IVA-ICRA<sup>7</sup>.

In these past three years, I as well visited the nomads again and again, exchanging news and presents on a private level of good friendship. Sadly, I had to learn that our filming effort in 2007 was just on time, because until 2010 four out of six black tents vanished at the mountain range of Keçi Kalesi forever. One family moved to the nearest village and another one stopped living in tents. As well, the oldest of the black tent builders, Dede Nasuh Şimşek, died in 2010 at the age of 78. We do miss him.

But, there was a bit of good news, too: The movie project was the impetus for the Şimşek family to build themselves a new black tent in the year 2009.

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5 ORF, "Österreichischer RundFunk", a national public Austrian broadcasting station.

6 Bayern Alpha, a national public Bavarian broadcasting station in Germany, broadcasting stations of Austria, Germany and Switzerland contribute movie material to the station which is broadcasting via satellite or cable to the German speaking audience in Europe.

7 IVA-ICRA, Institute for Comparative Research in Architecture, an association of researchers situated in Vienna, Auhofstrasse 51/2/14, <http://www.iva-icra.org>

From 2010 until 2013 I only had vague contacts with the Şimşek, the Şurgun, the Durabay and the Çetinkaya family as I was busy with nursing our children Veronika and Silvia and writing the doctoral thesis. We planned another visit to Turkey in autumn 2014 but already at the beginning of 2014, I got amazing news via facebook. Mehmet Şimşek had got into contact with local associations for Yörük culture. Together with Mustafa Şurgun and his relatives and friends he had presented our movie project and thus promoted the significance of the Yörük black tent within the culture. In Ahmetli Köy, where he hailed from, he supported annual Yörük meetings and helped enlarging them to common festivals. He became president of the Cultural Survival and Development Association of Yörük Culture in Ahmetli Köy. In his new position, Mehmet Şimşek pursued an innovative promotion project in Ahmetli Köy and on facebook that turned the village into a cultural centre of the nomadic life of the Yörük. His undertaking was so popular that it made it into the newspapers presenting his culture being based on respect towards nature, joy in human life and the nomadic flexibility in adapting to changes in environment.<sup>8</sup>

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8 *Dağlardaki gizemli hayat 'tik' rekoru kiriyor*, Büyük Torbalı, 16<sup>th</sup> Dec. 2013, <http://buyuktorbali.com/daglardaki-gizemli-hayat-tik-rekoru-kiriyor>



*image 1.001: Mehmet Şimşek (right front) and friends in front of a black tent model promoting the cultural association of Ahmetli Köy (photo by Meryem Pişkin Kaya, 2013).*

Times are changing and people as well. The nomads know how to adapt to these changes. For some of them, the era of nomadism is at its end. But as nomadism ends at one place, it might start at another one. Looking back in history, one can observe shifts of nomadism and sedentarisation in Turkey again and again<sup>9</sup>. It was not the goal of the black tent project to keep up the culture by opposing the changings, but rather documenting the tradition and giving the next generation a chance to remember the culture of their ancestors while they pursue a new way of life. The later events show, that the project was the impetus for some Yörük to cherish their tradition more openly while adapting to the fast changes that happen in a more and more globalised environment.

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<sup>9</sup> In chapter 2.2.1, I describe the history of nomadism in Turkey focusing on the repeating shifts between nomadism and sedentarisation.

## Chapter 2

# The Yörük Nomads

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### Chapter 2.1 New Aspects in Nomadism Defining the Yörük

#### Chapter 2.1.1 Outlining Nomadism

Anthropologists have long discussed the precise definition of the term nomadism, in which categories it may be subtitled and how old it could be. In fact, to date, it is still difficult to answer these three questions clearly. Giving a short overview of the different theories associated with the questions at hand may help to access a general idea about nomadism.

The books of the anthropologist Anatoly M. Khazanov are amongst the most respected theoretical sources regarding nomadism. Being referred to in most papers about nomadism, the conclusion may be made that he is a reliable expert on the subject. Still, he does not demand an exact definition on the term „nomadism“ but rather suggests:

*Terminology is something about which we should agree, not argue.*<sup>1</sup>

I pursue the same purpose within this chapter. As a basis to the field research I try to embrace the meaning of the word in accordance with the subject. Nonetheless, it is quite interesting to consider what the term may mean generally. Looking up „nomadism“ at the Britannica Online Encyclopedia, the discussion may start immediately:

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<sup>1</sup> Khazanov 1994, p.15

*nomadism, way of life of peoples who do not live continually in the same place but move cyclically or periodically. It is distinguished from migration, which is non-cyclic and involves a total change of habitat. Nomadism does not imply unrestricted and undirected wandering; rather, it is based on temporary centres whose stability depends on the availability of food supply and the technology for exploiting it. The term nomad encompasses three general types: nomadic hunters and gatherers, pastoral nomads, and tinker or trader nomads. [...] <sup>2</sup>*

Here, the encyclopaedia already starts at a very broad level and carries on to discuss the different subcategories of nomadism. Thinking of the broad level of meaning, it is interesting to mention that in our contemporary society, „nomadism“ is also referred to as kinds of lifestyle that are quite distinct from the primarily idea about nomads. For example, modern entrepreneurs call themselves nomads when they change their home-base periodically, wherever economic development correlates best to their business plans. Contradictory to the citation of the encyclopaedia, they totally change their habitat.

Makimoto and Manners illustrate in their book „Digital Nomad“ how mobile technologies like the internet and mobile telephony create a new generation of international nomads.<sup>3</sup> Similarly, the term may be used for any lifestyle that includes travelling and change of home-base periodically.<sup>4</sup> In such cases, not only economic but also cultural factors may play an important role. D’Andrea describes in his book „Global Nomads: Techno and New Age as Transnational Counter-cultures in Ibiza and Goa“ paradoxical globalization counter-cultures based on studies in Spain and India which may also be designated as the phenomenon of „neo-nomadism“.<sup>5</sup> Is this in fact nomadism still? It depends on the point of view. The „original“ idea about nomadism evolved in a slightly different setting. Etymologically, the denomination „nomad“ goes back to the Greek word „nomas“ meaning “roaming about, esp. for pasture” and is related as well to the Greek expression „némein“ meaning “pasture”. In Latin, „Nomas“ may be trans-

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2 Encyclopedia Britannica 2007

3 Makimoto, Tsugio / Manners, David *Digital Nomad* (John Wiley & Sons) 1997

4 see contemporary art and literature, as for example:

Matthewman, Jim *The Rise of the Global Nomad: How to Manage the New Professional in Order to Gain Recovery and Maximize Future Growth* (Kogan Page Verlag) 2011

Wortsman, Peter *The Urban Nomad: Vienna* (New Word City Inc.) 2011

Wortsman, Peter *The Urban Nomad: Paris* (New Word City Inc.) 2011

and many others...

5 D’ Andrea, Anthony, *Global Nomads: Techno and New Age as Transnational Contercultures in Ibiza and Goa*, (Routledge Chapman & Hall) India 2007

lated as „pastoral people wandering about with their flocks”.<sup>6</sup> Here, the quest for an agreed use of the term regarding this thesis gets closer to its goal. It may be comfortable to point out that nomadism refers to wandering pastoralists but, as cited from the Encyclopedia Britannica above, it is quite common to divide the term into three sub-categories which not only contain pastoralists: nomadic hunters and gatherers, pastoral nomads, and tinker or trader nomads. Indeed, looking closer at this issue, it is difficult to take sides.

A. Khazanov recommends not to use the expression „nomadism“ too broadly for any mobile group because this would render the term to an imprecise attribution. Comparing proclaimed types of nomadism to each other, their lifestyle may prove to be quite different. For example, wandering hunters and gatherers differ strongly from wandering pastoralists concerning reasons and character of mobility. As well, the term „nomad“ may not be applicable to certain ethnic groups such as gypsies or the so-called „maritime nomads“ of South-east Asia. Furthermore, he even suggests to be careful about assigning the denomination „nomads“ to any mobile pastoralists:

*However, if all mobile pastoralists are described as nomads this once again leads to an excessively broad and imprecise use of the term, because there are very many different forms of mobile pastoralism. It is obvious that the definition of pastoral nomadism as particular form of food-producing economy should be based on the sum total of those economic particularities in which it differs from other kinds, forms and even varieties of economic activity.*<sup>7</sup>

Herdsmen husbandry in the Alps of Austria, Switzerland and Germany is a possible example of how a certain lifestyle may be connected to mobile pastoralism but not to pastoral nomadism. The shepherds who are wandering with their herds through a specific mountainous region may change their sleeping base on a daily basis. However, they pursue this lifestyle within only a certain time-range alone and apart from their families and homes that have a fixed place.

Looking again at the etymological meaning of nomadism, the supposition becomes self-evident that there may be groups who live or have lived „pure“ nomadism. This idea is not uncommon. Khazanov mentions pure nomads in regard to „pastoral nomadism proper“ when no other economic activity within the ethnic group is present

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6 Hoad 2003 (Concise Dictionary of English Etymology), p.314

7 Khazanov 1994, p.16

but pastoralism itself.<sup>8</sup>

While some scholars try to find a defined core for the term, others are surprised by the revelations they make when they study the „pure“ or historically „original“ nomads. For example, for a couple of years, the anthropologist P. C. Salzman lived among one of the last nomadic groups of Baluchistan who had managed to stay entirely independent. Describing his first days among the nomads, Salzman does not hide his bafflement:

*I went to Baluchistan hoping to study nomads who did nothing but raise livestock, who were called „pure“ nomads by some anthropologists. When I confided this to the tribal chief, he appeared to have no idea what I was talking about. The reason was that all Baluchi nomads were involved in several different sectors of production.*<sup>9</sup>

He observed that the Baluchi nomads adapted and changed their economic activity at any occasion. They were hunters, agriculturalists, traders, formerly raiders and pastoralists at the same time without abandoning their highly mobile lifestyle. Still, for the passing visitor, they would have appeared to be only pastoral nomads who change their site without fixed routes at any occasion according to the regional precipitation and range of pasture. And this first-sight impression correlates absolutely with the idea of pure nomads.

Another example of questioning classical categorization is shown in the researches of Daniel G. Bates who points out that nomadism does not need to be closely connected to the economic dependence on livestock production but may as well be influenced by cultural and social relations.<sup>10</sup> He studied a group of Yörük nomads who stayed nomadic due to the lack of social and cultural support for sedentarization in their particular region.<sup>11</sup>

Additionally, Bates as well puts his finger on another misunderstanding that may occur, by categorising cultural groups by their lifestyle and preoccupation:

*In addition, nomadism is sometimes treated as a „cultural type“: nomadic peoples are held to differ perforce in their political and social organization from sedentary societies. Often, however, the same tribe is found to encompass both far-ranging nomadic pastoralist and sedentary agricultural segments.*<sup>12</sup>

8 Khazanov 1994, p.15-18

9 Salzman / Rice 2008, p.8

10 Bates 1973, p.22

11 Bates 1973, p.25

12 Bates 1973, p.22

P. C. Salzman's and Daniel G. Bates' observations are a bit similar to the field research in this book. On the one hand, there are terms and categories developed in anthropology that help the scientist to discuss matters on a common basis, but on the other hand, real life shows a far more diverse image. In my case, as I occasionally refer to the Yörük people as „nomads“, their current lifestyle shows a contradictory pattern: Their camp-sites are fully mobile and could be moved at any moment but they live at the same place at least for 35 years and will apparently not move in the near future. Actually, they ought to be categorized as sedentarized nomads anthropologically. However, regarding the architectural aspect, they do not show the characteristics of sedentarized people at all.

This case will be presented in detail in this chapter and in the chapters 2.2 and 2.3 that follow.

In spite of the above demonstrations, I prefer to use the terminology based on A. Khazanov's recommendation because it provides a very detailed tool for discussing lifestyles and presenting a logical overview. Nonetheless, it needed to be mentioned that this kind of categorisation is not shared by everyone, as shown at the beginning of this chapter and that real life may hold its surprises for the interested individual when he or she is looking for the claimed system.

Indeed, the agreed terminology is nothing but a vocabulary that helps to explain reality, showing us occasional exceptions, surprises and revelations. That is, actually, the adventure of research.

## **Chapter 2.1.2      Categories among Nomadism**

Apart from discussing the terminology of pastoral nomadism, it is as well, interesting to understand which kinds of nomadism are chosen for which reasons. Roughly sketched, what follows is some generalized information on that issue. Pastoral nomadism is present in regions that do not fully supply a sedentarized life for all indigenous people. In most cases, the lack of water and thus the lack of fertile grounds is a main factor. In such regions, agricultural cultivation may be impossible, or merely regionally or seasonally restricted. Examples for extreme climate zones that do not support agriculture are deserts that bear a dry hot (e.g. Sahara desert in Northern Africa) or a dry cold climate (e.g. Gobi desert in China and Mongolia, or as well in the Eurasian steppes). Further, restricted agriculture combined with nomadism may be found in climate zones that have precipitation enough to support a fairly constant vegetation, but not for intensive

agriculture (e.g. in moderate hot zones like the Taurus mountains of Turkey or the Atlas; Or in cold zones like the highlands of Tibet). There, dramatic temperate changes throughout the seasons may be an additional characteristic that a nomadic lifestyle can adapt to. Apart from climate impact, other outside influences determine how nomadism is organized among peoples like terrain, availability of resources, social and political structures, economic features, type and size of livestock. In addition, the nomadic peoples' culture and history is an additional factor that influences the chosen lifestyle.

So, which types of pastoral nomadism do exist? Or, moreover, in which groups are different mobile pastoral lifestyles categorized in the scientific point of view? Based on the suggestion of Khazanov, a terminological division of mobile pastoralism into the following categories is available:

pastoral nomadism proper

semi-nomadic pastoralism,  
semi-sedentary pastoralism,

yaylag pastoralism (transhumance)

herdsman husbandry (distant-pastures husbandry),  
sedentary animal husbandry<sup>13</sup>

These types are strongly connected to the economic value of cattle-breeding in relation to other economic sources combined with a particular model of mobility.<sup>14</sup> Though Khazanov refers to very common expressions of subdivisions in pastoral nomadism, his definitions of the terms may differ from other scientists working on the subject.

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13 Source: Khazanov 1994, p.19-25, adapted by the author. The original order by Khazanov was: pastoral nomadism proper, semi-nomadic pastoralism, semi-sedentary pastoralism, herdsman husbandry (distant-pastures husbandry), yaylag pastoralism (transhumance), sedentary animal husbandry. The new order proposed by the author is more fitting to the common idea about yaylag pastoralism or transhumance. These forms get closer associated to a semi-nomadic lifestyle than to herdsman husbandry.

14 see as well: IFAD 2013

Pastoral nomadism proper or „pure nomadism“ refers to groups who solemnly rely on pastoralism as economic resource and pursue entirely a periodic mobile lifestyle on a regular or irregular basis. Typically, as already mentioned above, they can be found in regions of extreme climates like the Sahara desert or the Eurasian steppes. This type of nomadism is quite rare and the question may even arise whether it is rightfully labelled to the ethnic groups that are defined as „pure nomadic“ in scientific literature<sup>15</sup>.

Semi-nomadic pastoralism is far more widespread than pure nomadism. Here, the group is predominantly occupied with mobile pastoralism and executes agriculture just as a supplementary resource activity. It may be that the entire group participates in the seasonal migrations and as well the cultivation of agricultural fields together. Or, the tasks of agriculture and mobile pastoralism are split within the group by being assigned to specific members.

Semi-sedentary pastoralism differs to the semi-nomadic style by involving most of the group's capacity for agriculture and adding mobile pastoralism just as a secondary resource to the economic profile.<sup>16</sup>

Yaylag<sup>17</sup> pastoralism is characterized by the use of seasonal pastures in addition to a mainly agricultural occupation. The cattle is kept on mountain pastures during the hot season and on the lower pastures (mainly near the settlement) during the colder periods of the year. Khazanov points out that yaylag pastoralism is often associated with transhumance, although these terms may bear a slight difference:

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15 see as well: Cribb 1991, p.16

16 Khazanov 1994, p.19-22

17 According to Khazanov the Turkic word „yaylag“ means summer highland pasture. See Khazanov p.23. In modern Turkish, a similar translation can be found: according to Langenscheidt's Universal Dictionary implies „yayla“ „high plateau“ and „yaylak“ „summer pasture“. I personally made the experience that „yayla“ has the same denotation in comparison to the German expression „Alm“. Products of the „Yayla“ are advertised in Turkey in the fairly same style and valence as products from the „Alm“ in Austria.

*However, as it has been pointed out by Johnson (1969:18-19)<sup>18</sup>, many scholars often confuse transhumance with vertical variants of pastoral nomadism and semi-nomadic pastoralism; in doing this they ignore on the one hand, the etymology of the term which comes from Spanish and was first used to describe specific forms of pastoralism in the Pyrenees, Alps and other mountainous regions of Europe (Sorre, 1950:647)<sup>19</sup> and on the other hand, the more essential fact that the vertical movement of livestock in itself signifies not a form of pastoral economy, but only some of its separate characteristics (Bacon, 1954:54)<sup>20 21</sup>*

Herdsman husbandry or distant-pastures husbandry occurs when the majority of the group lives a fully sedentarized life while its livestock is tended by herdsman on pastures near or distant to the settlement. During seasons that do not allow grazing, the flocks are held in pens or stalls requiring additional feeding.

Sedentary animal husbandry can be compared to herdsman husbandry with the significant difference that the livestock are driven back to the stables daily. Within that category there are variants that are distinguished by the presence and use of stables or enclosures. In its simplest form, the use of shelter or enclosure may be totally absent and the livestock grazes freely.<sup>22</sup>

In comparison, it is interesting to observe how other scientists choose to subdivide nomadism that is associated with pastoralism. For example, the archaeologists Barnard and Wendrich distinguish between pastoral nomadism, semi-nomadic pastoralism and agropastoralism. Pastoral nomadism is assigned to groups who support themselves entirely from pastoralism carrying out a fully nomadic life. Semi-nomadic groups are partly settled. Either the entire group stays at its settlement for a certain season during the year or a part of the group lives constantly in the settlement while the other part accomplishes the nomadic livelihood. Agropastoralism describes the combined use of

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18 Referring to: Johnson, Douglas L. 1969, *The Nature of Nomadism: A comparative Study of Pastoral Migrations in South-western Asia and Northern Africa*. The University of Chicago. Department of Geography. Research Paper No. 118. Chicago

19 Referring to: Sorre, Max. 1950, *Les fondements de la Géographie Humaine*. Vol. II. Partie 2. Paris, Librairie Armand

20 Referring to: Bacon, Elizabeth, 1954, *Types of Pastoral Nomadism in Central and South-west Asia*. SJA. Vol. 10, No. 1: 44-68;

21 Khazanov 1994, p.23

22 Khazanov 1994, p.22-24

agriculture and pastoralism without referring to the grade of mobility. Additionally, Barnard and Wendrich introduce another set of categories which is not so much defined by the economic preoccupation but rather by the relation to the outside world:

tethered pastoralism,  
enclosed nomadism,  
peripheral nomadism

Tethered pastoralism occurs when a group's mobility pattern is dependant on particular resources, social groups or features in the environment.

Enclosed nomadism refers to the close relation between the group and the surrounding settled population.

Peripheral nomadism shows a contrary characteristic to enclosed nomadism. Here, the group lives and acts on the fringes of a settled society.

Additionally, they describe transhumance to be a pattern of seasonal migrations with herds determined by periodic weather conditions or scarcity of resources.<sup>23</sup> Associated with the geographic relation between summer and winter pastures, a distinction between vertical and horizontal transhumance can be made.

Apparently, the term varies slightly in its characteristics between scientists, as can be seen in the comparison of the opinion of Khazanov with the proposition of Barnard and Wendrich.

After introducing two different systems of categorizing pastoral nomadism, it is possible to add another subdivision to the subject, which is regarded as rather new, although

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23 Barnard / Wendrich 2008, p.7-8

already introduced in 1972 by Salzman: multi-resource nomadism<sup>24</sup>.

As already mentioned previously in this chapter, Salzman started a field research after he had finished his student education in anthropology. He expected to experience „pure nomads“ in Baluchistan who ought to live entirely on the subsistent use of livestock, but on the contrary, he found out that these people rather pursue various different preoccupations while living a fully nomadic life. He was not the only one who had to face such surprising revelations and thus, his introduction of multi-resource nomadism became adopted by other scientists.

The different ways of categorization of pastoral nomadism always depends on the point of view of the researcher. There may be endless possibilities of finding new definitions. Regarding the field research in this thesis, the above mentioned groupings provide a solid basis that offers an overview and the chance of detailed sketching when it comes to the discussion of matters. However, there is another focus point needed on the subject. The Yörük people whom I got to know closer have been sedentary for about 35 years, expecting to remain sedentary for the foreseeable future. Yet regardless of this, they have kept up their fully mobile way of living during this whole period of time. To preserve the benefits and advantages of mobility, they moved their camps a few 100 meters each second year within their property land. Finding a new clean place after intensive use of the camp was one of the reasons. Other reasons were changing preferences regarding position and infrastructural relations within the camp and with regard to surrounding physical features. From interviews, it was also established that there was a desire to maintain the traditional way of living, a way the people were used to and made them feel comfortable. Expressions like „We change camps every two years, that is our way.“ or „We fancied a different place after staying there for some years.“ were among the answers given when asked why they were now slightly aloof from their

24 Salzman 2000, p.2-3:

*„Observing and trying to understand the Sarhadi Baluch with the crude conceptual tools „nomadism“ and „pastoralism“ I had to come to terms with the fact that the Baluch could not be reasonably characterized simply as „pastoral nomads“ because they were deeply engaged in a variety of productive activities – both large- and small-sock pastoralism, run-off cultivation, qanat irrigation cultivation, arboriculture, gathering, selling their labor, smuggling, trading, in the past predatory trading, and, as the future would develop, guiding illegal émigrés – and were conspicuously busy trying to manage their many related activities. Their nomadism was as much moving between the sites of different forms of production as it was for strictly pastoral purposes. Trying to capture this committed and ongoing multiplicity, I coined the phrases „multi-resource economy“ (1971a) and „multi-resource nomadism“ (1972), arguing that this pattern was widespread among peoples often labelled „pastoral nomads“.“*

see as well: Salzman, Philip Carl, *Multi-resource Nomadism in Iranian Baluchistan* in W.Irons and N. Dyson-Hudson (eds.) *Perspectives on Nomadism*, Leiden, E. J. Brill, 1972, p.60-68

old camp. Sometimes, there were explicit reasons for moving camp, as for example the death of a grandfather in one of the families and therefore the loosening of certain social connections which made new camp positions possible. In another case the new jobs of the household's adult children made the whole family move to the other end of their land property in order to be closer to the working place. Somehow, the indigenous architecture did not so much reflect a category of pastoral nomadism but rather a cultural practice or habit. This attitude inspires to approach the subject through an additional angle, like observing the anthropological lifestyle and architectural design as isolated matters regarding the grades of mobility and then comparing them to each other. This may be another tool for trying to understand the built environment of a culture and maybe even to challenge the collected data of older researches. Does the architecture mirror the current lifestyle according to our criterion? And if not, why not? The last question is not only difficult to answer, it is as well necessary to question our own criteria. The following passages about the historical origin of nomadism will lead to similarly posed questions. It is interesting to observe how different disciplines of research are confronted by the same challenges.

*Before presenting a brief resume of the social landscape essential to an understanding of the contemporary pattern of nomadic pastoral land use, a number of conceptual questions must be considered. This may enable us to avoid the confusion that often attends studies of nomadic pastoralism. Foremost, perhaps, is the way in which such terms as "nomad", "true nomad", "semi-nomad", and "transhumant" are employed. Too much concern has been directed toward the elaboration of taxonomies and too little toward their usefulness or logical consistency. This problem will not be pursued here except to mention that there is no necessary relationship between the amount of regular movement of residence and the degree of dependence on livestock production. Rather, both should be treated as independent variables: one does not necessarily involve the other. Furthermore, distinctions are often made according to a typology based on migratory patterns without questioning the assumption that migration is a determining, or even an important, factor in shaping the social and economic system under consideration.*<sup>25</sup>

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25 Bates 1973, p.22

### Chapter 2.1.3      Origins of Nomadism

*The origins of nomadism probably reach back to Neolithic Age (...) when humans started to breed cattle, to till fields, and to build fixed settlements. This happened in the region of today's south-east Turkey, where the veld plains between Euphrates and Tigris River (Mesopotamia) meet the mountain range of the Eastern Taurus. Around 7000 BC the world's first small towns were built there, as for example Çayönü at Diyarbakır or the slightly younger central-anatolian Çatal Hüyük where assumedly more than 3000 people lived. Excavations construe to animal husbandry at the periphery of these centres of trade on one hand, but on the other hand as well to mobile groups of cattle breeding which had a hand in distribution of goods over hundreds of kilometres.*<sup>26</sup>

Nomadism is often associated with an old and ancient way of living and, even more daring, it may be mentioned in one breath with human origins. In that context, it is sometimes connected with a very romantic approach to a long forgotten past. On the contrary, for the scientific point of view, this subject is not an easy one. How old is nomadism? How did it originate? That cannot be answered properly. Here, again, it is interesting to learn about the different approaches among scholars trying to answer these questions. The image of the past changes with every new archaeological revelation or scientific discussion on the issue.

As the archaeological records about nomadic settlements leave room for a broad area of interpretation, most of the work about the nomadic past needs to be carried out through anthropological and philosophical discussion. First, there was the idea that pastoral nomadism may have originated from the hunter-gatherer tradition. Groups followed the seasonal migrations of game trying to find continuously optimal hunting grounds. In the course of development and optimisation of hunting and subsistence methods they managed to domesticate animals that travelled along with their routes. Originating from the wild game the new domesticated animals were bred according to human needs and measurements. Slowly, the lifestyle of the hunter-gatherer people

<sup>26</sup> Kunze 1994, p.67, translated. Original words in German: *Die Ursprünge des Nomadismus reichen wahrscheinlich in die Jungsteinzeit (Neolithikum) zurück, als die Menschen begannen, Vieh zu züchten, Felder zu bestellen und sich feste Siedlungen zu errichten. Dies geschah im Gebiet der heutigen Südosttürkei, wo die Steppenebenen zwischen Euphrat und Tigris (Mesopotamien) auf die Gebirgsketten des östlichen Taurus stoßen. Dort wurden um 7000 v.Chr. Die ersten Kleinstädte der Welt gebaut wie z.B. Çayönü bei Diyarbakır oder das etwas jüngere zentralanatolische Çatal Hüyük, wo vermutlich mehr als 3000 Menschen wohnten. Ausgrabungen deuten sowohl auf eine Herdentierhaltung im nahen Umkreis dieser Handelszentren hin als auch auf mobile Viehzüchtergruppen, die zur Verbreitung von Gütern über Hunderte von Kilometern beitrugen.*

changed into a pastoral nomadic one.

This theory, which is also called “proto-stock-raising”<sup>27</sup> or „tripartite theory“<sup>28</sup>, appeared to be a plausible one but soon got questioned by some scholars like Vajnshtejn in 1978:

*In recent decades the view that pastoral nomadism originated among the hunter peoples has lost support to the spreading concept that, under conditions of neopolitical revolution, in a number of steppe and foothill areas of Eurasia a complex kind of farming emerged involving sedentary and productive land cultivation and animal husbandry on the basis of which, in certain mountainous and steppe areas, a transition occurred in some tribes to pastoral nomadism.*<sup>29</sup>

Khazanov also describes this change of mind within the scientific world in the past decades. The thought that nomadism must have been one of the most ancient lifestyles among humans renders into a misled supposition. Only towards the end of the 19<sup>th</sup> century some scholars managed to defend the contrary<sup>30</sup>:

In the course of agricultural occupation people started to keep animals on their land and began breeding them. As livestock became more productive, the method of rearing expanded into herdsman husbandry and later into pastoral nomadism. Here, the earliest date of domesticated stock is of interest. According to Betts, it can be assumed that sheep were first domesticated in south-east Turkey in the late 8<sup>th</sup> or early 7<sup>th</sup> millennium BCE. In the eastern Jordanian steppe, evidence was found that the herding of goats and sheep influenced the faunal profile in the early 7<sup>th</sup> millennium BCE.<sup>31</sup> Combined with the theory of sedentary origins for nomadism, the supposition may be formed that pastoral nomadism dates back into same millennium or later.

Still, there is a third theory how nomadism emerged in the course of human history:

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27 Bonte 1981, p.33

28 Khazanov 1984, p.85

29 Vajnshtejn 1978, p.128

30 Khazanov 1984, p.85

31 Betts 2008, p.27

*There is less information on the origin of pastoral nomadism in the steppe and arid zones of the Old World. However, in ancient literature and written documents from the archives of the Mari settlement in Mesopotamia, grounds are found for supposing that pastoral nomadism spread there on the basis of the economy and culture of roaming hunters who borrowed domestic animals from their sedentary neighbors. The most ancient documents on the nomadic elements of the population refer to the beginning of the second millennium B.C..*<sup>32</sup>

In regard to the third theory, Vajnshtejn proposes the 2<sup>nd</sup> millennium BCE to be the earliest documented start of nomadism. Therefore, compared to Betts' dates about domestication, a gap of about 5000 years can be found which allows a continuous dispute about the first emerge of pastoral nomadism. As already mentioned at the beginning of this section, it is actually a matter of philosophical and anthropological discussion to pin down the right millennium as long as no undeniable archaeological evidence was found.

Having now analysed what nomadism may mean, in which categories it may be subtitled and how old it could be, we still have not embraced a whole image about nomadic lifestyles. As already mentioned in various parts of this chapter, some existing theories can be profoundly questioned. In fact, it appears as if a major change in the view about nomadism takes place. One example may be the thesis of the archaeologist Roger Cribb which proved that a fundamental questioning of common scientific approaches may reveal important information that influences other areas of research as well: He documented nomadic camp sites of the present with archaeological methods demonstrating that these sites present a large quantity of human-made stone formations (e.g. wind protection barriers along the tent's walls, groundwork for animal sheds) and ceramic sherds.<sup>33</sup> This result opposed the existing theory that nomadic sites display only a minimum of non-ephemeral materials. Cribb's thesis set off a major issue about supposedly wrongly interpreted archaeological sites that may be not of sedentary but rather nomadic origin. As well, he introduced a new approach in the distinction between hunter-gatherer and nomadic communities. In the publication of the 69<sup>th</sup> annual meeting of the Society for American Archaeology, Wendrich and Barnard mention in their introduction the huge impact of Cribb's thesis on the archaeological field of science.<sup>34</sup> Furthermore, in the same publication, Bernbeck points out in his article „An Archaeology of Multisited Communities“ how the perspective of sedentary scientists on nomadic communities has developed a distorted idea about mobile lifestyles.

32 Vajnshtejn 1978, p.130

33 Cribb 1991, p.113-132

34 Wendrich/Barnard 2008, p.6

*This dichotomized perspective is reinforced by chance encounters of archaeologists with non-sedentary people. Such encounters occur often on a purely visual basis. On travels, „nomads“ may be identified as those who live in black tents and raise livestock. The construction of a fundamental divide between sedentary people, who depend on agriculture, and pastoral nomads is at least in part due to practical matters of fieldwork combined with ad hoc „evidential experience“ of nomadism.* <sup>35</sup>

While some scholars discover the importance of analysing not only the observed culture but also the observer's background and motivation in order to be able to point out relations and blind spots, other scholars found a similarly astonishing new perspective on nomadism by changing the point of view. Kasaba presents in his book „A moveable Empire“ a whole new view upon the history of the Ottoman empire by describing it from the aspect of mobility. Resulting from a detailed research on historical records he demonstrates how nomadism was an essential part of the empire's political structure and logistics. As well, he shows how mobility needs to be considered over a larger period of time than just seasonal migrations.<sup>36</sup>

This revelation does not stand alone as can be seen in Bernbeck's thoughts about multi-sited communities:

*The idea of a group's dependency on annual or more frequent moves alone does not capture all forms of mobility since it can also work on larger time scales, as is evident from ethnographics (James 1979; Rivière 1995;197-199)<sup>37</sup> and research on the central European Neolithic, for example at Bylany or the Aldenhovener Platte (Soudsky 1969; Lünning 1988)<sup>38</sup>.* <sup>39</sup>

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35 Bernbeck 2008, p.45

36 Kasaba 2009

37 Bernbeck refers to:

James, W. 1979 *Kwanim Pa: The Making of the Uduk People*, Oxford, Clarendon;

Rivière, P. 1995, *Houses, Places and People: Community and Continuity in Guiana*, in J. Carsten and S. Hugh-Jones (eds.), *About the House: Lévi-Strauss and Beyond*, Cambridge, Cambridge University Press: p.189-205;

38 Bernbeck refers to:

Soudsky, B. 1969 *Étude de la maison Néolithique*, Slovenská Archaeologia 15: p.5-96;

Lünning, J. 1988 *Frühe Bauern in Mitteleuropa im 6. und 5. Jahrtausend vor Chr.*, Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz 34: p.27-93

39 Bernbeck 2008, p.50

Kasaba additionally describes how various groups partly settled for a period of time and then resumed their mobile lifestyle. Due to economic, political or cultural influences people were in a state of constant readiness to give up their homes or home regions in order to find new places, or to travel until the circumstances became different again.<sup>40</sup> There again, Kasaba's revelations support other scholar's thoughts about finding a new way of recognizing mobility, like e.g. in the article „The Archaeology of Mobility: Definitions and Research Approaches“ by Wendrich and Barnard:

*No firm delineation can be made between settled and mobile existence. At the same time, we should not imagine the relation between settled and mobile life as a point or range on a scale between „completely settled“ and „completely mobile“.*<sup>41</sup>

Summarized, we straddle the interesting scale between classic classification and a nearly total breakup of any classifications when it comes to nomadism. While some scholars are drawing a detailed definition structure, others try to step out of the definition range in order to test out new angles of approach. Both approaches are of high importance in order to provide a rich data on the issue. As the new revelations are rather young and of supportive importance for this thesis, I embrace once again the crucial discoveries: The anthropologist Salzman pointed out how obviously „pure“ pastoral nomads may as well retrieve their resources from other economic fields. The historian Kasaba showed how different the idea of sedentarization and mobility may be when observed over a longer period of time. And the archaeologist Cribb revealed blind spots when marks of settlements were only interpreted by the view of settled persons. In both aspects, the defined approach and the breakup of any definitions, we have a valuable basis for experiencing the different lifestyles of the four Yörük families whom were the subject of this study. They differ profoundly in their economic preoccupation, social organisation and environmental connection. Nonetheless, their camps appeared to be of same architectural type and level of mobility. This antagonism will be elaborated on in chapter 2.3.

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40 Kasaba 2009, p.30, p.36

41 Wendrich / Barnard 2008, p.11

## **Chapter 2.2 The Yörük Nomads in Turkey**

Coming from the field of architecture, anthropological knowledge was not my main basis of fundamental education. Therefore, my approach towards the Yörük nomads was, regarding the field of science, the approach of an ordinary person. During the years of research, I filled my gap of background knowledge by studying various papers which provided anthropological information about the Yörük and information about anthropology in general. Still, this way of self-education was unsatisfactory for my desire for background knowledge, as I was not able to take a scientific position towards the different aspects that were presented by different scholars working in that field. The urge to find more transparency in the huge pile of anthropological information was finally satisfied as I started to study the history of Turkey and the history of nomadic people within Turkey. Knowledge of history helps understanding of how things developed until today. Having learnt from the process, I am starting this chapter with the history of Turkey with emphasized focus on the Yörük nomads. Based on the historical knowledge, the presentation and discussion of the ethnic background, the geographic information and the economic profiles can be illustrated in a far more transparent light for readers who are new to the subject.

### **Chapter 2.2.1 History**

Turkey is a very multifaceted country of various different ethnic groups. Brought together under a strong Turkish identity, it is astonishing how many different traditions can be encountered when one travels the country as a tourist. The Yörük are an important part of this magnificent conglomerate of Turkish culture. In order to understand the cultural variety and furthermore the nomadic traditions among it, a small journey through Turkey's history is helpful.

The history of Turkey can be started by two different aspects: By taking a fixed and enclosed look at the geographical location which is mainly Anatolia or by tracing the past of the Turkic peoples who, to date, represent a main cultural influence on Anatolia.

The first aspect lets us look at various past populations in Anatolia like the Hattian (2500 – 2000 BCE<sup>42</sup>), Akkadian (2400 – 2150 BCE), Assyrian (1950 – 1750 BCE), Hittite (1680 – 1220 BCE), as well as the Greek (traced back until 3000 BCE), the Persian (559 – 331 BCE) and later on the Roman (509 BCE – 330 CE<sup>43</sup>). The prosperously developing Byzantine empire (starting 330 CE) established its centre of power in Constantinople, lasting for about 700 years in the region of Anatolia until it was first invaded by Turkic people, the Oghuz Turks, forming the Rum-Selcuq Empire in 1097 CE.

Traces of pre-Turkic mountain settlement in south-eastern Anatolia can be found, as documented by cuneiform inscriptions on bricks of the Sumerian and Akkadian period. Further, excavated inscriptions dating back to appr. 1800 BCE inform about nomads travelling between the Taurus mountains and the Mari-Kingdom (northern Mesopotamia).<sup>44</sup> Furthermore, the earliest traces of stock breeding lead back to neolithic times (7<sup>th</sup> millennium BCE) with regard to the taming of goats, sheep and cattle in the region of Palaestina, northern Mesopotamia, southern Anatolia and southern Iran.<sup>45</sup> In particular, the origin of sheep domestication may be narrowed down to south-east Turkey as already mentioned in the previous chapter.

Considered from the other aspect of history tracing, it is necessary to take a closer look at the origin of the Turkic people who had invaded Anatolia after 1067 CE.

Their tribal roots are associated with the Turkic or Turk peoples who lived in the steppes of Central Asia (Turkestan) and in the Altai, the highlands at the borders of modern Kazakhstan, Russia, Mongolia and China. First references mentioning the Turk peoples can be found in Chinese records in the 2<sup>nd</sup> or 3<sup>rd</sup> century CE. They were a conglomerate of nomadic tribes, partly organized as confederacies, associated with

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42 BCE: before common era; is traditionally identified with “Before Christ” (abbreviated BC); wishing to be neutral to Non-Christian readers, I chose the abbreviation BCE.

43 CE: common era; is traditionally identified with “Anno Domini” (abbreviated AD); wishing to be neutral to Non-Christian readers, I chose the abbreviation CE.

44 Kunze 1994, p.67-68, quotation of the relevant passage: *Von sumerischen und akkadischen Keilschriftziegeln des 3. vorchristlichen Jahrtausends stammen die ältesten schriftlichen Aufzeichnungen über südostanatolische Bergvölker. Detaillierte Texte über verschiedene Nomadengruppen fanden sich bei Ausgrabungen des ca. 1800 v. Chr. angelegten Archivs von Mari im heutigen Zentralirak. Die vom Mari-Reich teils unterworfenen, teils mit ihm verbündeten Nomadenstämme wanderten jeden Sommer zu den im Taurus-Gebirge gelegenen Weiden, wie dies noch heute kurdische Gruppen tun.*

45 Kunze 1994, p.46, quotation of the relevant passage: *Die Zähmung von Wildziegen, -schafen und -rindern in der Jungsteinzeit (Neolithikum) war die Voraussetzung für das Entstehen des Nomadismus- Sie erfolgte erstmals im 7. Jahrtausend v. Chr. Im Gebiet des ‚Fruchtbaren Halbmondes‘ (Palästina, Nordmesopotamien, Südanatolien, Südiran) und geschah fast zeitgleich mit dem Anbau vom Wildgetreide.*

settled populations, as for instance the settlements in oasis.<sup>46</sup>

At the beginning of the common era, some Turk tribes immigrated to the Iranian region. Their new settlement was a significant peak of a slow westward movement. In the **10<sup>th</sup> century CE**, the conversion of Turk peoples in Central Asia to Islam started and a Turk-Islamic empire rose in the region of today's Afghanistan and Eastern Iran. As well, in the Arabian region, Turk mercenaries gained power after the downfall of the caliph and installed their own districts of power. Between 800 and 1000 CE, the composition of the population in Eastern Anatolia and today's Syria had changed significantly.

In about 1000 CE, the Seljuqian forces expanded their empire from Lake Aral to the Indian Punjab and in the West from Mesopotamia to Syria.

After the victory at Manzikert over Constantinople, they finally invaded Asia Minor. Konya became the new centre of the Rum-Seljuqian empire in the year 1097 CE.

The nomadic lifestyles of the Turk tribes in the Asiatic steppes and Eastern Europe show fundamental similarities in spite of different tradition and culture. As a significant part of them had invaded Anatolia, it is interesting to find these fundamental similarities in Anatolian nomadism exist until today. For instance, winter seasons can be best endured by the use of camels, horses, sheep and goats. These animals are able to find their fodder even beneath snow cover and especially the fat-tailed sheep (türk.: karaman koyunu) which can easily adapt to meagre pastures within extreme climate zones. Even today, this breed can be found in Eastern and Middle Anatolia. Additionally, the Turk tribes bred hybrids of dromedaries and camels which could endure the Anatolian climate. Lack of water, snow storms, ice and pestilence were common threats that could decimate stock quickly. These common ascendancies supported the fusion of different ethnic groups.<sup>47</sup>

In the year 1243, the luck of the Turkic conquerors changed as, after a series of attacks from Central Asia, the invasion of the Mongol had set an end to the Seljuq reign. At the **end of the 13<sup>th</sup> century**, groups of Oghuz Turks and other Turk groups, managed to gain independence from the Mongol oppression and became a new leading force in Anatolia. Their leader Osman I appointed himself Sultan of the new empire. This was the beginning of the successful Ottoman empire, a „realm“ that had lasted for many centuries from the Middle Ages until the First World War.<sup>48</sup>

46 Kreiser / Neumann 2009, p.19-20

Moser / Weithmann 2008, p.62

47 Kreiser / Neumann 2009, p.30-31

48 see as well: Moser / Weithmann 2008, p.63

Even in Ottoman times, the invasion of Anatolia by various ethnic groups, in particular Oguz tribes and other Turkic tribes, did not cease. It is assumed, that many of these Turk tribes practised agropastoralism as semi-nomadic groups.<sup>49</sup>

*The superimposition of the long-distance migrations onto these local movements created a highly fluid social environment throughout the territory, especially in Anatolia, where it became difficult to distinguish between the arriving, staying and departing tribes between the eleventh and fourteenth centuries.*<sup>50</sup>

In the **14<sup>th</sup> century** the Ottoman empire expanded further into Asia Minor and in the Balkan area thanks to local nomadic tribes which played a significant role within the military organisation. Without threatening peasant economy, the Ottoman government could activate large numbers of troops just by relying on mobile groups. The local tribes' military force, especially of Yörük and Turkmen tribes, were an integral part of warfare strategy. Many Yörük communities were registered as military units (ocak), and, with regard for their military commitment, special rights were granted to them.<sup>51</sup>

First setbacks to the Ottoman expansion happened at the beginning of the 15<sup>th</sup> century. After a series of internal fights, the installation of the new Janissary corps lead the empire back to its former glorious expansion and to further territorial victories, but the dawn of the new corps initiated the advent of nomadic tribes playing a key role within the military organisation.

In the **middle of the 15<sup>th</sup> century**, Constantinople was conquered and re-established as capital under the new name of Istanbul. At the same time, Sultan Mehmed I gained caliph status and was designated religious leader of all Muslims.

By the **end of the 15<sup>th</sup> century**, a change in the importance of nomadic groups within the Ottoman empire becomes perceptible. Previously, nomads were appreciated as skilled raiders among the military forces of the Ottoman empire. Indeed, the success of Turk expansion lay within the nomadic lifestyle. But, as the Ottoman empire had gained significant size which demands a different kind of structure and organisation, the once befriended nomadic tribes turned out to be a possible threat for the installed authority.<sup>52</sup>

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49 Kreiser / Neumann 2009, p.51-53

50 Kasaba 2009, p.15

51 Kasaba 2009, p.33; Beck 1994, p.113; Bates 1983, p.17

52 Kreiser / Neumann 2009, p.140

The new structures within the empire pushed the nomadic tribes into a lower status, accompanied with new burdens, as for instance heavy compulsory services or orders of sedentarization.<sup>53</sup> Not all nomadic tribes accepted that so easily. At the same time, a political and religious shift among groups of Turkmen semi-nomads took place. The “kızılbaş”<sup>54</sup>, followers of İsmail<sup>55</sup> formed a rebellion against the Sunnite Ottoman state as a response to the occurring changes. These groups emerged mainly from semi-nomadic tribes located in Anatolia and Persia.<sup>56</sup> They tried to oppose the structural reforms of the state which have lowered their status from military elite to the fringes of society.

About 40.000 kızılbaş lost their lives during violent confrontation with the Ottoman state. The surviving members fled into the rural areas of Anatolia where they developed the Anatolian Alevism in secret throughout the centuries that came.<sup>57</sup>

Regarding this era, historical documents already help outlining a more detailed image of the nomadic lifestyle in Anatolia. Yaylag pastoralism was very common there, being characterized with winter and summer pastures that could be distant to each other by some several hundred kilometres. In most cases, the winter pastures were found in the lower settlement near the home villages while summer pastures were located in higher altitude. During times of riots and crop failure this process could also be reversed.<sup>58</sup>

The Ottoman empire expanded further over the area of Serbia, Bosnia, Albania, the southern coast at the Black Sea and stood its grounds against Venice and Persia. At the **beginning of the 16<sup>th</sup> century**, Egypt, Syria and Palestine became Ottoman. Moreover, Tunis, Algeria and Tripoli acknowledge the sovereignty of the Sultan and thus get included into the empire. In Europe, the conquests of Hungary, Transylvania, Moldova, the Crimea and parts of the Ukraine mark the empire’s peak of expansion.<sup>59</sup> At the end of the 16<sup>th</sup> century, fortune changed and first defeats were suffered against the Venetians and the Spanish. Additionally, the Ottoman state had to fight inner troubles like questions of succession, structural problems within the feudal diversity and the different interests between religion and political expansion. The Sultan lost his powers

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53 Gibb 1982, p.557

54 Kızılbaş means “red head”; referring to the red headgear worn by the partisans.

55 İsmail: a Shiit leader of the brotherhood of Safavids who had managed to become Schah in Tabris.

56 Mélikoff 1998, p.6

57 Kreiser / Neumann 2009, p.109

58 Kreiser / Neumann 2009, p.139-140

59 Ágoston / Masters 2009, p.17

to the administrating Eunuch and the bureaucratic establishment. At the same time, the **end of the 16<sup>th</sup> century** marked the end of the process of replacing the nomadic raiders with the established Janissary corps.<sup>60</sup>

At the **beginning of the 17<sup>th</sup> century**, a lot of farmers had to give up home and land due to increasing tolls or political riots that roamed the country. There, nomads experienced an expanding possibility of using these lost grounds for grazing. In that way, they were partly able to benefit from the situation until the 19<sup>th</sup> century.<sup>61</sup>

Then, by the **end of the 17<sup>th</sup> century**, the Habsburg empire managed to defend Vienna successfully and took the territory between Austria and Belgrade back. Furthermore, in rivalry against Russia, the Ottoman empire faced its loss of international power. Between 1821-1830 Turks were driven out from Greece which gained national independence with the support of England, Italy and France.

The **19<sup>th</sup> century** marked the downfall of the Ottoman empire. Sustainable reforms and reduction of corruption were not able to halt the deterioration process. At the end of the century, the Sultan acknowledged the installation of a parliament. The Balkan countries succeeded in their efforts for independence from, or annexation by, the Austrian monarchy. Muslims were expelled from the Balkan and moved to the remaining Ottoman empire, huge numbers of immigrants settled in today's Turkey, especially after 1876.<sup>62</sup>

Cyprus and Egypt fell under English sovereignty. Tunisia was put under French authority, Tripoli (Libya) became Italian and Albania gained its independence. While industrial revolution pushed Europe forward, the Ottoman empire has to struggle with its inner feudal structure and remained undeveloped in comparison to the European countries. In addition, the ideological idea of a multicultural flexible state vanished giving way to nationalist movements which eroded the difference between minority groups and "original" Turks.

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60 Kreiser / Neumann 2009, p.160

61 Nicolle 1983, p.11  
Kreiser / Neumann 2009, p.192

62 Kreiser / Neumann 2009, p.315

In this epoch, significant demographic changes occurred in the Anatolian plateau. Expelled Muslims from Russia immigrated to Anatolia: The Lasepe, Abkhazian, Nogai, Circassian and other Caucasian minorities, as well as Ottoman and Tartar. Rivalry with the indigenously settled population and the nomadic groups was an inevitable dilemma. Furthermore, this radical shift of population explains the particular diversity of cultures which exist in Anatolia until today.

While ethnic variety contributes to the dynamics of the regional system of land use, the distribution of ethnic groups does not correlate with any set of strictly environmental features. More directly it reflects past politics and, in particular, the differing ways in which ethnically defined populations articulated with the former Ottoman government of Turkey and its Republican successors. For example, the Circassian (Çerkes) immigrants to Anatolia were granted right of settlement and land in the middle and late nineteenth century. Türkmen and nomadic Kurdish tribes were settled by force in **1865**.

During the First World War, the Armenian minorities were driven out of the country. About two million Armenians were killed due to persecution. This horrible program or genocide is still a subject of today's politics. Indeed, during the development of this thesis, hot-tempered debates about denial and recognition of the massacres against Armenians were filling the newspapers.<sup>63</sup>

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63 see as well:

“Fransa’ya Ermenistan’ dan teşekkür, Türkiye’ den protesto” BBC Türkçe, 22<sup>nd</sup> Dec 2011 [http://www.bbc.co.uk/turkce/haberler/2011/12/111222\\_turkey\\_france\\_envoy\\_withdraw.shtml](http://www.bbc.co.uk/turkce/haberler/2011/12/111222_turkey_france_envoy_withdraw.shtml)

“Sarkozy should leave the Armenian genocide to the historians”, the guardian, 23<sup>rd</sup> Dec 2011 <http://www.guardian.co.uk/commentisfree/2011/dec/23/nicolas-sarkozy-armenian-genocide>

“Streit um Gesetz: Türkei wirft Frankreich Völkermord vor”, Zeit Online, 23<sup>rd</sup> Dec 2011, <http://www.zeit.de/politik/ausland/2011-12/frankreich-tuerkei-armenien>

“Armenian genocide: How will Armenian genocide bill affect France-Turkey relations?”, CNN World. 23<sup>rd</sup> Jan. 2012, [http://articles.cnn.com/2012-01-23/world/world\\_europe\\_turkey-france-genocide-bill-q-and-a\\_1\\_armenian-genocide-genocide-bill-ottoman-turkey?\\_s=PM:EUROPE](http://articles.cnn.com/2012-01-23/world/world_europe_turkey-france-genocide-bill-q-and-a_1_armenian-genocide-genocide-bill-ottoman-turkey?_s=PM:EUROPE)

“Armeniern: Türkei droht Frankreich wegen Völkermord-Gesetz”, Welt Online, 29<sup>th</sup> April 2012, <http://www.welt.de/politik/ausland/article13829270/Tuerkei-droht-Frankreich-wegen-Voelkermord-Gesetz.html>

“Fransa’ya Ermeni Kilisesi cevabi”, Belgesel Yayıncılık, 30<sup>th</sup> March 2012, <http://www.belgeselyayincilik.com/ismail-kahraman/makaleler/fransaya-ermeni-kilisesi-cevabi>

Other Christian minorities needed to leave the Anatolian plateau<sup>64</sup>. In the act of war, the Ottoman empire took sides with Germany and Austria, thus belonging to the losing side. The national debt kept increasing, various recapitalizing programs were attempted without success. In the year 1918, the Ottoman empire had reached its lowest ebb. The Sultan had lost power and neither by military nor by political means the old structure could have been upheld. Finally, during peace negotiations in Sèvres (France), the empire was divided up by the winning parties.

In the year **1922**, Kemal Mustafa took over the command in the remaining Ottoman state “Turkey”. This marked the beginning of the Kemalistic revolution that had formed a new nationalist definition of the Turk identity within the country. The nationalist movement unleashed a profound change of population. Greek minorities were driven out of the country while Turk groups were called to Turkey from the Greek peninsula. This tremendous endeavour did not occur without force and despair. Families were torn apart and expelled from their social roots.

At the same time, attempts at redefining minorities provided diverse ways of oppression by the new Turkish authority, as for instance defining the Kurd people to be “mountain nomads”. After expulsion of the “foreign” minorities, the state faced inner reforms that provided the first stepping stones of a modern Turkey: The division of religion and politics, the introduction of a compulsory school system, the change from the Arabian alphabet to the Latin system, modernisation of the state administration, adaption of the legislation system according to European standards, economical direction towards Europe and installation of parliamentary authority. Mustafa Kemal remained head of state until his death. Until today, he is assigned to be the father of modern Turkey, referred to as “Atatürk”. In the year **1923**, the Republic of Turkey was proclaimed as an independent state.

As the modern republic evolved, changes did not come easily to the Yörük nomads. Though the new nationalism recognized the Yörük as representing original Turkish culture, new laws were not conducive to their mobile lifestyle. In **1935**, a law was introduced allowing villagers to lease sites near the village to nomadic groups. The payment of lease was a severe financial burden for the Yörük families which forced them to

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64 Kreiser / Neumann 2009, p.315

add to their income with agriculture or various job opportunities.<sup>65</sup> Furthermore, in the year **1961**, the introduction of compulsory education<sup>66</sup> constrained the families to relocate their travelling routes closer to larger settlements and thus, they lost established options of grazing. In addition, the newly introduced compulsory military service for young men detracted manpower from the families.<sup>67</sup>

During the Second World War, the state managed to remain neutral but finally took sides with the allies shortly before the war ends. In the middle of the 20<sup>th</sup> century, Turkey was included in the rivalry against communism based on the Truman-Doctrine and gained increased support from the U.S.A..

Due to a population explosion after the Second World War, expansion of farmland became essential. As a result of the financial support given by the Marshall Plan, a modernisation of the Turkish agriculture took place, helping to expand the regional possibilities of farming. That again, reduced potential areas of grazing for nomadic groups<sup>68</sup>

The young state Turkey became member of the Council of Europe and the NATO. After withdrawal of the British from Cyprus, Turkey would be in guarantor power of half of the island with Greece. Inner political problems led to military coups in 1960, 1971 and 1980 and then again to the democratic system. Turkey tried to become member of the EEC up to 1989. In 1984, the first terrorist attacks of the PKK in south-eastern Turkey happened as the Kurdish minority attempted to fight for sovereignty and autonomy. During the first gulf war, Turkey supported the USA by providing airfields. The secular ideology of Atatürk was still the leading tendency in the political landscape, though a change to the Islamic approach occurred slowly with occasional setbacks. Nonetheless, Turkey kept trying to join the European Union and adapted its constitution by e.g. abolishing the death penalty and emphasizing the equality of men and women.

In **2007**, the moderate Islamic party AKP became the leading authority within the country. Secular parties feared the break down of Atatürk's heritage. Though, the fears

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65 Beck 1994, p.115

66 Stern 2010, p.47

67 Beck 1994, p.115

68 Mayer 1994, p.64

are unmet until today.<sup>69</sup>

Although recognized as part of original Turkish history, nomads were still regarded to be uncivilised during the 1970's due to their economic lifestyle. This stigma changed into a positive aspect during the 1980's. Politicians started to demonstrate alignment to the nomadic tradition during campaigns by taking seats in nomadic tents. By returning to a folklore that remembers the heritage of the many Turk tribes that invaded Anatolia in the 11<sup>th</sup> century, the Yörük became the embodiment of noble Turkish tradition. They were identified as "öz Türkler" (real Turks) and their language was presumed to be "kaba" (ethnic).<sup>70</sup>

## Chapter 2.2.2 Ethnic Background

Historians agree that the Yörük descend from the many Turkic tribes that have invaded Anatolia since the 11<sup>th</sup> century. Bates explains that many of the Yörük tribal names were found in documents describing various "*Türkmen groupings*". He mentions that the Yörük themselves lay stress on their common origins with the Türkmén in Khorisan.<sup>71</sup>

Taking a look at the eventful history of Turkey which contains constant migrations and population changes, it can be assumed that they intermarried with indigenous or arriving populations in the face of lineage customs.<sup>72</sup>

At the dawn of the Republic of Turkey, various papers about the history of Turkish nomadism imply that no ethnic delineation between Oghuz, Turk, Türkmén and Yörük can be accepted.<sup>73</sup>

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69 *Atatürks islamische Erben*, Daniela Kallinich, an interview with Benjamin Wochnik, 6<sup>th</sup> Aug 2010, <http://www.demokratie-goettingen.de/blog/ataturks-islamische-erben>

70 Borchhardt 1998, p.12, p.171-172

71 Bates 1983, p.17

72 Kunze 1994, p.81

73 Borchhardt 1998, p.1, quotation of the relevant passage: *Mit der Gründung der Türkischen Republik entstanden zahlreiche Arbeiten, die sich mit der Herkunft der Türken auseinandersetzen und damit auch mit der geschichte des türkischen Nomadentums, so u.a. Sümer in seinem Standardwerk von 9167, Orhonlu (1963), Eröz (1991[1965], Inalcik (1993[1986])). Ihre Arbeiten verdeutlichen, daß die historische Quellenlage keine ethnische Unterscheidung von Oghusen, Türken, Türkménen und Yörük erlaubt. [...]*

The denotation „Yörük“ can first be found in administration records from the 14<sup>th</sup> century when the Yörük were registered for military services. In those days, the Ottoman conquests in the Balcan area were mainly accomplished by nomadic groups. In the course of history, Yörük families advanced into southeastern Europe, as far as the region of today's Makedonia, where some remained. Most of their descendants returned to the Anatolian plateau after the downfall of the Ottoman empire.<sup>74</sup>

Concerning these events, I had interesting conversations with members of the 4 Yörük families who had helped me accomplishing the field research. I asked them about their origins and was confronted with contradictory replies. In the year 2005, one of the women of the Durabay family told me that they originally came from Romania. Two years later, I posed the same question to one of the men of the Şimşek family. He answered me that they have always been here, at the Aegean Sea in western Turkey. I mentioned to him the previous answer I was given to from the Durabay family and he explained to me: “Yes, that may be. Some of us have been in Romania for a while and returned later again. But actually we have always been here.” I interpret this information as a hint that part of the tribe may have moved to southeastern Europe in the course of Ottoman expansion and returned generations later to the home region in Turkey.

Whereas the origins of the Yörük can be answered quite satisfactory, it is not the same with the denotation „Yörük“. What does it mean? Where has it come from? Does it define an ethnic group or just a certain way of life? While only few scholars claim that the expression „Yörük“ can be applied to all nomads sharing historical roots with the early Oghuz and Turkic tribe's invasion between the Taurus mountains and the Hindu Kush<sup>75</sup>, most scholars agree that „Yörük“ is a denomination used by or applied to a certain cultural group mainly located in Anatolia. The main dissonance in regard to scientific opinion starts with the question of whether the Yörük are an ethnic group or a certain cultural group of mixed ethnicity that was labelled under the term „Yörük“. Borchhardt mentions two papers proposing that „Yörük“ derived from old tribal names of the Oghuz.<sup>76</sup> In that case, the chances are high that it is possible to define the Yörük

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74 Kunze 1994, p.82

75 Landreau 1978, p.11

76 Borchhardt 1998, p.7, quotation of the relevant passage: *Güngör (1941:38) führt den Namen auf einen der Oghusenstämme, die Yüreğir, zurück. Werner (1966:472) deutet ihn ebenfalls als eine ethnische Bezeichnung und vermutet, sich hierbei auf Eremeev beziehend, in den Yörük einen Unterstamm des oghusisch-türkmenischen Kavi-Stammes. [...]*

as an ethnic group.

On the other hand, Kasaba suggests that the denotation was applied to certain nomadic groups in the course of registration proceedings by the military services starting in the 14<sup>th</sup> century.

*In addition to tribal confederacies and their leaders, with whom the Ottomans dealt regularly, there were also single tribes and unattached individuals, all of whom provided the government with additional avenues for influencing local relations. Individual Muslim tribes were described in court records and government documents by reference to their skills, crafts, or occupations. Some examples are the Keçili (with goat), Koyuncu (sheep seller), Saraç (tanner), Kaşıkçı (spoon maker), Yarı-Çoban (half-shepherd), Kürkçü (fur maker), Yağcı (oil maker), Yayıcı (bow maker), Çeng (musician), Atçeken (horse puller), and Koyuneri (sheep master) tribes. [...]*

*Tribal members could be summoned for government service or sued as individuals. In such orders the names of the persons would be qualified with reference to the larger grouping, such as Yörük, Türkmen, Kıpti, Çingene, and Kürd. This has led to confusion among later researchers who assumed that Yörük referred not just to an administrative status but also to ethnic identity.<sup>77</sup>*

Bates proposes that the term „Yörük“ is definitely one of ethnic identity today, but quite likely, it has not been that case in earlier times. He mentions that some historians thought that the origin of the term may lie in pre-Turkish Greek antiquity<sup>78</sup>, but the majority rather associates it with the Turkish verb „to walk“ (yürümek) which might have originated as a generic term for nomads who moved on foot<sup>79</sup>. Furthermore, he as well describes how the expression „Yörük“ may have derived from the formation of militia or regimental groups and evolved into an ethnic meaning in the centuries that came.<sup>80</sup>

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77 Kasaba 2009, p.26-27

78 Comment by the author: This position clearly opposes the other supposition stating that the term derived from Oghuz tribes.

79 see as well: Kunze 1994, p.82

80 Bates 1983, p.17

However, most scholars agree that the term „Yörük“ supports an ethnic identity today. It denotes „membership by virtue of patrilineal descent in one of a number of tribes“.<sup>81</sup> Indeed, taking a closer look at the social customs, especially customs of marriage, it is quite impossible to deny the strong ethnic conscience that lies within the cultural group<sup>82</sup>. Furthermore, the term “Yörük“ has evolved into an identity characteristics that goes beyond a mere ethnic definition.

*In the area studied the appellation has also acquired certain ethnic and occupational connotations, and is occasionally used as verbal noun yörükçülük, or “the Yörük way,” implying pastoral nomadism. The fact of tribal or Yörük identity has nothing to do with whether members live in a village or migrate as sheep herders. As noted previously, the Yörük of south-western and south-eastern Turkey are distributed through towns and villages, as well as nomadic encampments. Tribal and lineage identities are usually maintained and continue to carry important social burdens in the daily ordering of the activities of these people.<sup>83</sup>*

Bates’ observation about the equal denomination of ethnic members regardless of settled or mobile lifestyle is shared by all researches that encountered the Yörük people during their field research<sup>84</sup>. As well, in the area around Selçuk, certain villages are described as „Yörük“ settlements of old age. These settlements have strong connections to Yörük families that still live a mobile life in the surrounding mountains. According to my observations the inhabitants of these villages are themselves defined as „Yörük“ by lineage and there are arguments between mobile und settled Yörük about who is to be an original „Yörük“ in a sense of lifestyle.

Although the Yörük uphold a clear tribal identity, the national Turkish identity is equally important to them, sharing common ancestry with all Turks that recall their

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81 Bates 1973, p.35

82 see as well: Bates 1983, p.18-19

83 Bates 1973, p.35

84 A slight exception to the rule is presented by Borchhardt who as well observed a strong common identity regardless to settled or mobile lifestyle. But in her case, the members of the cultural group defined themselves to be Aydınlı who originated from nomadic groups that had lived in the region of Aydın, and not to be Yörük in the first instance. And, the interviewed members denoted themselves to be *Saçıkaralı*. The results of Borchhardt’s research lead her to the conclusion, that the Yörük cannot be defined as „ethnic group“. See Borchhardt, p.173, quote: *So lassen meine Untersuchungsergebnisse bei den Saçıkaralı von Tatsüsu eine Definition der Yörük als ethnische Gruppe nicht zu.*

origins from the invading Turkic tribes in the 11<sup>th</sup> century.<sup>85</sup>

The Yörük are divided into several lineage tribes (turkish: aşiret<sup>86</sup>) which again are subdivided into several household groups (turkish: oba<sup>87</sup>). With regard to marriage customs, candidates of the same aşiret are preferred though exceptions occur occasionally.

Kunze mentions that about 50 Yörük tribes were counted at the beginning of the 20<sup>th</sup> century<sup>88</sup> On the one hand, Bates presents the number of 88 tribal divisions being recorded in a 1868 survey carried out along the Aegean coast.<sup>89</sup> On the other hand, even today, it is difficult for any researcher to gather all tribal divisions without information gaps or mistakes, on the other hand, the number of tribal divisions may change throughout several generations.

Based on Eröz (abbr.: Er; source: Eröz 1991, pp. 45-49), Bates (abbr.: Ba; source: Bates 1973, p.40, 42), Kunze (abbr.: Ku; source: Kunze 1994, p.83), Striessnig (abbr.: Str; source: Striessnig 1991, pp.25-67), Böhmer (abbr.: Bö; source: Böhmer 2004, p.26, p.30, p. 108, p.120, p.122, p.128, p.266, p.267) and personal research (abbr.: Pf) I could gather 59 tribal names:

Akkoyunlu [Bö]

Aksiğırlı [Ku]

Ali Efendi [Ku]

Arabalılar [Ba]

Arıklı [Ba]

Bahşı(İzmirli) [Ku], [Bö]

Boynuinceli Aşireti (divided in 9 obalar) [Er]

Cücü / Sermaye [Ba]

Çakallar [Ku]

Çakmak [Ba]

Çavoçlu [Ba]

Çoşlu [Ku]

Dazkirli [Ba]

85 Based on the author's personal experience; see as well: Borchhardt, p.171, quote: *Die aufgesuchten und untersuchten Gruppen betonten alle, daß sie sich als Türken fühlen, wobei sie, neben den gemeinverbindenden Werten, die türkische Sprache, den Islam und einen gemeinsamen zentralasiatischen Ursprung nannten.*

86 "aşiret" means „tribe“, *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 7<sup>th</sup> March 2012

87 "oba" means "large nomad tent,nomad group, tent or nomad camping side", *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 5<sup>th</sup> March 2012

88 Kunze 1994, p.81

89 Bates 1983, p.17-18

Elekli [Ku]  
Erdemli [Er]  
Eskiyörük Aşireti (devided in 7 obalar) [Er], [Pf], [Str]  
Farsak Aşireti (devidied in 3 obalar) [Er]  
Gaçar [Ku]  
Güzelbeyli [Ku], [Pf]  
Gögebakanlar [Ba]  
Hacıçiller (İzmirli ) [Ba]  
Hacıkaracılı [Ba]  
Hayta Aşireti (devided in 12 obalar<sup>90</sup>) [Er], [Ba], [Str]  
Honamlı Aşireti (devided in 9 obalar) [Er], Honamlı [Ku], [Str], [Bö], [Pf]  
Horzum [Ku], Horzumlu [Ba]  
İzmirli [Ba]  
Kabaklar (İzmirli ) [Ba]  
Karaevli [Ku]  
Karahacılı Aşireti (devided in 7 obalar) [Er], Karahacılı [Ku], [Str], [Pf]  
Karakoyunlu Aşireti (devided in 7 obalar) [Pf], Karakoyunlu [Ku], [Str], [Bö], [Pf]  
Karakayalı [Ku]  
Karalar [Ku], [Bö]  
Karakeçili [Ku], [Pf]  
Karataş [Ba]  
Karatekeli Aşireti (devidied in 7 obalar) [Er], [Str], [Pf]  
Kelebekli [Ba]  
Kılaz [Bö]  
Koçbıyık [Ba]  
Korkuteli [Ku], [Pf]  
Kösereli Aşireti (devided in 3 obalar)[Er]  
Köleli [Ba]  
Kölemen [Ba]  
Manavlı [Ku]  
Melemenci [Ku], [Pf]  
Osmanlı [Ba]  
Ötkünlü [Str]  
Sadıkoğulları (Satılar) [Ba]  
Saçıkara [Ku], [Str], [Pf], Saçıkara [Ba], [Bö]

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90 Obalar: Plural noun of “oba” meaning “large nomad tent, nomad group, tent or nomad camping side”, *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 5<sup>th</sup> March 2012

Saraçlı Aşireti (devided in 9 obalar) [Er]  
Sarı Ağalı [Ku], [Str]  
SarıHacılı [Ku],  
Sarıkeçili Aşireti (devided in 4 obalar) [Er], Sarıkeçili [Ku], [Bö] [Pf], [Ba]  
Sarıtekeli [Ku]  
Sümenli [Ba]  
Tekeli [Ku], [Pf], [Ba]  
Tırtar Aşireti (devided in 3 obalar)[Er], Tırtar [Ba]  
Töngüslü [Str]  
Yeniosmanlı Aşireti (devided in 7 obalar) [Er], [Str], Yeni Osmanlı [Ku], [Pf]  
Yaycıbedir [Bö]

In that list, records of Eröz<sup>91</sup> show a slightly different character compared to western European authors. He combines the tribal connotations with the genitive of „aşiret“, and even lists the names of the obalar which may change easily in the course of household divisions. I value his approach to be the result of a culturally closer contact with fellow countrymen, as it is untangled from possible misunderstandings based on different language and nationality between researcher and researched group.

On the other hand, Borchhardt presents a slightly differently defined structure in the hierarchy of tribal associations. In the example of the Saçıkaraı, she explains, that this tribe was devided in 12 kabile<sup>92</sup> during the Ottoman era of military administrative recording in the 14<sup>th</sup> century. The kabile can be described to be a larger community of common interests or destiny that itself was again divided in several „sûlale“, „aile“<sup>93</sup> or residential units being „oba“. Marriages were preferably arranged within the kabile in order to strengthen bonds within the tribal division.<sup>94</sup> During the end of the 19<sup>th</sup> century, the importance of the kabile deteriorated and marriages increasingly bridged

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91 Prof. Dr. Mehmet Eröz has travelled Anatolia researching on Yörük culture. His book „Yörükler“ presents the results of the research in detail. See: Eröz 1991

92 “kabile“ means „family, clan“, *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 7<sup>th</sup> March 2012

93 “sûlale“ means „family line, lineage“, *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 7<sup>th</sup> March 2012

„aile“ means „family“, *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 7<sup>th</sup> March 2012

94 Borchhardt 1998, p.163

the various kabile within the aşiret.<sup>95</sup>

Bates lists 24 tribal names by the Yörük of Southeastern Turkey at the kabile level which ought to be a level lower than aşiret. I assume that these names are to be associated with his main research group, the Saçıklaralı. Though, again he lists names that are levelled to main „aşiret“s by other authors like „Tekeli“, „Tırtar“ and „Sarıkeçili“.

Therefore, a mixture of levels may be presented in the list of Bates and/or in the list in this thesis.

History records and present tribal organisation shows that there was never a central administration within the Yörük over the whole culturally defined group. Kunze mentions that certain „Yörük-Bey“s were denoted to represent cultural interests in big cities of the Ottoman empire as e.g. in Selanik, İzmir and İstanbul.<sup>96</sup> Similarly, Beck mentions that „ağa“<sup>97</sup>s represented and commanded several „ocaklar“<sup>98</sup> within the military hierarchy at the beginning of the 14<sup>th</sup> century.<sup>99</sup>

It is not only difficult to collect information about the number and names of existing tribes, but also, there are few sources for estimating the possible number of Yörük kinsmen and -women living in recent decades. Albert Kunze tried to outline possible population numbers based on a detailed research in literature. He estimates that in the year 1980, 10.000 Yörük lived a nomadic life while 1 Mio. were mainly sedentary. The number of nomadic Yörük at the first half of the 20<sup>th</sup> century may have been about 28.000, during the 19<sup>th</sup> century about 700.000 and before 1800 CE 270.000 in the Balkan area. Statistics for the sedentary Yörük population are totally missing there.<sup>100</sup> Apart from Kunze, I could not find a more recent population estimate singling out the Yörük minority.

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95 Borchhardt 1998, p.166

96 Kunze 1994, p.83

97 „ağa“ means „master“, *Tureng Çeviri* (Kadıköy, İstanbul), <http://tureng.com>, 7<sup>th</sup> March 2012

98 Comment by the author: ocaklar (deriving from the singular noun „ocak“) meant „military units“ or later „households“.

99 Beck 1994, p.113

100 Kunze 1994, p.77; Excerpt of table (Source: Kunze, Albert 1987 *Nomadentum in Anatolien. Lebensformen im Wandel der Geschichte*, Tübingen (unveröffentl. Magisterarbeit) )

Note: In addition to the table, Kunze explains how he established the estimates of numbers of Yörük living in Anatolia. The following citation excerpt provides a small impression about the estimating problem:

Taking a close look on the identity of Yörük people, it is nearly impossible not to mention an academic dispute about the nomadic groups that call themselves „Aydınlı“ and are regarded as - dependant on the scholar's position - Yörük nomads or as newly independent defined group of nomadic people. The early records of a very profound field research within this cultural group by Johansen describe quite clearly the issued case:

*At the highest level of identification, the nomads in the west wing of the Taurus Mountains, the Taurus proper, running along the Mediterranean Sea from the Gulf of Antalya to north of Adana, are called and call themselves Yörük or Yürük (=nomad). The nomads of the east wing, the Antitaurus, are also officially named Yörük but they call themselves "Aydınlı," or people from Aydın, a town near the Aegean Sea in South-west- Anatolia.* <sup>101</sup>

According to Johansen and Borchhardt, the Aydınlı moved from the province of Aydın into the eastern territories that were left vacant by Armenian groups<sup>102</sup> at the beginning of the 20<sup>th</sup> century.<sup>103</sup>

Borchhardt describes how kinsmen of the tribe Saçıklaralı did distinguish themselves clearly from other local Yörük during her field research before 1998 by embracing their own tribe within the Aydınlı but apart from the Yörük.<sup>104</sup> While Bates, researching in the same region before 1973, documents a different way of self-definition by the Aydınlı:

*Yörük in the area of this study, whether sedentary or nomadic and of all tribes and lineages, are called Aydınlı (from Aydın) or, collectively, the „Aydınlı Aşireti“. The Yörük regard this as a lakab or nickname, which if used by itself is a synonym for „Yörük.“* <sup>105</sup>

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*“Da zu dem Volk der Yörük kaum offizielle, statistische Angaben und nur einige regional bergenzte Forschungsarbeiten vorliegen, ist für einen aktuellen Schätzwert ein historischer Rückgriff notwendig. Wie Tabelle 1 zeigt, wurde noch nach Ende des 19. Jahrhunderts die Anzahl der Yörük in drei verschiedenen westanatolischen Regionen auf 700000 veranschlagt. Zuzüglich der aus dem Balkan zurückgekehrten und in weiteren, vor allem westanatolischen Provinzen lebenden Yörük und abzüglich derer, die ihre Yörük-Identität aufgegeben haben, ergibt sich für die Gegenwart eine Anzahl von ungefähr 1 Million Yörük in Anatolien.”* (see Kunze, p.80)

101 Douglas / Johansen 2005, p.100

102 see chapter 2.2.1: At the beginning of the 20<sup>th</sup> century, the Armenian minorities had to face persecution and violent assaults in Turkey. 2 million people were killed in this genocide.

103 Johansen 1994, p.34, see as well: Borchhardt 1998, p.10

104 Borchhardt 1998, p.169

105 Bates 1983, p.55

There, it can be clearly seen how different scholars retrieve different information during their field research in close contact with the researched group. It may as well show, how definitions and self-definitions regarding a cultural group may change with time, region or personal view of the interviewed person.

Today, in modern Turkey, the Yörük are regarded as a proud and traditionally rich ethnic group representing a folklore of mobile mountain pastoralism. Pastoral products from Yörük families are associated with high quality of natural resources from the mountains. Observing various Turkish advertisements, it is possible to state that in western Turkey, products from the „Yayla“ are subconsciously connected with the Yörük tradition. In common with Borchhardt, I must undoubtedly agree that today, the term “Yörük“ represents the historical tradition of the Turks as nomadic society who originated in Central Asia.<sup>106</sup>, and therefore, being of Yörük descent automatically implies being „Öztürk“ (original Turk). The association of Yörük and original Turkish ancestry is so prominent that even the Non-Yörük set emphasis on recalling some nomadic ancestors and being therefore an original Turk within Turkish society or even indicating that they might be partly Yörük.

For the western European researcher it is indeed difficult to detect if any given information about ancestry or tribal associations is understood in the right way. The frontiers between the definitions are softer than expected and, as well, according to Turkish tradition, the hosts or interviewed partners are eager to please their guests and try to avoid disappointing them. Therefore, answers may be adapted to the expectations of the interviewer.

*When Johansen asked at the beginning of her fieldwork what was the tribal name for members of the clan, they first told her that they (i.e., the clan as a whole) were emembers of the Honamlı, one of the well-known nomadic tribes. But soon she discovered that they spoke of others as „the Honamlı,“ not as „we“ or „our people.“ After she had lived with them for about two months and they were aware that she did not let government institutions know about their tricks but, on the contrary, served as a good witness in legal proceedings against sedentary people, they admitted that they had only recently become associated with a lineage of the Honamlı. This happened at the end of the 1920s and the beginning of the 1930s, when land in the former Armenian territories in the Antitaurus was given to those nomads who agreed to settle down in villages. In declaring their name as Honamlı in the govern-*

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106 Borchhardt 1998, p.171-172

*ment settlement, their official declaration was one of willingness as a group to become sedentary. [...] They soon confirmed this agreement with the Honamlı by marriage ties, [...]. [...] They told Johansen that, in fact, they had no traditional name but they were called „Karaevli“ (=people with black houses).<sup>107</sup>*

### Chapter 2.2.3 Geographic Information

The history of Turkey shows how abruptly families of various minorities had again and again to move, relocate their homes, interact with the new surroundings and find new ways of living. Today, the distribution of ethnic groups only shows a blurred correlation to environmental features. Moreover, it is a result of past politics, how ethnically defined populations responded to migration orders by political authorities or how the groups reacted to social and economic impacts. For example, only recently, as many Yörük minorities had already established traditional roots at the Western Toros<sup>108</sup> mountains, some of them migrated to the vacant plains at the Central Toros at the beginning of the 20<sup>th</sup> century, based on a governmental warrant.<sup>109</sup>

By trying to detect geographical distribution of a certain ethnically defined group, the research of major and minor migration shifts in history may provide essential information. Nonetheless, it can't show a complete picture of today's settlements. As well, based on the national goal to develop a common Turkish identity, the Turkish government avoids establishing a detailed cultural mapping. Therefore, some scholars made the effort to record their encounters with ethnic minorities in Turkey. In regard to the Yörük minority, I chose to combine the ethnographic map of Kunze<sup>110</sup> (developed before 1994) with the list of encounters by Eröz<sup>111</sup> (recorded before 1991) and illustrate the resulting information on a map setting emphasis on the main mountain ranges in Turkey.

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107 Johansen / White 2005, p.101

108 In this thesis, both expressions "Toros" and "Taurus" are used to name that particular mountain massif. "Taurus" derives from mainly German literature but is used in English papers as well. "Toros" is rather the English denomination.

109 Bates 1973, p.21, p.37; see as well: Johansen 1994, p.34; Borchhardt 1998, p.10

110 Kunze 1994, p.73

111 Eröz 1991, p. 45-49; excerpt and added explanations:

Hayta Aşireti → Anamas Dağlar, Isparta, Antalya, Karadeniz (Çepni) with ancient connections to Bulgaria

Honamlı Aşireti → Yunak (Konya), Kozan-Saimbeyli

Farsak Aşireti → Korkuteli (Yelten Köy), Farsak Yayla, Kozan, Saimbeyli, Kadırlı, Karacaoğlan

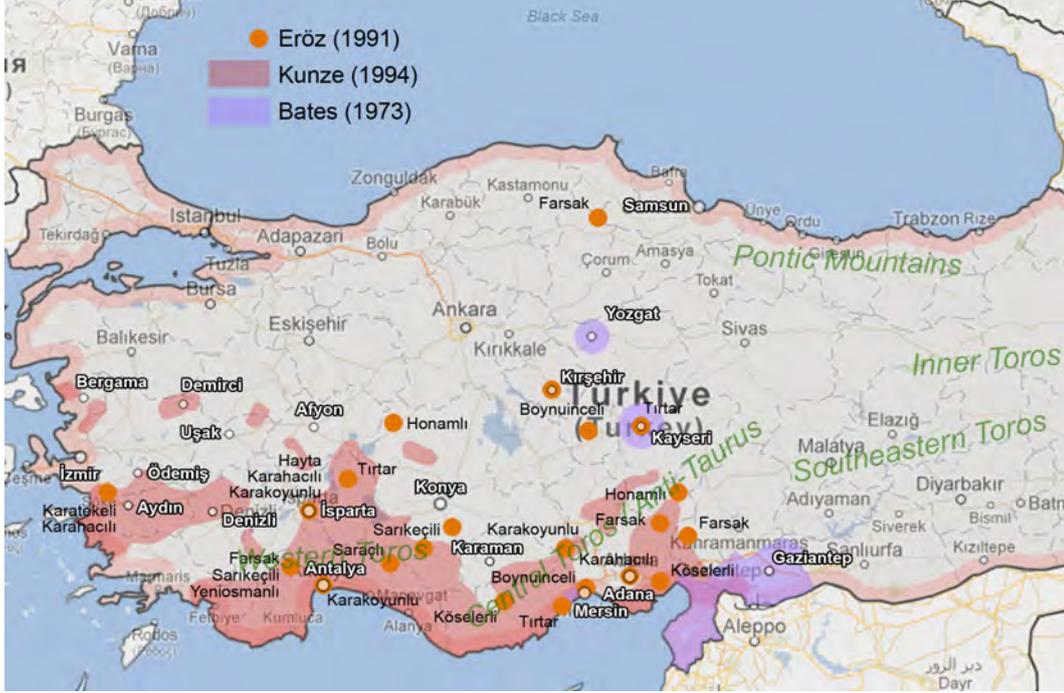


image 2.001: Distribution of Yörük tribes based on two sources

Apart from northwestern settlement spots around Bergama, Demirci, Uşak and Afyonkarahisar<sup>112</sup>, a high density of Yörük settlement and migration routes can be found at the Aegean coast, the foothills of the Western Toros mountains, spreading into the

Boynuinceli Aşireti → Erdemli (Mersin), historically mentioned in Nevşehir and obviously still present. As well in Kırşehir

Karatekeli Aşireti → At the end of Selatin köy (Ortaklar-Aydın); This lineage can be found in the Aegean region.

Karahacılı Aşireti → Anama dağlar, Aegean region and Adana

Karakoyunlu Aşireti → Anamas, Anamas dağlar (summer), Antalya (winter), Bulgar dağlar

Kösereli Aşireti → Yelibel (Ermenek), Mut

Eskiyörük Aşireti → no more information

Yeniosmanlı Aşireti → Korkuteli (Söbüce Yayla)

Saraçlı Aşireti → Akseki, Göktepe Yayla, Saraçlı Köy (Antalya)

Tırtar Aşireti → Erdemli, Kayseri, Gelendost

Sarıkeçili Aşireti → Karadin Köyü (Korkuteli), Çumra-Bozkır

112 Afyonkarahisar is labelled as “Afyon” on the map in order to support easier reading. Quite unusually, the map does not show any Yörük settlements near Afyonkarahisar. “Afyon” was once a major meeting point for trading Yörük families.

higher plateaus around Aydın and Denizli. This area is the main point of interest in this thesis. However, much better known are the Yörük territories in the Western Anatolian plateau with migration patterns moving from lowland plains from the coastal area to upward valleys into the inner highlands. Similarly, Yörük settlements and routes do exist in the Anti-Taurus or Central Toros as already mentioned in the previous chapters. The most eastern expansion of the area reaches İslahiye (between Osmaniye and Gaziantep)<sup>113</sup> near the Syrian border and may be expanded further to the east<sup>114</sup>.

Bates (before 1973) explains that the regions used by Yörük nomads roughly cut across four provinces of the Republic of Turkey: Hatay, Gaziantep, Mara<sup>115</sup>, and Kayseri.<sup>116</sup> Here, it is important to mention, that his field research was mainly focused on southeastern Turkey. Notwithstanding the rough nature of this description, I have added his information to the map. Further on, he mentions that a number of Yörük communities were established in central Anatolia, around Konya and in the Black Sea region.<sup>117</sup> Based on Eröz and Kunze, the map indeed shows single entries in these areas, as for example the Honamlı near Konya and the Farsark near Samsun.

Altogether, the map displays the differing results of the three researches, proving that the provided information can only be seen as blurred or incomplete data. Nonetheless, it offers a valuable overview of the Yörük territories and helps taking a closer look at the

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113 see as well: Bates 1973, p.37, quote: *Other families took their herds to the Black Sea coast to use pastures in the Pontic range, with some settling on land granted by government in Yozgat (Abdurrahman köy). This was an area that had not known Yörük tribes until then (see Planhol, 1965: passim). Their move in that direction was not successful, and those who settled as well as those who remained nomadic joined their kin who, in the meantime, had come to winter in the plains around İslahiye. Some went to İslahiye to settle, while others, formerly settled during the 20-year stay in Yozgat, again took up nomadic husbandry.*

114 see as well: Bates 1973, p.38, quote: *Military conscription is now, and has been for the last 15 years, an unavoidable fact of life for Yörük males upon reaching age 18. Young men of the present generation placidly accept, even anticipate, what their fathers energetically sought to avoid. The animal tax, collected in all party of the country under the successor governments of the Ottomans, was, in every practical sense, abolished in 1950. The Yörük are now in the enviable position of not paying any taxes but those imposed on finishing goods bought in the bazaars. However, the rising prices of pasture rights, quite pressure on nomadic families to move still farther east where land is available for grazing at less cost. As this involves establishing sites for winter and summer grazing alongsidé nomadic Kurdish tribes, and living in districts where there are no other Yörük, eastward movement remains slow. One family of the tribe has recently returned to İslahiye after being in Diyabakir province for several years; they cite conflict with the Kurds as a reason of their return. Another tent left for that area during the study period (leaving substantial debts behind). Settlement for most families is a more attractive alternative than abandoning a familiar environment.*

115 The province "Mara" is probably today's "Mersin"

116 Bates 1973, p.7

117 Bates 1983, p.20

climate zones and the terrain.

Southern Turkey can be regarded as huyetal region during the winter season. Two thirds of the annual precipitation occurs from November until February while the period between the middle of May and October is marked by aridness. The coastal region and the top highlands of the Toros differ about 3000 m in altitude. Inbetween, various levels of different landscapes can be found.<sup>118</sup> In the coastal lowlands, wintertime is characterised by mild temperatures between 16° and 23°C<sup>119</sup> while summer offers dry-hot weather of up to 45°C during the daytime. Occasionally, in winter, the temperature goes below 10°C. Snow or ice are a rare phenomenon, there. On the contrary, temperatures in the high Toros regions may go below -10°C, while the summer heat only reaches 30°C in average with cool nights around 15°C.<sup>120</sup> Distant from the hot coastal climate, the high inner Anatolian plateau features rough cold winters with short summer seasons.<sup>121</sup>

Starting from the Aegean coastline, the Western Toros offers a versatile structure of different fertile levels below 2500 m altitude. The crests along the southern shore may rise up to 3000 m, more to the east even up to 4000 m. The dry steppe of the inner Anatolian plateau rises from west to east from 800 m up to 1200 m. The eastern Anatolian highland even reaches about 2000 m altitude.<sup>122</sup>

Along the Toros, the Mediterranean Sea and the Aegean coast, the tradition of trans-humance can be traced back to the antique, making use of the vertically different climate zones. McNeill clearly explains how this appealing duality of weather arises which also holds risks:

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118 Mayer 1994, p.103

119 Mayer 1994, p.104

120 McNeill 1992, p.20

121 Neumann-Adrian / Neumann 1993, p.14

122 Kunze 1994, p.49

*Two belts of climate duel for sovereignty over the Taurus. It lies on the climatic frontier between a typically Mediterranean zone and one that is continental. This pattern makes for tremendous uncertainty in the weather, not so much day to day but year to year. The rainfall maximum comes in the winter, as is usual in the Mediterranean, but there is a second rainy season in May, associated with local thunderstorms caused by convection. The rains are heavy, favouring erosion, but the late spring rains make for more water in the springs and underground limestone passages in summer.*<sup>123</sup>

Until the end of the 19<sup>th</sup> century, it was difficult to establish permanent settlements in the coastal lowlands with their many swamps providing breeding ground for ague and malaria during the summer months.<sup>124</sup> Only the winter months allowed temporary settlement without risk of health, while it was wise to move into the inner higher plateau during the hot season. Transhumance showed itself to be the ideal economic form to combine effective farming with environmental influences.

#### Chapter 2.2.4 Economic Profiles

On the basis of Gökalp, Eröz introduces seven economical ways of retrieving aliments in rural areas:

- 1) herb and fruit gathering
- 2) hunting
- 3) fishing
- 4) mobile farming (transhumance)
- 5) sedentary (or lowland) farming
- 6) alpine farming
- 7) nomadism<sup>125</sup>

123 McNeill 1992, p.20

124 Mayer 1994, p.59

125 Eröz 1991, p.67: *İnsanlari İktisadi faaliyetlerine göre, yedi enmuzece ayirabile-ceğimizi Z. Gökalp, garpli bir àlime dayanarak kaydedyor:*

1- Ot ve meyva toplıyanlar,

2- Avcular,

3- Balıkçılar,

4- Göçebe çiftçiler,

5- Oturak çiftçiler,

6- Yüksek çiftçiler,

While nomadism is standing in the last position of the enumerative listing, this may as well support the overall impression that nomadism is the sum of the previous 6 principal points. And indeed, I wish to present it that way: Turkish nomads do as well take the opportunity of herb and fruit gathering, hunting, fishing, mobile farming, lowland and alpine farming in order to retrieve an optimum use of the environmental possibilities. Simply: it's taking what nature offers.

Traditional societies in rural areas often represent a very optimized profile of economic activities with the goal to achieve a maximum resource output based on minimum effort in accordance of the society's needs. Additionally, aspects of sustainability, environmental impacts and compatibility with other activities are needed to be considered. Based on that thought, it is interesting how Mayer explains that the alpine area of the Toros only offers two potential occupations due to the rough terrain, the short fertile seasons and the lack of water: forestry and transhumance.<sup>126</sup>

As economic system, transhumance offers high flexibility of adaptation in reaction to natural, economic and cultural changes in the environment.<sup>127</sup> The basis of the transhumance of the Yörük are the flocks of sheep or goats. Sanyo and Schütze state that sheep became more and more popular as a response to market changes, while goats are rather known to be the original animal for production of the Yörük.<sup>128</sup> Of both species, milk, meat and hair are fundamental resources that are either used for self-consumption or for further sale. Based on the field research and literature I could gather the following trading products that are produced by nomadic Yörük breeding sheep or goats:

Goats	Sheep
<b>Field Research 2007:</b> products sale (listed according to importance):	
milk	milk
cheese	meat
meat	hair (raw wool)
hair	

*7- Kendi sürülerile beraber dolaşan, göçebe sürü sahipleri.*

Eröz refers to: Z.Gökalp, *Türk Medeniyeti Tarihi*, 1926 p.13-14.

126 Mayer 1994, p.111

127 Sanyo / Schütze 1994, p.91

128 Sanyo / Schütze 1994, p.91

<u>self-consumption (listed according to importance):</u>	
cheese	meat
milk	(cheese)
meat	(milk)
<b>Literature information:</b>	
<u>products sale:</u>	
milk	cheese
cheese	yogurt
meat	butter
goat's hair velum (carpets, weaves, bags, belts, etc...)	hair (raw wool)
yarn, dyed yarn	meat
hair	milk sheep's hair velum (clothes, weaves, bags,...)
<u>self-consumption:</u>	
cheese	cheese
milk	yoghurt
meat	butter
hair → yarn (strings, ropes,..), dyed yarn, goat's hair velum (carpets, bags, belts, etc...)	meat
	wool → sheep's hair velum (clothes, weaves, bags,...)
	milk

Source "literature information": Sanyo / Schütze 1994, p.91; Douglas / Johansen 2005, p.102;

The table shows how the Karatekeli families of the field research in 2007 provide a less varied array of products compared to literature information which offers records of earlier times. Due to industrialisation and globalisation the families decided to invest less time in product processing but more in emphasising quantitative sale of basic nutrition like meat or milk. Though the weekly bazaars offer various sale opportunities to the families, this facility gets rarely used in that way. During the field research I noticed that the women buy prefabricated scarves or other woven fabrics in order to decorate them with delicate bobbin laces. Then, they resell them to acquaintances or use them as presents on suitable occasions. Occasionally, they as well produce clothes based on

knotting or knitting techniques.

On the contrary, documentations of various tribes in the Toros mountains show how extensive cloths and carpets were produced by the women on the traditional vertical loom inside or in front of the tent for personal use or market sales.

The tribes in the Toros mountains exchanged dairy and handicraft goods with merchants who visited them on the Yaylas in summer. As well, contracts with dairy farms were established. Most important were the bazaar markets along their migration routes where they exchanged their goods in order to retrieve important provisions like noodles, rice, potatoes and sugar and, as well, clothes and household aids which they could not manufacture themselves.<sup>129</sup>

Meat was often sold shortly before Islamic festivals at the bazaars when the lambs or fawns had grown and become strong after the summer season. Today, some Yörük negotiate their transaction via mobile phone in order to sell whole flocks via the ports of export in south-eastern Turkey which are then further transported into the Arab countries. Regarding self-consumption, a family normally needs only up to a dozen animals from their own flocks within one year.<sup>130</sup> Based on their diet which mainly contains vegetables, cereals and dairy products, little meat is needed with consumption restricted to special occasions. Additionally, poultry may add to the meat consumption.

Similarly, the main sale of sheep and goats happens shortly before Islamic festivals for the Karatekeli nomads in the field research of 2007. As they pursue a settled lifestyle, a selling routine between the local merchants and the family became established which was built on negotiations in the nearby villages, not rarely in the “çayhane”, the local tea-houses. The consumption of meat by the family is relatively low and appears to be at the same level as reported in the literature records of the tribes in the Toros mountains.

As mentioned at the beginning of the chapter, a slight change from goat breeding to sheep breeding could be noticed among the Yörük nomads. This change happened in response to environmental changes and might be well understood after examining the economical and biological differences between goats and sheep.

Goats, the traditional livestock of the Yörük nomads, are a species that are well adapted to the broken grazing and rough terrain of the Toros region.<sup>131</sup> Goats are generally less

129 Sanyo / Schütze 1994, p.91

130 Mayer 1994, p.109

131 Bates 1983, p.19

demanding regarding fodder and much more resistant against high temperatures than sheep. In particular, black cashmere goats (Anatolian Black) are preferred, sometimes mixed with cashmere breeds of other colours. It is said that goats need less personnel for supervision. For example, one shepherd with two dogs is able to herd of about 500 animals and keep them within the borders of pasture ground. According to my own herding experiences, I am able to state that the same compilation can be done with sheep. Thus, based on that aspect it is difficult to differentiate. In the case of the Karatekeli of the field research, I had the opportunity to observe how one lone young woman on a horse could handle 200 goats all day, while another family of the Karatekeli left their 150 sheep to the two dogs without human supervision during night-time. In interviews I gathered the following information on the herding issue:

Goats are tricky and need a good watch as they are sly enough to use any opportunity to get to forbidden pastures. Sheep do not perform such tricks so often but single individuals easily lose contact with the flock as their attention is sometimes too much focused on the fodder than on herding movement.

If a difference in herding between sheep and goats must be detected, it is important to take the nature of the terrain and climate into account. During the hot summer months in southern Turkey, sheep suffer badly from the heat which affects their attention span. They lower their head in order to find a more comfortable posture and thus lose a certain level of overview. In addition, the terrain in the Toros mountains is characterized by rocky cliffs and compact bushes which hinder dogs of pursuing single animals easily. In case of herding, goats easily find their way back to the flock as they are more attentive and less affected by the heat.

On the contrary, sheep may be more easy to handle on a flat terrain within delicate pasture borders as they are less tricky in invading forbidden grounds.

On that point a clear herding difference associated with the environment can be observed between the two species.

Johansen explains that prices for sheep's wool, meat and yogurt are more profitable than those from goats. The opposite can be said about cheese. In comparison to the field research 2007 this seems to be true except for the goats' cashmere hair that can be sold to the weavers' villages at Bozdoğan at considerably high prices. Still, sheep's products are far more lucrative nowadays.

Opposing this, sheep need more attention for maintenance as they are less adapted to the hot weather and more demanding regarding fodder. Therefore, a higher frequency of pasture change and longer intervals of nocturnal pasturing during the hot seasons is necessary. As sheep feel less comfortable with the climate than goats, veterinary services

and extra losses must be considered.

In spite of the maintenance disadvantages, the higher economical output of sheep seems to be the main reason for the economic shift from goats to sheep among many of the Yörük families. In particular, the Anatolian fat tail sheep is preferred in the Toros mountains.<sup>132</sup> The Karatekeli in the field research of 2007 were specialized in breeding “spectacles sheep”.

The animal husbandry of the Yörük is not only focused on goats and sheep. Bates explains that camels were also kept to transport family belongings and as secondary source of income. The families of the field research 2007 kept and are partly still keeping dairy cattle in addition to their sheep or goat flocks.

The obstacles and assets of animal husbandry today induce a change within the economical management among the Yörük families. Though livestock breeding became slightly more profitable because of the increased importation of meat by the Arab countries<sup>133</sup>, rising taxes and rents for pasture grounds, force the families to find additional income<sup>134</sup>. Quite often, women, children and youngsters are assigned to herd the animals while the men attend the family’s rented or owned fields and plantations.<sup>135</sup> This is one of the many reasons why nomadic families have settled or reduced their range of transhumance.

In case the necessary environmental requirements were provided, some families chose to react differently to the new economical obstacles and increased their flocks. As 150 animals were once sufficient to uphold the minimum of existence, about 250 animals are needed in modern times per family.<sup>136</sup> These numbers, which are closely dependant on local features, may vary from region to region.

The success of animal husbandry depends on experience, skill and fortune. The quota of reproduction can be, -even after drawing off the losses in the lambing season,- about 70% per year. Although this sounds lucrative, pestilence or rustling may rapidly cause the total loss of the flock.<sup>137</sup> In addition, difficult seasons with little rainfall and meagre pastures may as well reduce the growth of the flock and thus the annual income of the family. The regional climate in the Toros mountains, in particular, is

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132 Douglas / Johansen 2005, p.102

133 Bates 1983, p.21-22

134 Bates 1973, p.125

135 Sanyo / Schütze 1994, p.97

136 Sanyo / Schütze 1994, p.92

137 Mayer 1994, p.109

well known for its unpredictability which may cause a series of difficult years for the nomadic Yörük. Along the old routes of migration that were upheld for generations, it needs skill and experience for the Yörük families to decide each season when it is necessary to break camp, to stay a bit longer or to change routes in order to hit the right moment of pasture change. Clever planning of the route and migration dates within the patterns of mobility helps making ends meet in autumn.

## Chapter 2.2.5 Patterns of Mobility

*The movement of the tribe's livestock from season to season between winter- summer- and inbetween autumn pastures according to the need of pasture provision and to climatic conditions is called Migration [Göç].*<sup>138</sup>

Traditional migratory routes of the Yörük often cross three geographic areas, and in the aspect of seasonal planning, four migratory periods. In the Western and Central Toros the character of the routes allows a general description: Starting from the lowland or plains pastures in the south (kışlak), reaching the high mountain pastures to the northwest (yayla) with the routes of access between them (göç yolu) which offer opportunities for pastures in spring (yazlak) or autumn (güzlek) helping to preserve the late pasture grounds or to prolong the season of highland pasturing.

In spring, the herds leave the lowland grazing areas, moving out to the summer high mountain pastures on a one-and-a-half months trek. If possible, a short stop at a spring grazing area (yazlak) may be taken below the forest line, where enough water and fuel can be gathered for camping. The yazlak stop helps to protect the ewes and lambs from the cold highland climate during lambing season. The summer pastures with their cool mountain climate (altitudes are between 1800 m and 2700 m) are reached in about the middle of May where camp is set up for the summer season.

After three months of pasturing, the grazing grounds may already be exhausted and the barren springs nearly run dry. The time to return to the winter camp comes up and the right migration date settled. This is a delicate task because, on the one hand, the flocks need new fodder but on the other hand, the route down to the kışlak cannot be accessed as long as the grainfields are not harvested. The stubble fields are needed for the long journey down to the plains. Most groups leave the yayla at the beginning or middle of August, starting in many cases, their way back along the same route (göç

<sup>138</sup> Eröz 1991, p.86: "Kışla, yayla, güzle arasında, aşiret halkının hayvanlarına mer'a temin etmek ve kendilerini de iklim şartlarına uydurmak için, bütün hayvanlarile birlikte mevsimden mevsime muntazam şekilde yaptıkları harekete Göç denir."

yolu) they had come from.<sup>139</sup>

The *güzlek*, grazing grounds at about 1000 m until 1500 m altitude, is an autumn camp lasting several weeks which prolongs the alpine grazing opportunity. Finally, in October, the flocks reach the *kışlak*, the winter quarter near the seashore. Here they remain for the cold season until end of March.<sup>140</sup>

Of course, according to different regional conditions, the pattern of migration varies from the classical description provided above. This does not only imply length and altitude of the trekking route but as well the number of stops. Variations may be endless but the mainly known alterations are shortly sketched here:

*kışlak* → *yazlak* → *yayla* → *güzlek* → *kışlak*

*kışlak* → *yayla* → *güzlek* → *kışlak*

*kışlak* → *yayla* → *kışlak*

The *göç yolu* in spring may vary from the *göç yolu* in autumn so that the trek moves on a round route.

The character of the migration route is not only dependant on the terrain and the climatic impacts but as well on economical conditions or conditions of ownership. Taking a look at the change of migration strategies in the course of history may explain how outside influences affect the group's decisions about the mobility pattern.

The traditional routes of the Yörük nomads were highly adapted to the environmental and economical influences. Based on their mobility, the nomads were able to make use of an environment which was not accessible for settled cultures. The Mediterranean and Aegean coastal plains with their extensive marshy areas provided breeding grounds for malaria carrying mosquitoes which made these regions unbearable for the summer months. Therefore, these grounds were only usable in the winter season, when the Yörük returned from their high summer pastures. They came to occupy a specialized place in the western Anatolian economy which was entirely balanced in with activities and ways of life of other groups.<sup>141</sup>

With the changes in the late 19<sup>th</sup> and early 20<sup>th</sup> century, this balance ended as new

139 Bates 1973, p.7; Mayer 1994, p.104, p.109

140 Mayer 1994, p.104

141 Bates 1983, p.20

technologies helped the development of intensive agriculture in the coastal plains after draining the marshes and thus extinguishing the malaria breeding grounds. New villages rose on former winter pastures and the Yörük were encouraged or set up to settle by the government.<sup>142</sup> Those, who tried to remain mobile, needed to negotiate new arrangements with the settled farmers owning the fields and plantations on the former grazing grounds. These arrangements implied additional fees and renting costs for the nomads which again increased the necessity for larger flocks and more efficient herding. But the new conditions barely allowed expansion. Therefore, many families had to give up their mobility and were forced to settle or move away in order to find new possibilities for income.

Those, who remained nomadic had to change their strategies fundamentally. As the migration routes became inaccessible after being transformed into arable farm land, the nomads started to transport their flocks via trucks to the high pasture grounds in summer. Nowadays, migration distances became vaster and quicker conquered by rented or owned trucks or by train.<sup>143</sup> Still, even this extreme adaption of migration strategies does not help to decrease the deterioration of mobile herding. The continuous expansion of settlements and intensive agriculture oust the mobile flocks from their grazing grounds. In addition to the services of obligatory education and enhanced health care provided by the national authorities, settling became more and more attractive for the formerly mobile Yörük. Presently, by far more Yörük are settled on government-granted land than are still nomadic.<sup>144</sup>

## Chapter 2.2.6 Customs, Social Life and Religion

Although most of the Yörük praise their nomadic way of life with its vast possibilities of social and economical flexibility or even its offer of a good lifestyle in the wonderful summer pastures, many of them as well had good reasons to exchange it with a settled life. The translated interview of Eröz with a Yörük shows how troublesome nomadism can become when the environment gets hard to conquer:

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142 Bates 1983, p.20

143 Mayer 1994, p.103; Sanyo / Schütze 1994, p.97

144 Bates 1973, p.37-38

*A new place of residence found. Set up the tent. There was no water in the region. The women went to find water and spray (fuel for bonfire). One hour later they found only few, rather muddy, water, bringing it in their leather bottles, lighting up the fire, made humble food (food of misery)...*<sup>145</sup>

The lack of water sets grounds for starvation and bad hygiene helping to spread fleas and illnesses. As the downs of nomadic life may unfold most dramatic difficulties, its ups offer a variety of cultural quality that are appreciated by the nomads and their many guests that documented their customs of migration. In particular, the moment of breaking camp early in the morning inspired authors to put this experience down in writing, as e.g. Bates:

*During periods of migration, whether in fall or spring, the women of the household would rise at dawn or before, strike the tent and load possessions in complaining camels. Loading itself was an art, and women of different households would sometimes compete to accomplish this task and be underway before the others. Usually the men and older boys would have moved on along before the remainder of the family awoke.*

[...]

*Most families would carry their belongings on four or five mature camels. The better camels would be fitted with embroidered trappings, and inevitably protected with such talismans as silver hands, blue beads, and shells from the Mediterranean. The camels themselves were usually a cross between the heavy boned "two humped" Bactrian of Central Asian origin and the taller, more light boned "single humped" Arabian dromedary. [...]*

*On migration, the family's camels would be tethered head to tail in line, and the first camel would customarily be led by either a young bride or yet unmarried daughter of the household. These young women would dress in their best finery, with the married distinguished from the unmarried by distinctive hair and costume.*<sup>146</sup>

In an interview with Borchhardt, Mahmut O., a settled Aydınlı of the tribe of the Saçıklaralı, gives us an inside of the migration practices from the point of view of a young boy who experienced the adventures but as well the austerities of nomadism (translated from German into English):

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145 Eröz 1991, p.90: "Yeni bir konak yeri bulundu. Çadırlar kuruldu. Civarında su yoktu. Kadınlar su ve çalı çırpı bulmağa gittiler. Bir saat sonra tuluklarını bulanık su ile doldurmuş oldukları halde döndüler, Ateş yakıp, sefaletin yemeğini yaptılar."

146 Bates 1983, p.15-16

At “*hidrellez*“ [Footnote of the author Borchhardt: “A folkloric festival taking place on the 6<sup>th</sup> of May, the beginning of summertime] my father slaughtered a goat each to the first, second and third prayer. It was a big festival and it announced the beginning of the trek to the *yayla* which would start a few days later. The girls wore their best clothes and blue beads in their hair. The trek would be led by the goats, followed by the donkeys, camels and dogs, and inbetween of all these animals there was us. Big and small kids were packed together with personal belongings, tents and bags onto the camels. I should have as well been seated on a camel, - I was still small -, but I wanted to be with the donkeys and their foals. A day before migration, our neighbour gave me a piece of camel leather – his camel died away recently – so that I can sew myself a pair of shoes. I had to wear two pairs of trousers, but still I was freezing and felt very hungry. As we reached *Akçaova*, our neighbour *Kara Hatem* fried cabbage for me and gave me mallow-vegetables. I can still remember today how my eyes started to shine and my strength returned.<sup>147</sup>

Although the translated interview again implies the hardiness that can come up in a nomadic life, many records as well show how joy and prosperity of the Yörük impressed their guests. Inspired by the famous hospitality of the Yörük, precious social events were put down on paper, documenting a rich culture of everyday life.

„Shortly before sunrise the young woman got up, ignited the bonfire, brew fresh tea and prepared breakfast with flatbread and dry soft goat’s cheese. When I got out under my blanket, the young husband gave me the metal can which beared warm water from the hot ashes so that I could wash my hands and face.“<sup>148</sup>

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147 Borchhardt 1998, p.44; quote: “Zu *hidrellez* [Footnote of the author: “Volkstümliches Fest, das am 6. Mai, zu Sommeranfang, stattfindet.”] schlachtete mein Vater zum ersten, zweiten und dritten Gebet jeweils eine Ziege. Es war ein großes Fest und kündigte den Zug auf die *Yayla* an, der ein paar Tage später stattfand. Die Mädchen trugen ihre schönsten Kleider und blaue Perlenim Haar. Angeführt wurde der Zug von den Ziegen, dann kamen die Esel, Kamele und Hunde und zwischen all den Tieren wir. Alte und kleine Kinder wurden auf die Kamele gepackt zusammen mit dem Hausrat, den Zelten und Säcken. Ich hätte damals auch auf dem Kamel sitzen sollen, ich war noch klein, aber ich wollte mit den Eseln und ihren Fohlen gehen. Am Vortag der Wanderung hatte mir unser Nachbar ein Stück Kamelleder gegeben -ihm war erst kürzlich sein Kamel gestorben- damit ich mir daraus Schuhe nähen konnte. Zwei paar Hosen übereinander mußte ich anziehen, trotzdem fror ich sehr und war sehr hungrig. Als wir nach *Akçaova* kamen, briet mir dann *Kara Hatem*, eine Nachbarin, Kraut, und gab mir Malven(gemüse). Ich weiß heute noch, wie meine Augen leuchteten und meine Kräfte wiederkamen.”

148 Böhmer 2004, p.66; quote: “Noch vor Sonnenaufgang stand die jung frau auf, entfachte das Feuer, brühte den Tee auf und bereitete das Frühstück aus Fladenbrot und trockenem weichen Ziegenkäse. Als ich unter der Decke hervorkam, brachte der junge Ehemann gleich die Metallkanne mit dem in der Asche lauwarm gehaltenen Wasser zum Waschen der Hände und des Gesichts.”

Just the same, I experienced hospitality to the maximum during the field research. When we arrived the first day at the families, a goat or a sheep would be slaughtered and a feast prepared together with the surrounding families. Each day we stayed, a large variety of dishes with fine vegetables and meat would be offered at lunch and dinner. Added up with a long and vast breakfast in the morning. It is the honor of the family to show the best of their services. Their famous hospitality bore legends of nomadic families who had slaughtered the last of their animals in order not to break their hospitality customs for their guests. Of course, in our case, we as well tried to be sensible guests by returning the effort, though, this action was never demanded and thus the hosts tried even harder to provide the best of services.

Most famous are the tea ceremonies in Turkey which are executed by nearly each Turkish family. When guests arrive or stop for a short visit, tea is freshly brewed and served in -at least- three rounds. In many cases, cookies, lokum (traditional candy) or fresh fruits of the season are served as well. The Yörük brew their black tea in a traditional metal can on a bonfire. As the tea itself is quite intense, it gets thinned by hot water. Normally, a woman of the youngest adult generation of the household serves the tea. It is a praised virtue that she knows exactly the drinking habits of returning guests and therefore mixes the tea according to the individual preferences without asking a second time.

Occasionally, the tea gets replaced by the more expensive coffee demonstrating that the current meeting occasion is very special.

Social life within the camp varies among families. Nonetheless, I dare offer a rough sketch of the social everyday life of Yörük nomads, providing a short inside for the reader. The camping groups I got to know consisted of 2 or 3 generations. The women of the family rise early in the morning in order to prepare a breakfast of tea, flatbread, goat's cheese, cut tomatoes and cucumber. Sometimes, a dairy dish may be served, too. Meanwhile, according to their assigned tasks, the men rise, starting their chores or they continue sleeping if they had worked throughout the previous night. During the summer season, some flocks (especially sheep, in some occasions goat's flocks as well) need herding during the night and sometimes the camp needs a nocturnal guard. Then, one or two men of the family sleep on a plateau at the flanks of the camp with their guns loaded in order to be alert against intruders.<sup>149</sup>

149 This happened as well, when we were staying overnight at one of the families. In Turkey, hosts are very sensible in guarding their western guests, as it would be a huge catastrophe if anything happens to them. Here, I do not want to set emphasis on the dangers that might happen but rather on the accuracy of the hosts to provide maximum security. Indeed, even unguarded, I felt very secure in Turkey

Parallel to breakfast preparation, plants in the small garden<sup>150</sup> are watered, the chickens fed and other farm animals cared for. Depending on the present situation at hand, orphaned lambs and goat's kids are bottle fed with milk, sick animals provided with medicine or water fetched with the tractor in order to fill the mobile cistern. During these morning chores, the members of the family take turns at the local water outlet for washing themselves, getting dressed and refurbishing their outer appearance.

As soon as the members of the family have accomplished the most urgent morning tasks, they gather at the dining place<sup>151</sup> for breakfast. Members of neighbouring families who are passing with their flocks or arriving for common tasks, may also join the breakfast. Sometimes, civil servants that have a job to do in the region, join the family for breakfast as well. Therefore, breakfast can be the first big social gathering event during the day, an important institution to cultivate social contacts.

After breakfast, everybody leaves for work. It may be that the women and the children carry out the herding of the flocks, while the men see to their seasonal jobs on the nearby fields and plantations. Parts of the family might meet again at the camp for lunch. In the hot summer months, a long midday break helps to gather strength for afternoon work. Each or every second day, the men visit the teahouse of the closest village in order to strengthen ties with the villagers and relax in the company of friends. Just the same, the women may welcome guests at the camp during lunch or in the afternoon. In the evening, when the sun has set, dinner is served. Three of the four Karatekeli families of the field research had the interesting tradition of taking turns to prepare dinner. Therefore, dinner took place at a different camp each evening and the women of the other households were mostly free from their duty except for helping the hosting family in a few chores. After dinner, there are still several tasks to accomplish for most of the family members.

As I have mainly described the social gatherings during the day, I want to avoid the impression that the families enjoy a lot of free time. Though it is common to take breaks regularly, most of the time is spent on hard work starting from 6 a.m. until 11 p.m..

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travelling alone or with my partner.

150 Nomad families tend small gardens in their seasonal camps by transporting single plants in plastic bags or pots from one camp to the other. In the case of the Karatekeli, the garden was not mobile any more and therefore larger.

151 Dining place: Meals are served inside the tent, inside the summer shed or in front of the tent depending on the preferences of the family and weather conditions.

The importance of social gatherings within Yörük society is as well shown in a description by Bates:

*This facet of Yörük life cannot be discounted, since, quite apart from considerations of security and grazing, Yörük of both sexes greatly prize the restrained conviviality of kinsmen and close friends. They gather daily for tea or coffee and to exchange opinions, or simply to idle hours away with pleasant banter and good humor. The men meet daily in a tent of the camp group, each well-founded home having its turn, where the seemingly ceaseless exchange of small talk, opinion, and pithy commentary on the behavior of anyone not present constitute, in the words of local wits, the *meclis* or parliament. Even if security were not an issue, no family would readily sacrifice the pleasures of visiting and being visited, of giving hospitality and receiving it.*<sup>152</sup>

Quite in contrast to the descriptions provided above, I translated an interview of Borchhardt with a man of a settled Saçkaralı tribe, which offers information about social activities with a critical insight of the ups and downs of nomadic life during the seasons (translated from German into English):

*The men cut wood in the mountains, the women dragged it on their backs to the market and carried just the same the children bound around the tree. The men tried their luck with gambling in the cafe. We youngsters stole wheat and chickpeas in order to buy lokum from the profit. The elders slept in front of the tents. Say there, that poor we have been. The men bashed their wives with a stick and swore upon the *sülâle* {group of heritage} of their mothers. That careless they acted. Their first word was a curse and they did not know any fear. They quarrelled with the elders of the village and the policemen. The revenge of the yörük was horrible, his dwelling like the fox's den. He drove his flock in the night and let his animals graze in the fields of corn.*

*The tent was made of three poles and eight rows of woven straps. Winters were horrible. The tent leaked during rain-showers and sometimes the storm made the cords of the tent break. Then, the goats entered bleating the tent and the camels lurked frightened beneath the trees. There was wheat, ayran and rice to eat but mostly we just had dry bread and hot onions. The water was often sullied by the dropping of the animals; when we drank it, our throats were hurting afterwards. Once in a month we washed ourselves, the lice ate our body. The women searched each other for lice on their heads. Once in two or three months they combed their hair. When we had set camp at a location with plenty of water, immediately a feast took place. The women washed all of the laundry, the young girls dyed their hands with*

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152 Bates 1973, p.121

*henna. At the Çatma-Yayla there was no lack of water but no wood for fuel; The women made fire with weed and dung.*

*Just for two months during the year we lived gloriously on the yayla, when the thyme was fragrant and partridge sat beneath the stones. Then we celebrated weddings, the brides and the girls put gold around their necks. Bride price was taken and daughters offered in return. The men took new wives and broke up with the old ones.* <sup>153</sup>

As seen above, descriptions of everyday life can fundamentally vary, providing either a positive or negative image. For the reader, I wanted to offer both examples in order to show how different people perceive social life in that regard. It varies from family to family, from region to region and from generation to generation. For me, as an architect and researcher, these records bear valuable information how daily chores need to be accomplished, how and when social interaction happens and which difficulties and eases may be faced. It helps understanding human tasks and interactions in an environment that is unknown to me.

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153 Borchhardt, p.43; quote: "Die Männer schnitten in den Bergen das Holz, die Frauen schleppten es auf ihren Rücken zum Markt und trugen dabei die Kinder um den Baum gebunden. Die Männer vergnügten sich im Kaffeehaus beim Glücksspiel. Wir Jungen stahlen Weizen und Kichererbsen, um uns *lokum* [footnot of the author: "Süßigkeit aus Stärkemehl, das mit Wasser und Zucker gekocht wird."] davon zu kaufen. Die Alten schliefen vor den Zelten. So arm waren wir. Die Männer verprügelten ihre Frauen mit dem Stock und verfluchten die *süläle* [Abstammungsgruppe] ihrer Mütter. So achtilos waren sie. Ihr erstes Wort war ein Fluch und sie kannten keine Furcht. Sie stritten sich mit den Agas der Dörfer und den Gendarmen. Die Rache des *yörük* war schrecklich, seine Wohnstatt war wie die Höhle eines Fuchses. Er trieb seine Herde bei Nacht und ließ seine Tiere in den Kornfeldern weiden.

*Das Zelt war dreistängig und hatte acht Bahnen. Die Winter waren schrecklich. Es regnete auch ins Zelt, und manchmal brachte der Sturm die Zeltstricke zum Reißen. Dann liefen die Ziegen meckernd ins Zelt, und die Kamele schauten ängstlich unter den Bäumen hervor. Zu essen gab es Weizen, Ayran und Reis, aber häufig nur trockenes Bort und scharfe Zwiebeln. Das Wasser war oft verunreinigt durch den Mist der Tiere; tranken wir es, so tat einem hinterher der Hals weh. Einmal im Monat wuschen wir uns, die Läuse fraßen unsere Körper. Die Frauen suchten gegenseitig ihre Köpfe nach Läusen ab. Alle zwei bis drei Monate kämmteten sie sich ihre Haare. Zelteten wir an einer Stelle mit viel Wasser, gab es gleich ein Fest. Die Frauen wuschen alle Wäsche, die jungen Mädchen färbten ihre Hände mit Henna. Auf der Çatma-Yayla gab es keinen Mangel an Wasser, dafür aber kein Holz; Die Frauen machten Feuer mit Kraut und Dung.*

*Nur zwei Monate im Jahr lebten wir prächtig auf der Yayla, wenn der Thymian duftete, und unter den Steinen die Rebhühner saßen. Dann wurden Hochzeiten gefeiert, die Bräute und die Mädchen hängten Gold an den Hals. Brautgeld wurde genommen und dafür die Töchter gegeben. Die Männer nahmen sich neue Frauen und trennten sich von den alten." (Bericht der sesshaften Saçıkara (Bekir Y.) über das frühere Nomadentum)"*

The marriage customs of the Yörük show how strongly ties within the ethnically defined group are maintained and cultivated. Bates explains that there is no social discontinuity separating nomadic from sedentary households as marriage and social intercourse form patterns that are largely undeflected by this dichotomy. He states that until now, very little sense of “urban” or “village” identity has visibly developed among sedentary families and that the primary referent remains rooted in tribe or descent group.<sup>154</sup> The four Karatekeli families of the field research had as well strong established connections to family members in the nearby village Ahmetli Köy. They partly identified themselves by being associated to that particular köy although their camping grounds were situated in the domain of Sağlık Köy. Just the same, the villagers of Ahmetli Köy put emphasis on their related connections to the tent camps near Sağlık Köy, demonstrating the strong bonds of the aşiret. A distinction in the difference of dwelling style (village house or rural tent camp) was of far lesser importance. Quite analogue to this, engagement and marriage feasts were celebrated in the village or in tent camps together including both sedentary and “nomadic”<sup>155</sup> members of the aşiret.

Bates closely investigated the marriage customs of the Yörük in south-eastern Turkey. He outlines the high importance of well decided marriage ties within close descent groups:

*Yörük of all tribes studied here state a strong preference for close cousin marriages. All first cousins are considered good matches; of the four types possible, matings with the patrilineal parallel cousin (father's brother daughter-son) are the most esteemed. Given this clear favoring of marriage with true or classificatory father's brother's daughter it is obvious, should actual practice follow belief, that marriages of the other three cousin types would be also within the definition of remote patrilineal parallel cousin marriages, e.g., within the agnatic descent group.<sup>156</sup>*

Comparably, the Karatekeli near Ahmetli Köy set emphasis on close related ties which were set on the traditional preferences as described by Bates. It is also important to mention that in many cases, the quality of social bonds between the descendants of the next generation of opposite sexes are taken into account by their parents in regard to marriage decisions. This should not mean that decisions are based on personal affections by the descendants but rather on the quality of mutual respect and social

154 Bates 1973, p.27

155 The inhabitants of the tent camps pursued a dwelling lifestyle that allowed nomadism although no migrations did take place for at least 35 years.

156 Bates 1973, p.61

cooperation between them. Plainly said, the implications are: Parents take care that their children find a place in a comfortable social environment that offers security and a good life. Of course, this is not implicit as a common rule but rather an attitude within families that can vary strongly.

The whole process of marriage starting with the first marriage negotiations of the parents, to the engagement event and then to the wedding ceremony, is embedded in a strong pattern of tradition. This tradition is built up on a set of rules that even include a traditional procedure for breaking them (as e.g.: bride kidnapping), if necessary. Bates studied these rules based on various interviews, explaining their essentials in a short summary:

Bride price and kidnapping are two closely associated aspects of the general problem of acquiring a bride in Yörük society among both sedentary and nomadic populations. They are, as it were, symbolic of the two strategies by which a man takes a wife. Bride price (*başlık*) is the money paid in cash by agreement with the family of the bride-to-be. It is money paid by the groom's family, usually his father, to the girl's guardian, normally her father. [...] <sup>157</sup>

*Kidnapping a bride is an alternative to the process of acquiring one by inter-family agreement, negotiation, and a formal wedding ceremony (düğün). [...] Whereas başlık in its usual sense represents agreement between families to establish social relations on the basis of affinity, the kidnapping of a girl by a member of one family from another household marks the onset of bad relations, or at best an indeterminate period of no social relations. Bride price taken for a daughter given in the proper manner is a sign of the bridegroom's family's respect for the house which gave them a bride. In situations where a girl is taken by kidnapping, başlık is again paid, after the fact, but is viewed as an indemnity. It is paid as an alternative to violence, and is exacted with bitterness on the part of the girl's father or brothers. It does not in itself symbolize the resumption of normal relations between the two households, let alone the beginning of the special affinal relationship. <sup>158</sup>*

The Yörük or Turkish term for kidnapping a bride is *kız kaçırma*. It embraces two options of how the girl is abducted: By force or by her own will of running away. In both ways, parental approval is lacking. <sup>159</sup>

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157 Bates 1973, p.68

158 Bates 1973, p.68-69

159 Bates 1973, p.69

As marriage was predominantly set within the tribe, the political and economical changes of the 20<sup>th</sup> century induced a shift from inner-tribal arrangements to arrangements outside the tribe or even - in some cases - outside the Yörük community.<sup>160</sup> This tendency is a result of the fragmentation of the tribes throughout the country in the search of new grazing grounds or new economic activities.

After being invited to an engagement event in Ahmetli Köy, the women of the Karatekeli families had the urge to make me understand that they did not have marriages with *yapancılar* (strangers) in their *aşiret* which was to be considered as an honourable feature. Just the same, I learnt that current social shifts made that feature rare and perishable, being endangered by the pressure of outside changes. Modernisation and new global opportunities are most attractive to the young generations leaving their traditional environment behind and moving to the economic hotspots like larger villages or towns offering career opportunities or further education.

Social life and cultural events are seamlessly woven in with religion, an integral part of Yörük identity. Each Yörük family that I was lucky to get to know a bit closer, soon explained to me that they were adherents of Sunni Islam. As well, they were interested in my religion and asked me about the most important books or sources my belief was built on. Based on that exchange of information further interesting and friendly discussions arose which were built on mutual interest. Bates explains that most Yörük count themselves to Sunni Islam<sup>161</sup> but, according to Reiter/Vogt, some groups are dedicated to Shi'a Islam like the Alevi Yörük.<sup>162</sup> Participation in *târîqa* or Sufi brotherhoods in the past are well known and even active today in some cases.<sup>163</sup> Eröz collected a number of religious Yörük customs and compared them to Alevi traditions which are often described to be shamanistic by outsiders. The similarities were quite striking. Though of Sunni religion, shaman practices are an integral part of Yörük life.<sup>164</sup> Here, I want to show two of the examples Eröz had collected:

*According to the Honamlı it is custom to sacrifice a rooster in order to honour the first fire lit within his own tent when a son of a household founds his own household.*<sup>165</sup>

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160 Kunze 1994, p.83

161 Bates 1983, p.18-19

162 Reiter / Vogt 1994, p.153

163 Bates 1983, p.18-19

164 Eröz 1991, p.29-35

165 Eröz 1991, p.31

When a young person (or child/baby) suffers from pain in its internal organs (mainly bowels), members of the household utter this phrase three times for easing the pain:

*“Dağlar, taşlar, ulu ağaçlar, ulu dağlar, ulu çaylar gelin!..Çocuğumun garnının ağrısını alın da gidin”*<sup>166</sup>

In 2005, I was invited to a ritual of settled Yörük which took place once a week on Sundays under a holy sycamore tree in the neighbouring forest of the village. Beneath the tree, which was said to be at least 800 years old there was a large resting place which allowed a rather large bonfire to be lit. The Yörük families who gathered there took turns each Sunday to cook a large cauldron with meat for everybody who was arriving. The place was open to everybody. Close to the sycamore tree stood another holy tree of similar age that fulfilled a different purpose. It was decorated with cloth ribbons bound to its twigs and surrounded by miniature stone houses at its base. During Sunday lunch under the sycamore tree, the women gathered for a short visit at the other tree, putting their scarf around their head. They asked the tree for wishes to come true and placed a piece of cloth of their underwear on twigs. Those who wished for new homes and houses, constructed a small stone house by piling pebbles on each other at the base of the tree. I was invited to come with them. When I asked if I had to put a scarf around my head they told me that it was not necessary for I was not Muslim. But the fulfilling of wishes would work for me, too, they assured me. A friend explained to me furtherly: “Of course, the tree sends the wishes to Allah who listens to them and makes them true.” I learnt that the weekly public cooking was especially set to help the poor who cannot afford meat in their diet.

Similar *customs* can be detected near monuments of religious importance whenever ribbons are tied to twigs or fences. They cannot be described as particular traditions of certain ethnic groups but rather as a common custom connected to the location. In Turkey, trees of high age bear a high importance as they prove that their location was not destroyed by fire. During the summer months, due to drought and heat, fires occasionally break out, destroying vast strips of land. Places that were not consumed by fire for several hundred years prove to be special.

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<sup>166</sup> Eröz 1991, p.30; translation: “Mountains, stones, holy trees, holy mountains, holy tea come!..Take the inner pain of my child away!”

## Chapter 2.2.7 Mobile Dwelling Forms

The thesis sets its main focus on the three pole tent of the Yörük people. But, however, there are more mobile dwelling forms used by the Yörük which get introduced here as a short overview.

Eröz mentions that there are three categories of mobile dwellings in use by the Anatolian tribes (Yörük-Türkmen):

1. The Black Tent (or Hair Tent, Haircloth Tent)
2. The Felt House (also called “alaçık” or “alıcık”)
3. The Round House (The House of the Bekdik, Skin House)<sup>167</sup>

Black tent and the felt house types are used by Yörük tribes while the Round House (more commonly known as the yurt in English literature) is assigned to Turkmen tribes<sup>168</sup>.

According to the classification of Eröz I want to introduce the two types of mobile dwelling which are used by Yörük nomads in the following passages:

### The Black Tent

*The black tent that the Turkomen met in their migration to the west is the tent type which is widespread among the recent nomads (the last nomadic groups of Anatolia) of the Taurus mountains. What is interesting is that the black tent of the Turkomen is closer in form to the Arabic tent than the Persian one which they had encountered on their way to Anatolia.* <sup>169</sup>

The Yörük Black tents are tensile structures with wooden parts (e.g. poles, ridges, stay-fasteners) for bearing the pressure load and textile parts (e.g. the tent cloth, ridge belts, ropes) for bearing the tension within the static system. Most characteristic is the tent cloth which is made of woven black goat hair yarn. The cloth offers protection from

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167 Eröz 1991, p.97; quote: “Anadolu’daki Türk Aşiretleri (Yörük-Türkmen) üç türlü çadır kullanırlar:

- 1- Kara Çadır (Kıl çadır, Çul Çadır da denir)
- 2- Keçe Ev (Bazı yerlerde alaçık, alıcık da diyorlar)
- 3- Topağ’ev (Topak Ev, Bekdik çadırı, Derim Ev de deniyor)”

168 see as well Eröz 1991, p.107

169 Günkut Akin, “Turkomen”, in: Oliver, Paul (editor), *Vernacular Architecture of the World, Volume 2 Cultures and Habitats*, Cambridge (Cambridge University Press) 1997, p.12-15, here: p.1482

sun, wind and rain impacts.

Best known and most common<sup>170</sup> is the three pole black tent which as well is the main interest of the thesis:



image 2.002: *Yörük three-pole-tent, reconstructed tent by the Şimşek family*

Variations of the three pole tent by increasing the number of poles:

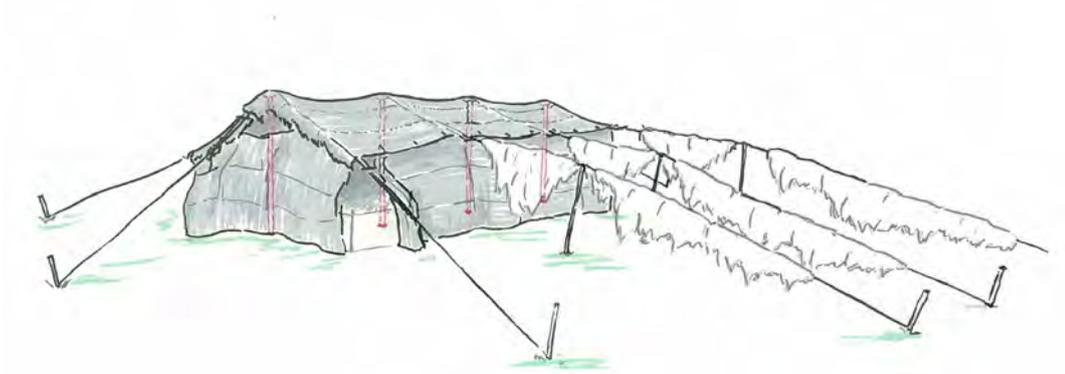


image 2.003: *Yörük four-pole-tent of the Saçıkara, after a photograph by Böhmer<sup>171</sup>*

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170 Zimmermann 1994, p. 121; quote: "Das mit frei Pfosten gestützte Firstzelt ist die am weitesten verbreitete Zeltform bei den Yörük. [...]"

171 Böhmer 2004, p.121



*image 2.004: Yörük five-pole tent of the Sarıkeçili. The miniature sketch is a simplified copy of the orthometric drawings presented by Böhmer<sup>172</sup>*

There seem more variations existent than shown above. Eröz describes in text one more variation of a four pole setting which I was not able to reconstruct technically.<sup>173</sup> As well, reports of poles of more than 5 counting up to 11 indicate that further variations were in usage.<sup>174</sup> Here, I am missing further information for developing a reconstruction of these tent types.

### **The Felt House or “Alaçık”**

Also known as Tunnel tents or Bender tents in English literature. Characteristic of the felt house is the rectangular ground-plan being converted into apsidal arcs at the short sides. The wooden construction of arches supports itself. Therefore, the covering cloths, made of black goat hair felt or woven goat hair cloth do not need to bear any primary tension forces.

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172 Böhmer 2004, p.105

173 see Eröz 1991, p.102

174 see Striessnig 1991, p.101

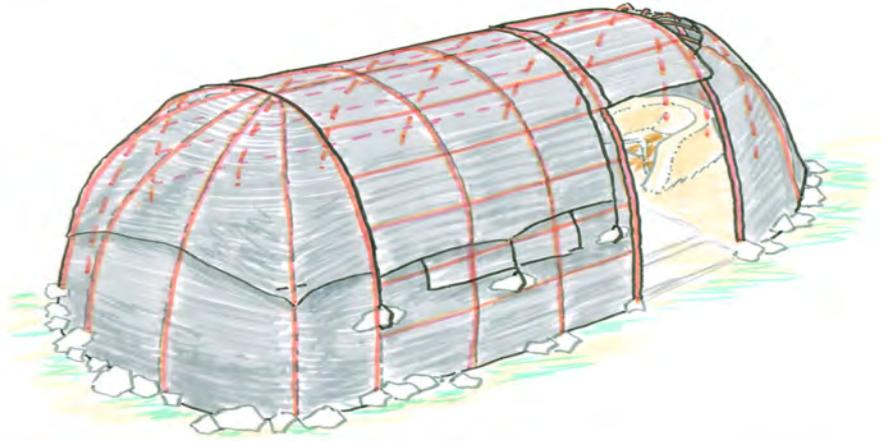


image 2.005: Tunnel Tent in the Province of Mut. The miniature sketch is a simplified copy of two orthometric drawings presented by Böhmer<sup>175</sup>. The orange curves mark the form of the wood construction beneath the black canvas.

Further Tunnel Tents in the region of Mut are documented by Kunze<sup>176</sup>. Andrews shows photographs of tunnel tents between Kütahya and Seyitgazi<sup>177</sup> (with hair goat cloth obviously) and near Karaman<sup>178</sup>. He has well shows bender tents with apsidal annexe by the Karakeçeli Yörük in Kütahya province.<sup>179</sup>

Andrews puts an emphasis on a clear distinction between tunnel and bender tents. While Tunnel-tents are constructed of arched poles that are rammed fixed to the floor and connected by horizontal rods, bender tents allow a loose connection of the arches to the ground which is compensated by a wattle or a stonewall with a wattle at the lower part of the construction.

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175 Böhmer 2004, p.126-127

176 Kunze 1994, p.174; quote: "Kuppelzelte aus schwarzem Ziegenhaar in der Gegend vom Mut. Provinz İçel (Mersin) 1989"

177 Andrews 1997, image description 57; quote: "57. Tunnel tents Yörük on Türkmendağ, between Kütahya and Seyitgazi, Turkey, 1905, After E. Brandenburg. Type f27."

178 Andrews 1997, image description 58; quote: "58. Tunnel tent without ridge rod: erection of ladder-stringers. Yörük. İhsaniye, Bucakkuşla, Karaman, Konya province, Turkey, 23. 8. 1984. U. Hirsch. Type f27"

179 Andrews 1997, image description 73+74; quotes: "73. Bender tent with apsidal annexe, Karakeçeli Yörük. Eğrigöz Dağı, Kütahya province, Turkey, July 1984 P.A.A. Type h 39", "74. Bender tent with apsidal annexe, Karakeçeli Yörük. Eğrigöz Dağı, Kütahya province, Turkey, July 1984 P.A.A. Type h 39"

*This is an arched armature tent in which the lower part of the walls is consolidated by the addition of sales woven in and out of the benders to form wattle, or else by building a stone wall inside the line of the benders, sometimes with wattle above. As such it has firm structure which places it on the border-line between tents and huts, but it is covered with a removable velum of goat hair cloth, well within the tent tradition, and, as with other bender tents, the frame can be and is dismantled at the end of the season.* <sup>180</sup>

## Chapter 2.2.8 Spatial Organisation of Camping Groups

It is said that decisions on where to set tent and camping items falls to the women of the household who wager the right place based on availability of firewood and proximity to drinking water.<sup>181</sup> Furthermore, as already shown in the previous chapters, results of pasture negotiations with estate owners must be taken into account. As well, security against intruders, wind and weather impacts, character of ground and terrain and many other influences weigh considerably when decisions for the right camping place are made. In regard of the Karatekeli, I learnt that decisions of displacements of the longterm settled camps were maybe initiated by the women but furthermore discussed by all adult family members for several weeks before being put into action.

Furthermore, the formation of camping groups of several households may underly a traditional scheme based on tribal rules on the one hand and on personal preferences between the families on the other hand. Borchhardt explains in detail how a group of camps is formed based on the kinsmanlike relation of the households to each other (translated from German into English):

*The kabile have not been static formations during times of nomadism, even if the state has assigned commissioned leaders officially on them in the 19<sup>th</sup> century who represented their unit. The kabile consisted of flexible, -in size and composition varying-, tent groups which again contained smaller tent communities (*oba*) within. In the best of cases, the tent group consisted of members of a single sülâle.*

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180 Andrews 1997, p.322

181 Bates 1983, p.15

*Denominates sülâle the patrilinear descendant group, it is the oba that denominates their collective residence. Therefore, ideally, sülâle and oba are identical and stand for the same help and protection community.*<sup>182</sup>

Mayer explains that tent groups could have grown to the size of between 20-100 tents before the beginning of the 20<sup>th</sup> century. Therefore, about 150-180 people could live in such camps.<sup>183</sup> Then again, Bates reports of smaller tent groups that have consisted of between 2 and 20 households. It was rare that a family would camp alone for very long.<sup>184</sup>

Cribb compares Yörük camp sites with sites in Iran of the Lur concluding that given a particular distribution, the number of tents per camp can vary according to size of live-stock owned by the households involved. Meaning that the more animals per household, the fewer the tents. Additionally, he mentions that camp sizes are dependant on seasonal influences like regular changes in the composition of flocks (e.g.: lambing period, season of sale, etc. ...) and the size of cooperative groups needed to manage them. As well, the grade of necessity of defence and security must be taken into account.<sup>185</sup>

How have these tent groups been organized spatially? The reports in literature show that the spatial composition of groups can vary widely. As most authors did not set emphasis on architectural questions, certain information is missing from case to case and can only be cross referenced when trying to achieve an overall impression on the issue. Böhmer explains how he was told that Yörük tents would not be set up too closely to each other as the huge flocks of sheep should not mix when being milked in the evening. This took place near the tents and was where they rested during the daytime.<sup>186</sup> This explanation correlates with my own experiences which are presented in chapter 2.3 showing how a considerable space of the camp site is reserved for the flock, both for gathering and getting prepared for milking.

Cribb points out that tendencies of sociability and security will draw tents together

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182 Borchhardt 1998, p.78-79; quote: "Die kabile waren zu nomadischer Zeit keine statischen Gebilde, wenn ihnen auch im 19. Jh. von der Regierung offiziell anerkannte Führungspersonen vorstanden, die ihre Einheit nach außen repräsentierten. Die kabile bestanden aus flexiblen, in Größe und Zusammensetzung variierenden Zeltgruppen, die wiederum kleinere Zeltgemeinschaften (oba) umfassten. Im Idealfall setzte sich die Zeltgemeinschaft aus Angehörigen einer sülâle zusammen. Bezeichnet sülâle die patrilineare Deszendenzgruppe, so bezeichnet oba ihre gemeinsame Residenz, d.h. Im Idealfall sind sülâle und oba identisch und stehen für dieselbe Hilfs- und Schutzgemeinschaft."

183 Mayer 1994, p.103

184 Bates 1973, p.121

185 Cribb 1991, p.143-144

186 Böhmer 2004, p.26

while the needed room for manoeuvring herds and basic requirements of activity space may increase the dispersal. He explains that an area of approximately 10-20 metres operates as the optimal spatial unit within which a household can function efficiently.<sup>187</sup> He developed schematic diagrams based on the results of his study that put pasture grounds and tent camps into relation to each other:

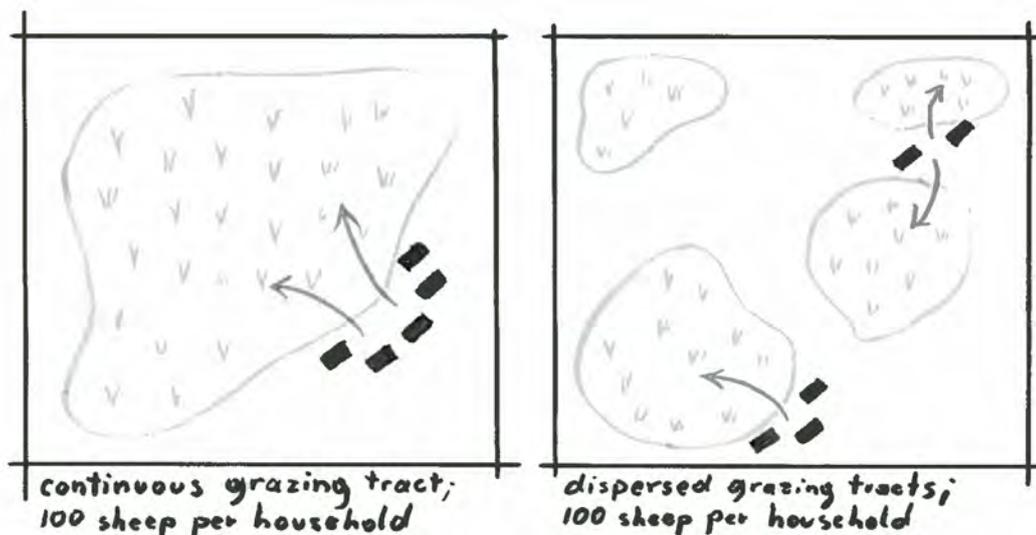


image 2.006: Schematic diagrams of the relationship pasture lots and campsites based on 100 sheep per household. Based on sketches by Cribb<sup>188</sup>

In order to test out the theoretical information of the authors mentioned above, I studied photographs of camp groups and sketched down site plans based on the information given in the photographs' perspectives.

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187 Cribb 1991, p. 145

188 Cribb 1991, p.143

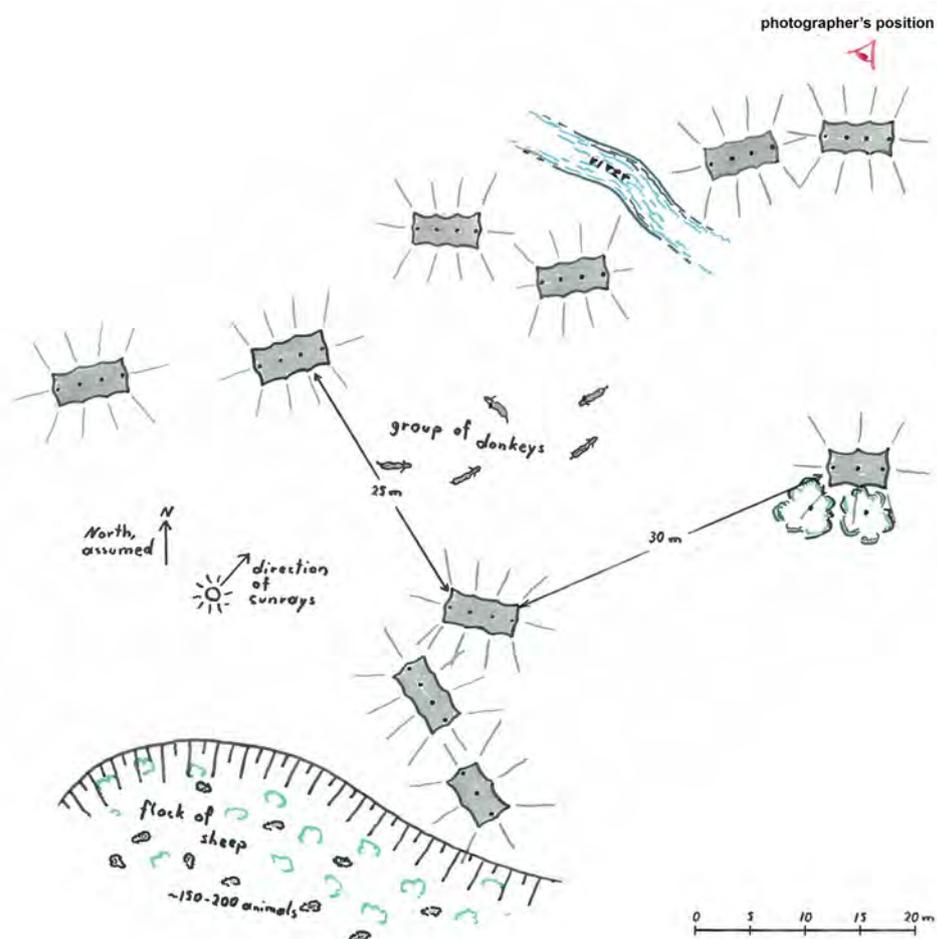


image 2.007: Interim camp of the Saçıkara in a river valley near Pınarbaşı (Kayseri) on their way back from the yayla to the winter quarters. Reconstructed site plan after a photograph by Böhmer. Only visible segments of the photograph are shown in the plan.<sup>189</sup>

The Saçıkara in this camp mainly use four pole tents. The entrances of the tents are mostly directed to the south, facing the sun. The horizontal perspective of the original photograph allows few estimates regarding distances between tents. While some tents appear to be apart from each other with just 4-5 metres, others show a distance of 25-30 metres and more. The arrangement of the camping group provides a protected pasture at the center where grazing donkeys can be spotted in the picture. Nonetheless, the grazing grounds for the flocks are unseen in the photograph.

189 Böhmer 2004, p.121, the photograph was dated September 1990

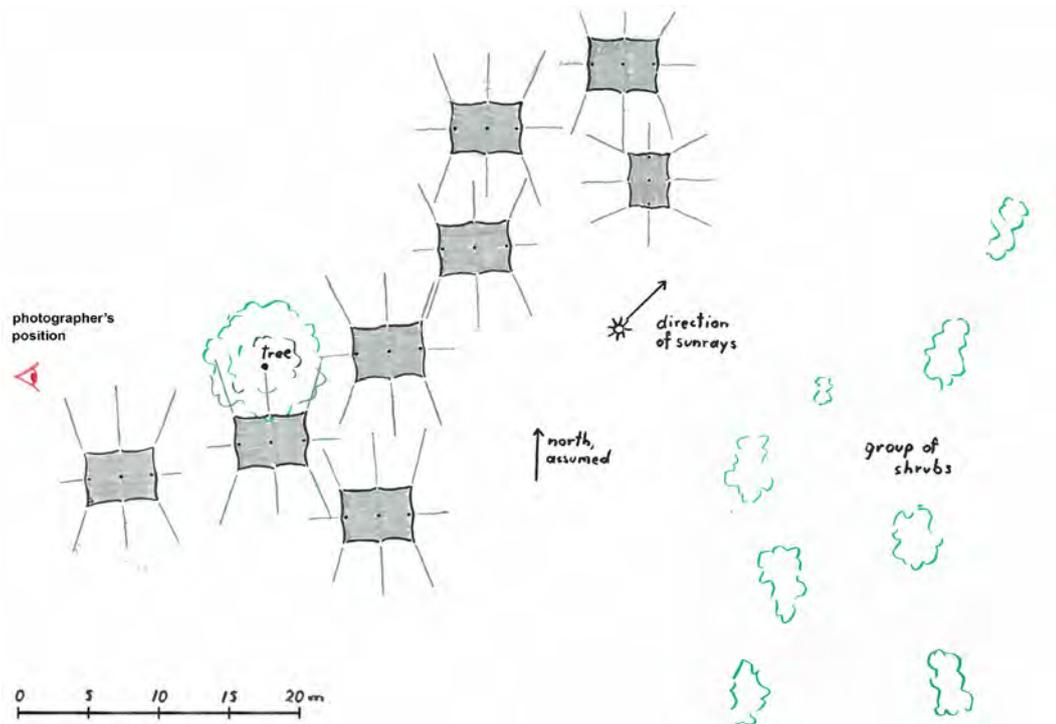


image 2.008: *Interim camp of the Karakoyunlu at Aksu (Antalya) in front of the High Toros in Oktober 1992. Reconstructed site plan after a photograph by Böhmer. Only visible segments of the photograph are shown in the plan.*<sup>190</sup>

The original photograph shows a quarter circle of arrangement. Tents entrances are again directed to the south. The gaps between tents are about 5 metres more or less. Aside to the normal sized tents of about 3,5 m width and 5 length, a tiny version of the three pole tent in the rear of the quarter circle, being rotated 90° to the main direction of tents, stands out of the common pattern.

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190 Böhmer 2004, p.103

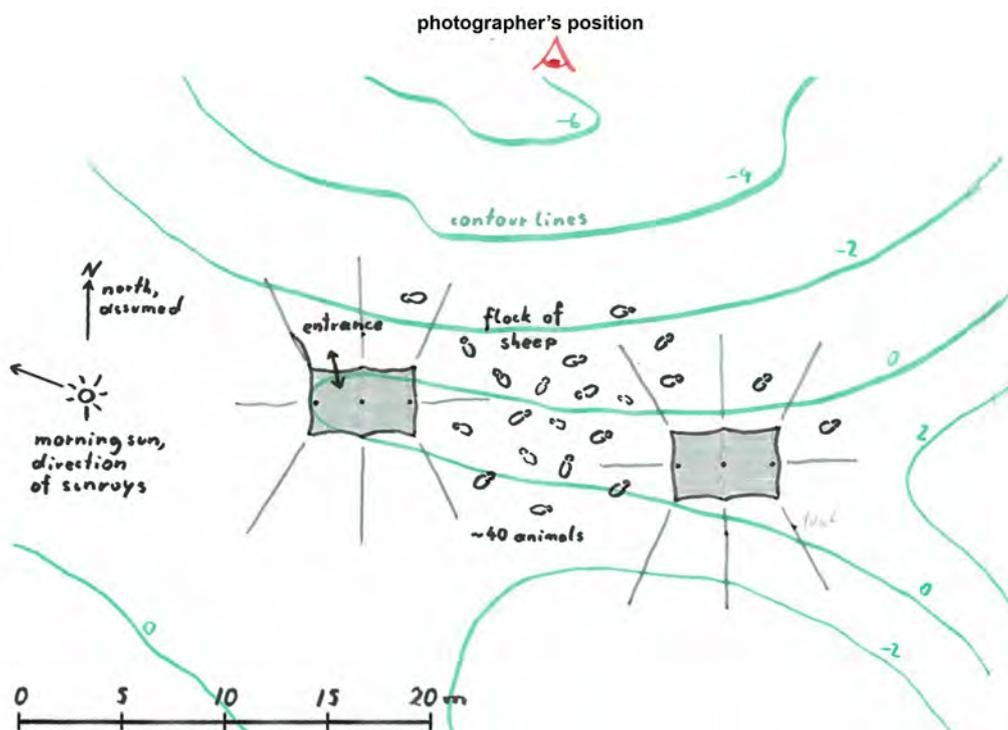


image 2.009: Black tents at the Yayla in the province of Denizli 1993. Reconstructed site plan after a photograph<sup>191</sup>. Only visible segments of the photograph are shown in the plan.

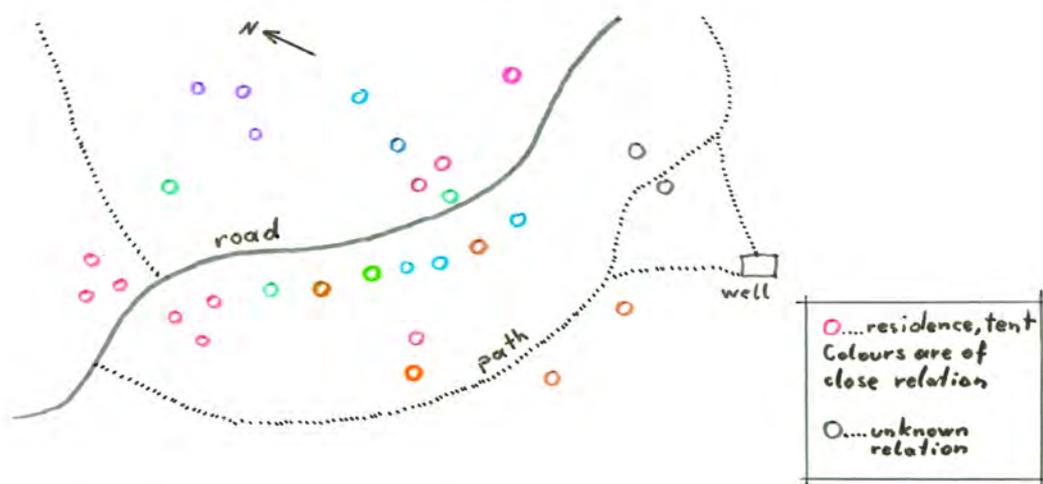
In Western Turkey, there were no traces to be found of large camping groups in the recent decades. Quite the contrary, it seemed that families of the same aşiret are vastly scattered around the foothills of mountains, remaining in contact with each other despite the large distances of about 2-5 kilometres between them. Indeed, in literature, photographs of single tents, seem to be in the majority compared to pictures of camping groups. Here, I chose to present a sketched site plan of a photograph that only features 2 tents camping together. There again, the entrances of the tents are directed to the south, being set up at a spot within the terrain that offers an optimal observation view over the flocks and arriving guests or intruders.

191 Kunze 1994, p.17

Borchhardt interviewed members of the Saçıkıralı tribe in south-eastern Turkey on the subject of camp formations and was able to reconstruct the formation of the tent groups based on findings of stone pilings for bases within the tents. At the end of the 40's the tribe formed two main camp groups on the traditional yayla. The bigger group consisted of 20 camp sites which were distant to each other by about 3 or 4 kilometres. One site consisted of 2-10 tents, but the average was 3-5 tents which were located closely to each other.<sup>192</sup>

I was able to observe such close formations of single tents during a long-distance bus journey in the region of the Aydınlı which supports Borchhardt's description but cannot provide any further information on the tribe, its economical whereabouts and reasons of camping which are important factors on that issue.

The following site plan is a simplified copy of another camp reconstruction of Borchhardt and was originally set to answer anthropological questions and therefore leaves out architectural information like the geographical direction of the tents. Nonetheless, the dispersion character can be seen. The linear arrangement of tents along the main pathway proposes the priority of easy access to the tents.



*image 2.010: Reconstruction of camping behaviour at the Avlan Yayla. Near Elmalı/Antalya, Summer 1992. Simplified copy of a sketch by Borchhardt.*<sup>193</sup>

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192 Borchhardt 1998, p.79

193 Borchhardt 1998, p.82

Based on the gathered information, I want to propose a few common features regarding camp groups. Nonetheless, this proposition needs to be handled with care as the provided data is still considered to be insufficient.

- 1) Camp groups can show an internal dispersion up to 4-5 kilometres being subdivided in smaller clusters of 3 - 5 tents on average or 2 up to 10 tents on occasions.
- 2) Small clusters of several tents may show narrow gaps between tents of at least 4-5 metres or more.
- 3) Given a certain number of tents, there is a tendency to encircle a protected area within the camp that e.g. offers grazing grounds for farm animals or manoeuvring space for the flocks.
- 4) Larger distances between the tents within a cluster may be 20-30 metres and more. According to literature, 10-20 metres are needed for avoiding the mixing of flocks when being manoeuvred.
- 5) The dispersion of the tent clusters is related to the size and location of pastures.
- 6) Pathways and access routes influence the character of arrangement.
- 7) Tent entrances face mainly the south.

The large flexibility of spatial camp formations expresses relations between families. On a social level, it is possible for the researcher to comprehend the benefits of nomadic camp formations. Social relations, personal preferences and emotional considerations are reasons for the choice of tent groups which underlie a continuous change. In cases of conflict, tent units separate and join other tent groups.<sup>194</sup>

The benefits of collective camping mostly found their climax on the high yayla pastures where larger camp groups were allowed due to the rich grazing grounds that supported larger flocks. Women would visit each other in the tents, marriages were arranged and weddings planned. It was the time of weaving and felt rug making. The men would visit the next market places and meet friends in the local tea and coffee houses.<sup>195</sup>

*If any single feature can be said to distinguish nomadic Yörük life from that of village communities, it is the freedom families have to choose their neighbours. Any nomadic group is the outcome of individual decisions to live and work with a particular set of people.* <sup>196</sup>

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194 Borchhardt 1998, p.152

195 Bates 1983, p.19

196 Bates 1983, p.15

## Chapter 2.3 Four Households of the Karatekeli Aşiret

### Chapter 2.3.1 General Information

The region of the field research lies within the district of İzmir in Turkey, 7 km north-eastern to the city of Selçuk and it is quite close to the famous excavation site of Ephesos. While Ephesos and Selçuk are well established centres of tourism, the surrounding rural area appears to be untouched by the influences of them. Just a few steps off the main tracks of tourism, one finds the traditional rural way of life. There, I was lucky to get to know four formerly nomadic families of the Karatekeli aşiret who not only helped to support my research but also became good friends. Their camps appeared to be set up for a completely nomadic lifestyle and were situated at the foot of the mountain range starting from the southern peak of Keçi Kalesi<sup>197</sup> near Belevi<sup>198</sup> running northern between the villages of Ahmetli Köy<sup>199</sup> and Sağlık Köy<sup>200</sup>. As the mountain range runs western to the highway İzmir-Aydın Otoyolu, their sites faced this highway to the east and had their backs sheltered by the mountains. All the four families are owners of their lands, an inheritance from their ancestors.

The camp of the Şimşek family is closest to the nearest village Sağlık Köy, being the most northern camp within the range of the four families. In accordance with its the location, the family holds strong economic bonds to Sağlık Köy and Ahmetli Köy. Separated by a small peak of the mountain range, the camp of the Şurgun family lies a bit further south in relation to the Şimşek camp separated by a 5 minute walk. These two families are closely connected and share economic interests and tasks on a daily level. Further to the south and closer to the highway, the camp of the Durabay family could be found. Their location is strongly connected to their economic interests as the

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197 „keçi“ means „goat“, „kalesi“ is the genitive flexion of the Turkish word „kale“ meaning „castle“. Keçi Kalesi means „castle of goats“ referring to an old local story that was told orally to me: Several decades ago there were fights between Greek and Turkish people in this region. The Greek army was about to intrude into the valley of Belevi coming from Selçuk. From the distance, they saw a big horde of fearful Turkish fighters running towards them along the slope at the mountain of Keçi Kalesi. They appeared to be so big in numbers that the Greek army decided to retreat immediately. Therefore, the battle was won by the Turkish side. But in fact, the assumed horde of Turkish fighters was not people but a huge flock of black goats being driven by the local shepherds.

198 „bel“ means „waist“, „evi“ is the genitive flexion of the Turkish word „ev“ meaning „house“. The village is situated at a throat of the main valley.

199 „Ahmetli“ derives of the forename „Ahmet“, „köy“ means „village“.

200 „sağlık“ means „life, health“, „köy“ means „village“.

majority of the family have taken jobs at the petrol station on the highway which can be reached by a 10 minute walk. In 2007, the family still lived there in their black tent huts. By 2010, the whole family had moved into a flat in Belevi and the daughter of the house has married the rich owner of an apricot plantation in Selçuk. Most southern lies the camp of the Çetinkaya family which is closely connected to the large village Belevi. All four families can be reached by car along a small side road street that runs parallel to the highway. All their camps are supplied with water springs and cable connections to electricity supply posts. The next railway stations can be found in Sağlık Köy or near Belevi and the same goes for the bus stations. For shopping, the markets and bazaars in Torbalı offer the best value. In addition, the bazaar in Selçuk is occasionally visited. Shopping expeditions are rarely made to Belevi or Selçuk.

The families had difficulty in naming their tribe as they did not feel themselves to be named after a specific tribe. Only in the year 2009, the Durabay family lent me the book of Eröz telling me that he was a professor who photographed and interviewed their ancestors and left the book as a present years later. The woman of the household, Aişe Durabay, opened the book and put her finger on a name of a tribe Eröz had listed in a short overview about lineages. She explained to me that the “Karatekeli” was theirs. Indeed, Eröz writes about the Karatekeli Aşiret which was well established in the region of İzmir<sup>201</sup>. He as well mentions camps at the end of Selatin köy (Ortaklar-Aydın) and explains that this lineage can be found in the Aegean region.<sup>202</sup> In the following chapters I will describe each of the four Karatekeli families. The order of description resulted from the order of my first encounters with the families since 2002. I chose to devote a chapter to each family as they are all pursuing very different economic occupations and daily tasks although their accommodations and tribal affiliation are the same.

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201 Eröz 1991, p.112

202 Eröz 1991, p.47

### Chapter 2.3.2 The Çetinkaya Family

I have already met the Çetinkaya<sup>203</sup> family in 2001, when the grandparents of the little girl Hatice<sup>204</sup> still owned a tent. In 2002, I learnt that the grandparents of Hatice had died. Then, in 2003, Hatice herself was mourned after dying of a serious measles infection. After these tremendous losses, her parents, Ayşe and Mustafa, struggled to re-establish their household. A few years later their son Mehmet was born. The parents and their daughter Fatoş gained new confidence then. Before the death of Hatice and her grandparents, the family owned a special breed of cattle that provided good income. In addition they had held shares of a huge area of grain-fields which were lost to relatives after the death of the grandparents. Having lived in a black tent until 2003, they then had to live in huts until 2006. The first years after the dreadful losses were very hard for the family. They improved their camp by creating a new site organisation and acquiring a new black tent from the Durabay family. Their flock of goats grew to a remarkable size and soon the family's income was again respectable. The above described losses were not the first ones to happen to the family. Mustafa Çetinkaya explained to me how he had lost his first son during a storm in the nearby stone quarry a decade ago. The son rode a horse trying to save the flock from the storm. At the stone quarry the horse slipped and he fell into the pit filled with water. As he was not able to swim, he drowned or possibly he bumped his head and had fallen unconscious before drowning. The stories of the Çetinkaya family show how fragile human life is here and how dangerous their daily tasks can be. Luck turns in no time and the reestablishment of a stable household can become difficult.

In 2007 they held about 200 goats of mixed breed with emphasis on the Anatolian Black, a breed providing quality cashmere hair. The flock contained 5 rams, the rest females and lambs. During the year, especially in spring, the family sold lambs for meat production, in addition to selling the daily goat milk to the local dairy service and delivering the goat's hair to the weavers' villages near Bozdoğan. The goats were generally shorn once a year, sometimes twice. Occasionally, Mustafa took seasonal jobs in the region of Belevi, e.g. repair work on the tracks of the railway or other technical repair jobs in the village. His wife Ayşe, his daughter Fatoş and the little toddler Mehmet took care of the goats and the other animals that were tended in the camp e.g.

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203 „çetin“ means „difficult“, „kaya“ means „rock“. The old and quite common Turkish surname can be translated as „difficult rock“, referring to a rock that is difficult to crest or difficult to manipulate. In fact, the family lives next to a quarry where people have already died due to storms and floods and the difficult terrain. As well, the mountain where they herd their flocks is famous for its tricky ravines that are hardly to notice for the badly informed wanderer.

204 see the story of Hatice in chapter 1

the horse of Fatoş, some ducks, chicken and guinea fowls. They had a garden bearing various vegetables like tomatoes, aubergines or cucumber. Occasionally, the daughter herded the flock all on her own by riding the horse. In such cases, she drove the flock all over the steep mountain up to the highest peak. Each evening, the flock needed to return to the pen.

I did not have much occasion to observe the family's daily tasks but altogether I am able to give a rough overview of their daily schedule in the month of July, when the climate is extremely dry and temperatures may reach 40°C during the day.

The day starts when goat milk of the previous evening is set out at the street for the dairy service to fetch, the bottle-fed lambs nourished and ill animals get their daily treatment. At about 6 o'clock in the morning the goats are released from their pen.



*image 2.011: Bottle-feeding of fawns in the morning*

The goats start grazing alone on the slope of the mountain, without a shepherd. The whole mountain can be used for herding by the family, which offers marvellous conditions for them. The women prepare breakfast, clean the tent, water the garden and tend the small animals like chicken and guinea fowls. Between 7 and 8 o'clock the family eats breakfast together. Afterwards, Mustafa leaves for work and Fatoş mounts her horse in order to go after the goats who have by now reached the peak of the mountain

at a altitude difference of 600 m.

Later, during the day, Fatoş drives the goats down the mountain and is joined by her mother and little brother. Together they lead the goats to the harvested fields wherever they have an agreement with the farmers to allow their flock to graze.

I could not observe how lunch is carried out. In the evening at about 7 o'clock p.m. The whole family meets again for dinner. Then, the goats are driven into the enclosure where the adults and their daughter start milking them. As there are about 150 goats to be milked it is important for the family to have an efficient routine there. The pen can be divided into two sections with a small gate connecting them. For milking, the ewes are driven into one of the sections. From there, Mustafa grasps one mare after the other in order to push them to the gate where the two women start milking them side by side. As soon as a goat is milked empty, the women push it through the gate to the other section of the barn.

There are several additional tasks that need to be accomplished during the evening time, that are not listed here. Again, and at regular intervals throughout the day, the bottle-fed animals are given their milk. Shearing also takes place in the evening time. Bedtime may be at 10 o'clock or later.



*image 2.012: Tent of the Çetinkaya family in 2007*

The Yörük Black Tent

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*image 2.013: Camp-site of the Çetinkaya family with a black tent in 2007*



*image 2.014: Milking of the goats within the goat pen*

The Yörük Black Tent

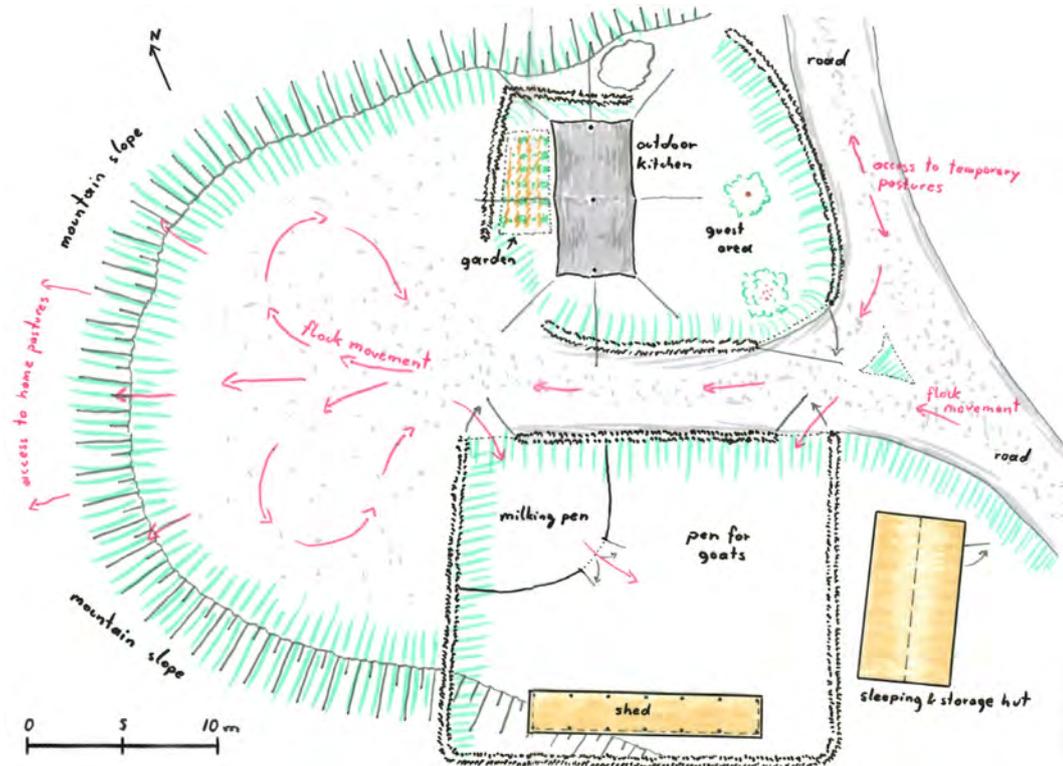


image 2.015: Site situation in the year 2007

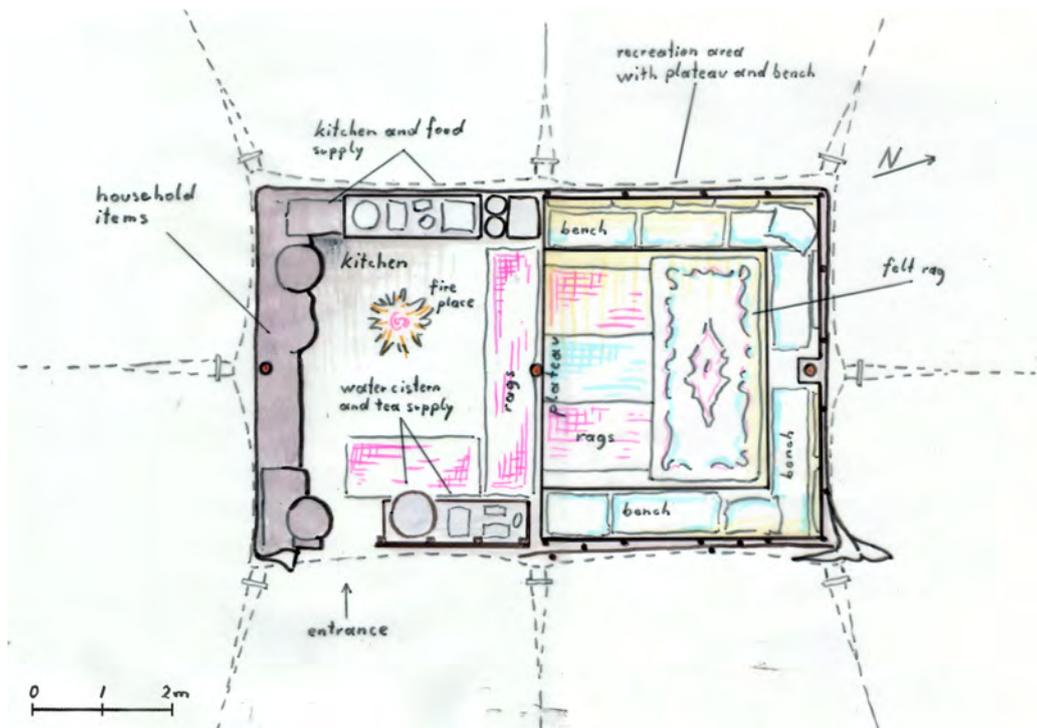


image 2.016: Interior design of the tent in the year 2007

In the course of changes in the previous years the family tried to optimize and enlarge its camp for improving lifestyle and working conditions. In 2007 the camp had reached an optimal arrangement which made the family feel confident. The camp is embedded in a basin at the foot of the mountain. Altogether I perceived that the camp was divided into four quarters. The two front quarters were facing the street offering a good view into the main valley. You can see the railway tracks, the busy highway and some industrial facilities there. And most importantly, you can be aware of visitors coming up the long road. These two front quarters are reserved for human accommodation. The black tent is situated in the south-eastern point of it, the newly built hut stands within the south-western front-quarter. Between tent and hut area a broad pathway opens up the rearward quarters which are reserved for the huge flock of goats. Behind the hut, in the western rearward quarter, you can find the pen and the barn for the goats. The eastern rearward quarter does not show any architectural design as it is just an open flat area which is used for gathering the goats before driving them into the pen.

### The site

The entrance of the tent is facing south-east. To the south and the east, the outside area in front of the tent is encircled with a fence of shrubs and poles offering an oval space of at least 7-10m radius that marks the eastern front quarter. The fence is discontinued at two spots, the entrances, one facing north-east and one facing south-west to the newly built hut. The fence border marks a private area and helps keeping the dogs and chickens within a certain range. The garden is situated behind the tent, mainly unseen by visitors. In 2007, the family did not sleep under the tent any more but in the newly built hut which offered a warm wooden atmosphere inside. Just as the tent, the hut was cool inside. Now, the tent was used for chores during the day as a working, cooking and welcoming place. Visitors were taken care for there.

On the other hand, the newly built hut was generally only used during the night for sleeping or in some cases for resting during the day if one of the family members had been working through the night. The hut had a square floor plan with entrance facing the street and a window facing the rearward barn which held the goats. It is surprising that they would not have been aware of intruders once inside the hut. There was no way to look out at the street without opening the door. On the other hand, the Çetinkaya family was eager to explain that the hut had not reached its complete function yet and improvements were to be made. Thus, this quarter was still to be considered under construction. Apart from offering a resting place, the hut also contained most of the belongings of the family, in particular clothing and textile furniture.

The rearward quarters are a masterful example of how to handle a huge number of goats with a minimum of personnel. Looking from the southern side of the camp, the left quarter contained the resting place for the goats with a small barn and a pen divided into 2 sections. The right quarter was just an open area that allowed herding goats into a certain direction. In the evening, when the goats had to enter the camp, they marched past the tent and the hut on the broad dividing pathway into the right rearward area where they gathered, waiting for the next stage to happen. Then, the first gate of the fort section of the pen was opened and the family members drove the lactating mares into that pen section. Afterwards the pen was closed again and the rest of the goats waited outside in the right quarter area. The lactating mares were now driven to the second gate that allowed entrance to the second pen within the barn. There, in the second gate, the mother and the daughter of the household were ready for milking the mares before allowing them to enter the final pen. Meanwhile, the father of the household sorted out the mares and oversaw the whole process. As the animals want to return to the barn, none of them are lost. When all the mares have been milked, the

rest of the flock can access the barn finally, getting locked in for the night.

The family owns two dogs but they were not used for this procedure. It seems that it is actually possible to train sheep and goats for certain procedures. As soon as the old animals of the flock have learnt the routines, the rest of it will follow instructions willingly. The family's washing place was located outdoors behind the black tent next to the tiny vegetable garden. But the toilet, which was simply an area outside the camp, was situated further off, south to the sleeping hut at a tiny slope featuring shrubs and bushes to hide during business.

The tent

The black tent of the family was newly bought from their relatives, the Durabay family. It is a classical 3-pole Yörük tent of remarkable size as the roof measures 8 m in length and 5 m in width. The height of the poles was about 3 m. Research shows, that 8 metres length is the common largest size of that type of construction so far. This seems to be plausible as the Çetinkaya family explained to me that the tent was altogether difficult to handle because of its weight and its complicated performance during set up or structural correction. Therefore, larger sizes of that construction type might prove to be impractical. Indeed, the tent broke during a storm in the year 2009 and could not be repaired satisfactory afterwards. In accordance to my literature research, the Yörük families in that region explained to me that the maximum size of 8 metres is common but rarely used.

The interior of the tent showed a traditional arrangement as being described in chapter 3.1.2 with a few exceptions.

As the personal belongings of the family were stowed in the newly built hut, there was no alignment of textile furniture along the walls of the tent except for a few sacks of ration storage near the cooking place. The resting area in the rear third of the tent was slightly elevated from the ground by a wooden construction, encircled with benches running along the wall line. The elevated floor was covered with woven rugs and a richly decorated felt carpet.

### **Chapter 2.3.3      The Durabay Family**

The Durabay family lives a 10-minutes-walk to the north of the Çetinkaya family, being closely situated to the Shell motorway service area of the highway İzmir-Aydın Otoyolu that runs alongside the mountain range. Regarding the fact that part of the family works for the motorway service area, it may appear obvious that they have cho-

sen to set up their camp for employment reasons. But that is not the case. The camp was already set up in 2002 just before the construction of the motorway and the service area started. They simply own their land at that spot. In 2004 they decided to develop a peach plantation on their estate according to the present trend of increasing value of peach farms. The busy parents Mehmet and Ayşe Durabay and their adult children Cennet und Erol create a strong workforce leading to a common goal: saving money for their own concrete house. The whole family is not involved in pastoralism but rather in agricultural tasks that occur during the seasons. They help out on the surrounding fields whenever labour is needed providing their own tractor with cultivating accessories and a lot of knowhow. Until 2006, they lived in two black tents moving their camp every two years by a couple of 100 metres in order to optimize it for personal needs and environmental conditions like occasional wind impacts, street noise and dust or relation to the peach plantation. In 2007, they converted their tents into huts made of wood that were covered by plastic canvases and black tent cloths of the former tents. Actually, these huts were their seasonal constructions for the winter which were always deconstructed in the spring in order do make place for the tents. Eventually, they left the winterquarter unchanged and used it in the summer as well. In 2008, the daughter of the house, Cennet, married a rich farmer in Selçuk and thus left the household. In 2010, the rest of the family finally moved away into their new flat at the village Belevi. Still owning their estate near the Shell service area they continue cultivating their peach plantation which has reached its full economic potential. The Durabay family is a hard-working family with their goal to change their lifestyle drastically towards settled middle class.

After knowing the family since 2003, they offered to build a new black tent for me in the year 2006. This became difficult for them to fulfill as the mother and children were employed at the service station and the father was working on the peach plantation every day, but in an effort to fulfill their promise they enlisted the Şimşek family to help out with the black tent construction.

In 2007, the daily schedule of the Durabay family was a tight one. The children of the household were already adults and had full time jobs at the nearby service station. A shift of daily work lasted for about 10 hours and could start at about 7 o'clock or 13 o'clock depending on the weekly shift they were assigned to. Altogether, the daughter and the son mainly had to work on different shifts so that at least one of them had to get up at about 6 o'clock for getting ready for work. The mother of the household would rise a bit earlier than the child to prepare breakfast. Her working shift started a bit later compared to the children and thus she was able to manage a few household chores

before leaving for work. The father of the household rose at about 5 o'clock for starting to water the plantation. His task lasted for at least three hours. Later on during the day he would leave for seasonal jobs on other fields.

The family members took lunch separately. The child of the household who started his or her shift at 13 o'clock would cook lunch at home in front of the black tent hut. The others would eat at their working place. The family gathers again at about 18 o'clock. Dinner may be cooked at about 19 o'clock when the mother of the household had returned from her work. Sometimes the daughter would cook instead of her. In the evening the whole family gets together except for one member who has to do the late working shift at the service station. This was also the time when they welcomed visitors and met friends at their home. The family was happy to receive guests in the evening because their tight schedule did not allow them to make visits regularly during the week.

Social gatherings are highly important in Turkey. If a family is not able to maintain them on a regular basis, it is important to compensate this lack of social interaction during off time as e.g. during the weekends. Indeed, the Durabay family had a very tight schedule of numerous visits during the weekends and I was lucky to accompany them then, learning about a lifestyle that already differed from the other Yörük families. It was apparent that this family changed their traditional way of life into a more modern way that includes fixed service jobs and strict time schedules dividing the day into leisure and working time.

The site

The campsite of the Durabay family changed drastically over the course of the last years. In the year 2005, as their life was still quite similar to the surrounding families, the campsite showed a practical scheme of working zones divided in certain quarters of usage. Small animals and a garden were tended. Sleeping places were spread over the camp encircling the private area. The former camp was situated in a basin. The tent marked the most southern point of the camping area. The summer shelter for social gatherings was set up at the centered rear when the slope of the mountain started. In the north another hut marked the outer rim of the camp and to the south a sleeping wagon was set up for the children. The camp did not contain a barn or a pen as the family had already stopped herding by then.

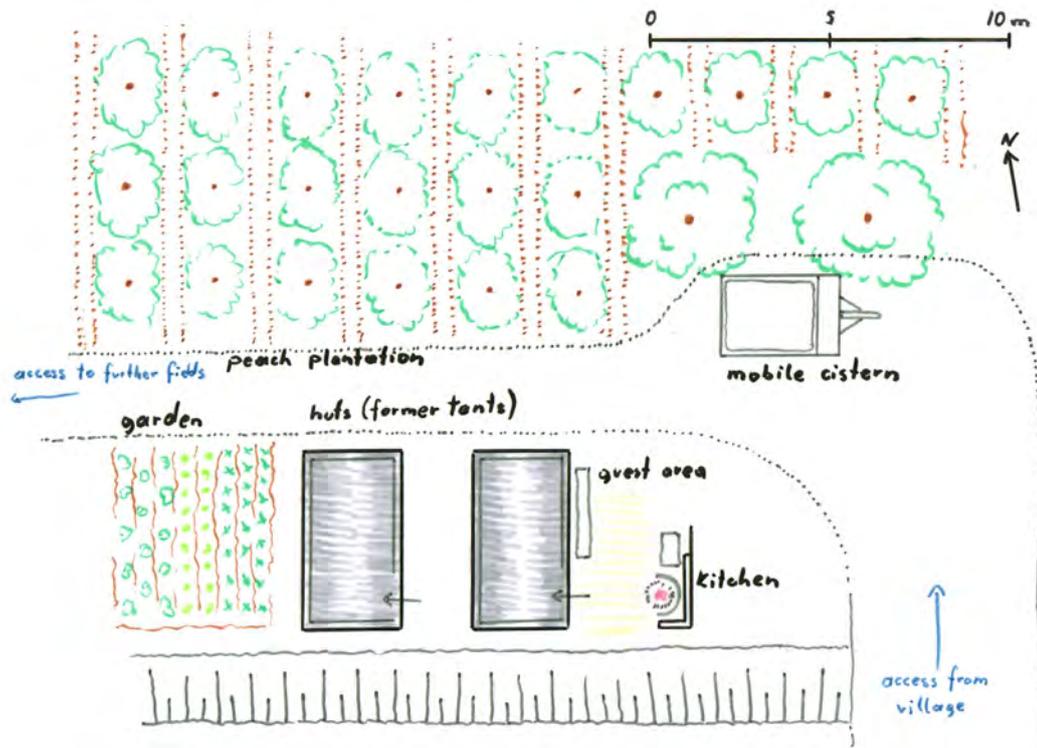


image 2.017: Sketch of the campsite in 2007

In 2007, the camp of the family differed strongly from the previous camps. It was not established on a circular floor plan anymore but on a scheme of rectangles. The black tents that were shortly transformed into huts covered with the black tent rugs stood side by side. Both of them were used for sleeping and for storage of personal belongings. In winter, the front hut would be used for welcoming guests. In summer, guests were only welcomed in front of the front tent without shelter. A shelter was not necessary as visits could only happen in the evening when the sun was setting and as rainshowers are very rare, resting outside was preferred by most of the visitors. The small garden was set up behind the rear tent, unseen for guests and intruders. That was as well the washing place for morning toilets due to the water outlet installed there. Continuing the path to further fields in the west (see image 2.017) the outdoor toiled area could be accessed

about 30 m off the camp at a tiny slope with bushes again.

This new site plan shows how dramatically the camp can be reduced when the functions of daily work are transferred to another location outside the household. The women of the house did not tend the place anymore to the same degree as the neighbouring families. Therefore, the area of interaction was cut down. Arrangements and settings of pathways lose their importance. A rectangle floor plan helps reducing the maintaining space to a minimum, letting the camp be organized to maximum efficiency according to the family's needs.

#### The tents

In 2006, the family sold their 8 metres tent to the Çetinkaya family. Afterwards they set up two older tents which were well usable for a summer season but then broke due to their old age of about 20 years. Normally, the family converted the tents into huts for the winter season and then converted them back for the summer time. In 2007 they kept the huts which were partly covered by black tent rugs and plastic canvas.

This was a good opportunity to study the huts which I had seen in the winter when I made a short trip to Turkey.

Structurally, the hut consists of a wooden frame which is fixed against horizontal impact by few bracing bars. The design of the frame is similar to the cubage of a tent. The roof is covered by a thick plastic canvas which again is covered by the black tent rugs in order to shut sunlight off from the interior. In winter, a little slow-burning stove is placed inside with a chimney pipe to the outside for ventilation.

The walls are covered by black tent rugs and stiffened in the lower section by a corrugated iron sheet that is held upright by several iron poles driven into the hard ground. The iron sheet protects the interior from high winds.

The interior design still resembles the traditional division, although the area for guests is scaled down giving way for an enlarged section to store personal belongings. Each hut offers a sleeping place for two people. The front hut contains a small fire place for cooking tea, however most dishes and teas were cooked and served outside in front of the tent at the exterior fire place.

The front tent is quite crammed in summer time with personal belongings. For the winter, these items are packed densely, offering more space for visitors and inhabitants.

No matter how stressful the life of the family members is, the whole camp always showed a tidy and orderly appearance.

In 2005, the black tent of the family differed and resembled in certain ways to the huts

in 2007. First of, the entrance of the tent was set on the eastern side of the front which posed to be an exception to my experiences in that area. The whole groundplan resembled the traditional design but mirror-inverted. The Durabay family was the only one who converted the exterior walls of the tent into shading flaps during the hottest season. This enlarged the tents interior area and made it more transparent to the outside. The opening of the walls is a common practice which does not require any extraordinary handling. Still, the Durabay family was the only one observed, who really used this regularly. None of the other families manipulated the tent walls in this fashion. As early as 2003, they used a corrugated iron sheet as wind shield. Normally, woven reed or plastic mats were used there.

During the field research an interesting detail came to light: Hens lay their eggs in a collective nest. These hens had been encouraged to lay their eggs on the textile coverings of mobile furniture at the rearside rim of the tent. The nest could be comfortably reached from the interior cooking place. The mother of the household waited until a hen had finished laying the egg and then took it, broke it and fried it in the hot pan on the fire. Altogether, the handling of the tent and this tiny detail of training the chickens, shows a charismatic and dynamic quality within the family. It is this quality which allowed the family to dramatically break away from their long established tradition in the following years.



*image 2.018: The tent of the Durabay family in 2005*

### Chapter 2.3.4 The Şurgun Family

Further in the north, situated in another basin with a slightly higher altitude at the foot of the mountain range, lies the camp of the Şurgun family. Though becoming known to the family members in 2005, I visited their camp for the first time in 2006. The Şimşek family wanted to introduce me to this family not only because the camp contained 2 black tents, but more importantly, they were close relatives, friends and economic associates.

In 2007 Halil and Emina Şurgun led the household with their two children Taner and Keziban aged 4 and 7. Our party from Austria were always a big curiosity for the two children.

Their parents encouraged the son (and years later their daughter) to try the English he had learnt at school, out on us, but he and his sister were too shy to try despite being familiar with us. School education was a very important subject for all the Yörük families who are part of this research.

The Şurgun family owns a flock of about 120 goats from which they sell milk on a daily basis and like the Çetinkaya family, they sell the goat's hair and meat. As their flock is smaller than that of the other family, they rely on additional income which is provided by the father of the household. As the goats are being milked each evening, the grandparents of the Şimşek family fetch a certain amount of the milk from their neighbours in order to produce cheese that will be sold at the market later on.

During the day, the grandmother of the Şimşek family would join the children during the school holidays in summer, or the mother of the Şurgun household in order to herd together Şurgun's goats and Şimşek's cows.

An overview of the economic details of the Şurgun family as compared to the other families was not possible to access, but it was quite obvious that they were socially well respected and embedded within the community of Ahmetli Köy and towards the Şimşek family. Good social contacts are a very important factor for wealth and security in this region. Additionally, it was an honour to be able to get to know related members of the Şurgun family as they always showed the utmost respect, politeness and reliability. This seemed to be a strong human profile for the whole clan that must have paid off throughout the generations.

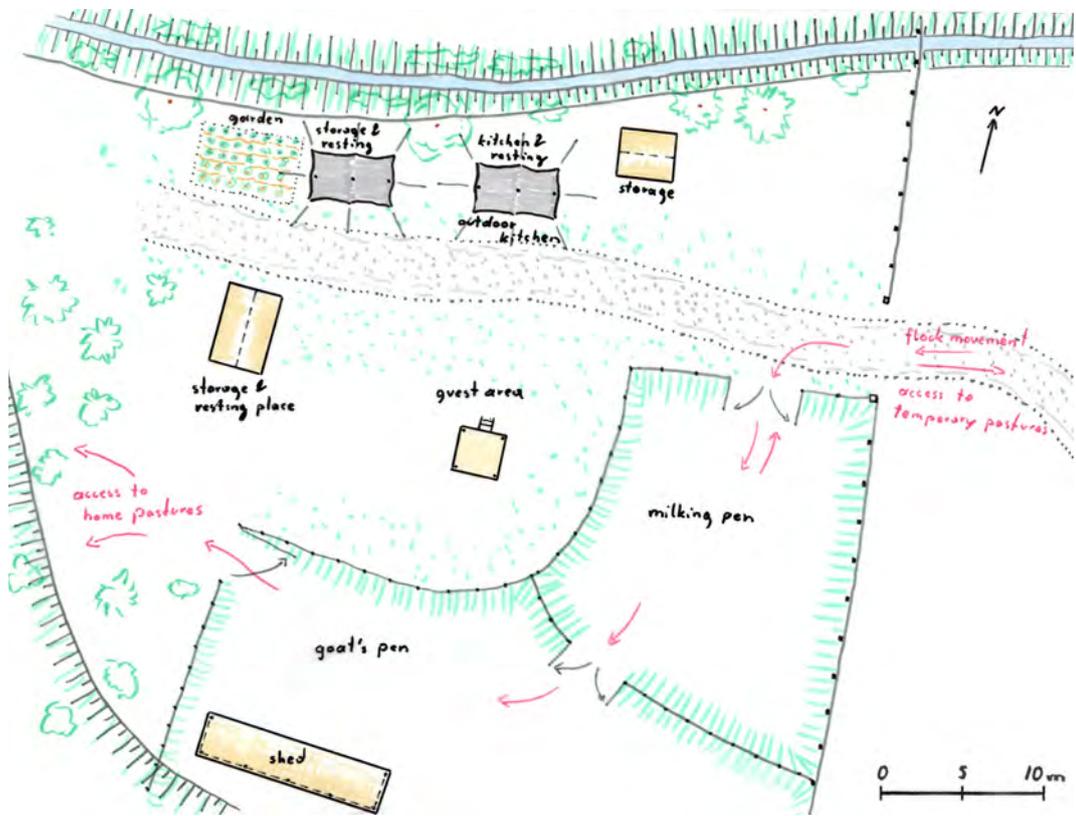


image 2.019: Sketch of the site of the Şurgun family in 2007



*image 2.020: Tent of the Şurgun family in 2007*



*image 2.021: Interior of the tent of the Şurgun family in 2007*

#### The site

Similar to the Çetinkaya family and to the former camp of the Durabay family, the camp of the Şurgun family shows an arrangement that supports an efficient handling

of everyday work combined with the need of security. The site is as well embedded in a basin that is flanked by a little brook in the north that carries water during winter time and dries out in spring before the summer season starts. The two tents are set up in line along the brook. The eastern tent is the representable one as it is well situated to welcome visitors at the entrance of the camp. The western tent is only used as a storage place. In 2009, this tent was no longer in existence as it had finally broken due to its great age. Next to the front tent and divided from it by a broad pathway which was probably reserved for the goats and tractor, stands the summer shelter, a shade giving construction which is elevated from the ground. The summer shelter offers space for gatherings during the day when meals are served and guests are entertained. The elevation of summer shelters provides the security that no scorpions, snakes or other small animals or insects can hide beneath the blankets and items put on the floor. As meals are cooked in or in front the main tent and served in the shelter it appears to be quite impractical to set those two building so far apart. In this case it seems that security rather than efficiency of access is the priority. In a distance at the western rear-side of the shelter, there is the hut in which items can be stored. The wooden hut is not only used for storage but as well for coarser activities such as slicing meat, washing the laundry, etc. In some cases it also contains the family shower.

The barn of the camp is situated at the most southern point with a pen that partly encircles the camp to the south-east.

The washing place was installed behind the western tent in 2007 and the outdoor toilet was a but further west at the slope that leads down to the brook.

The milking of the mares takes place in the open terrain unlike the Çetinkaya family who use gates and pens to restrain the animals. There, father and mother of the household work together, one milking the mares and the other fetching them. They both take turns in these tasks.

The small garden is situated at the back of the wooden hut, unseen for visitors, similar to those already mentioned in previous chapters.

Why are the gardens so well hidden? As most of the camps are aligned to the south east, the rear-sides of them offer the most shady places close to the spring that supplies the camp. The garden should not be too visible for trespassers as it is common practice in Turkey to collect single fruits and vegetables from the open fields. In case of the small family's garden this common habit is not welcomed as there is little to spare and the female head of the household prefers to make decisions as to what is served to guests and friendly trespassers.

### The tents

Of the two tents, I was only able to visit the front tent which was reserved for cooking and welcoming visitors. It is the only black tent in that valley that was fully equipped and arranged according to the descriptions of Eröz. The seating of guests and family members according to their status occurred according to old traditions. When invited, we were seated at the rear end of the tent which was decorated with pillows and a felt carpet on the floor. Next to us always a member of the family sat down explaining things to us. The mother of the household would tend the fireplace which sometimes bore a tea kettle or a cauldron full of goats milk that she prepared to serve us. The children were free to wander about in the tent except for mealtimes. At the flanks of the tent we could see the textile furniture containing belongings, clothings and food storage. In the evening time, larger meals would be cooked outside in front of the tent.

### Chapter 2.3.5 The Şimşek Family

Having already visited the camp of the Şimşek Family in 2003, it was in 2007 during the construction of the new black tents that closer observations were possible. Similar to the Çetinkaya and Durabay family, the Şimşek family has slightly changed camp positions throughout the years after finally finding an optimal place in a basin that rather faces north instead of south. Their camp in 2007 showed an optimal arrangement to support the family's daily tasks and was designed on an encircling site plan. Primarily, the family lived from the income of their flock of sheep which counted 150 individuals. They do not milk the ewes, but sell the lambs seasonally and the raw wool that they obtain once a year. Mehmet Şimşek, the father of the household, explained to me that the sheep offer a yearly income of about 8.000 Euro. Additionally, the family earns money by selling calves of their little cattle flock and producing marinated olives at the end of the year from their huge olive garden at the mountain slope. Mehmet Şimşek also raises small olive trees of a special species that he sells during the year or plants them when old olive trees die.

The family also keeps a few goats, chicken and geese.

The two teenage children of the family earn money by working at the service station on the highway. The mother of the household and the two grandparents tend the family's stock during the day and help out with the tasks that are jointly accomplished with the Şurgun family as described in the previous chapter.

As an invited guest of the family and having stayed overnight, observation of the family's daily schedule was possible.

At about 6 or 7 o'clock breakfast is served. The mother of the household wakes up the children who have to leave for the early shift at the service station. They get a quick breakfast to eat. Afterwards the father and the grandparents rise and start their morning tasks and the morning toilette, taking turns at the water outlet. Early tasks for the father would be fetching water for the animals and watering the young olive trees before returning to breakfast. The grandparents would take care of the cheese production and help serving meals or feeding the small animals at the site. Quite often, they get visitors for early breakfast like shepherds who work in the area or relatives who would come over for common family tasks. After breakfast the father of the household would leave to helping out with seasonal tasks at relatives, bargaining good conditions for their husbandry, sorting out bureaucratic necessities, organizing the veterinarian or related tasks that are essential for a good organization on the farm. The grandmother of the household starts early driving the cattle over to the estates of the Şurgun family in order to join in in the common herding with the flock of goats. The mother of the household sees to the chores at the camp and the grandfather helps out with tiny tasks he can accomplish due to his age and hip handicap.

During the day, the sheep would stay within their pen, trying to find shade under the shelter of the barn. In 2007, the family still owned a donkey which died the following year of old age. In addition they own two shepherding dogs which do not accomplish any tasks during the day but work during the night.

For lunch, the father and the grandmother would return to the camp during the day. Before noon or in the afternoon officers of the local Jandarma would come for a tea. It is their task to patrol the mountains guarding against fires. During the summer months, fires occasionally happen which could destroy large strips of land in Turkey. In the evening, the family would gather again. The children return from their jobs, the grandmother drives the cattle back to the barn and the father returns from his tasks in the region. Sometimes dinner would be eaten at the Şurgun family or vice versa they would be invited to dinner at the camp. Occasionally the evening meal would take place at the Durabay family. Sleeping time would start at about 10 o'clock with all the family members assigned to several locations spread throughout the camp. When I first learnt about the spread sleeping places I was a bit surprised by that habit. But as I started to understand that each camp is organised to a maximum security against undesired intruders it is strategically wise to spread instead of gathering at one vulnerable spot. Each 'dossing' community is equipped with its own rifle ready to take action if things run bad.

Therefore, the grandfather slept in the black tent (which was his sentimental habit), the grandmother would sleep together with the mother and the daughter in the gathering

shelter. The son would sleep alone in the summer shelter and the father would rest at a sleeping place at the gate of the camp with a rifle under his head. During the year, sleeping places and communities often changed so that I always faced a different sleeping situation when I was dropping by.

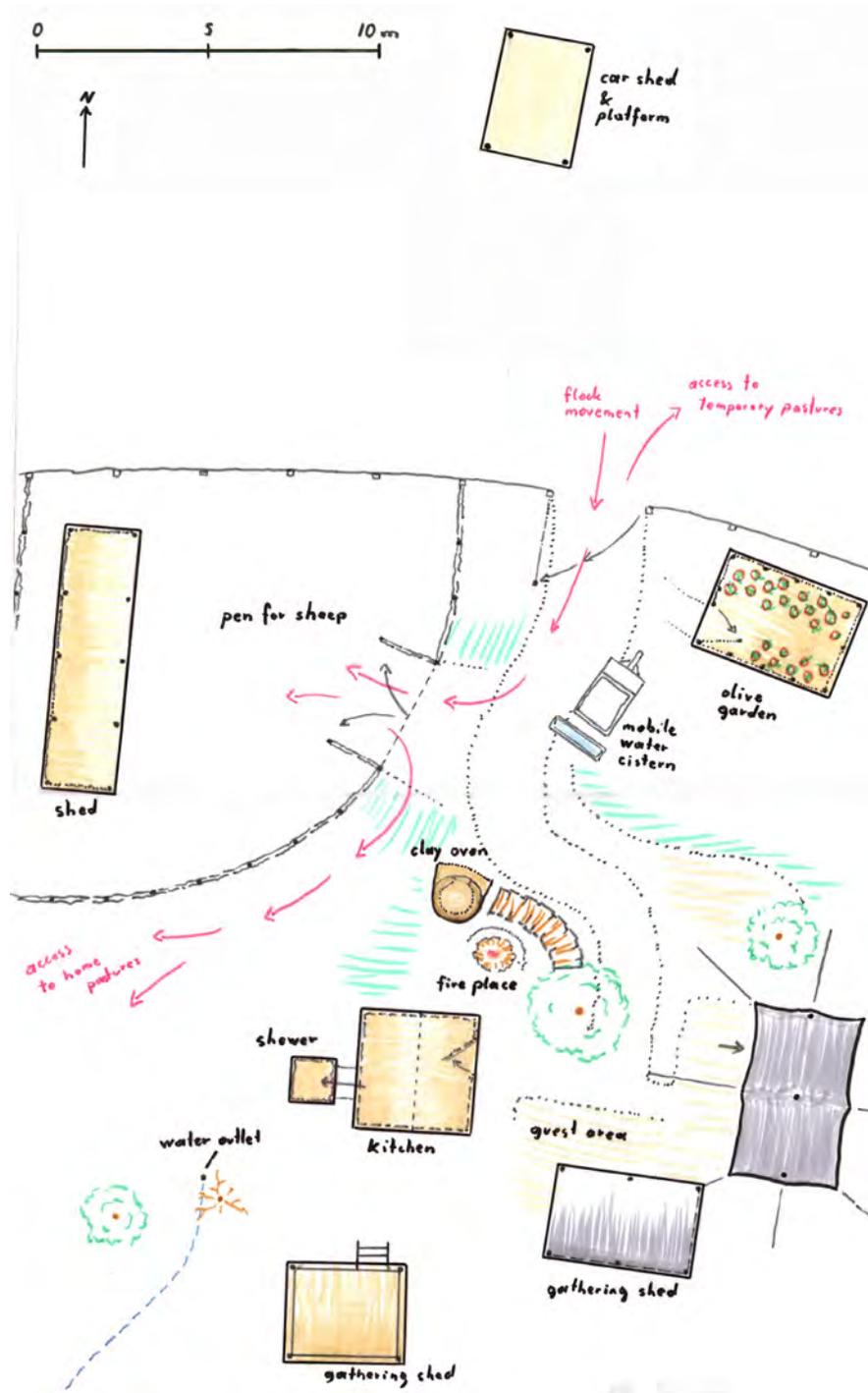
The common idyllic vision is that sleeping in a nomad camp is a pleasant thing beneath the twinkling stars in the fresh air. In many cases it is, but in the case of the Şimşek family, and they are not an exception to the rule, this idyllic picture is added to with busy shepherding sounds of the two dogs driving the baaing flock of sheep up and down the mountain. Sheep do suffer from summer heat and thus need herding through night-time. This may also apply to flocks of goats when the heat during the day is too intense. The two dogs do a good job but when both of them start barking wildly, the father of the household is alarmed to get up and see to things. Sometimes the son or the mother would rise as well for helping out. This happens 3 or 4 times during the night.

In addition to this, the vivid wildlife of small animals living in the surrounding bushes may introduce a rather loud acoustic atmosphere that needs getting used to. Witnessing how stressful the shepherding lifestyle can be was both enlightening and educative.



*image 2.022: Camp-site of the Şimşek family in 2007*

The Yörük Black Tent



*image 2.023: Sketch of the camp-site in 2009*

#### The site

The camp-site is not placed directly in a basin but rather on a slope next to it. It faces the north eastern direction being shaded by the mountain in the late evening ours. Therefore it is completely lit by the first rays of sun in the morning. The gate to the camp opens up in the north east being flanked by a fence that does not embrace the camp completely. Left of the gate entrance, the fenced and shaded garden for olive trees and vegetable plants is placed. Right of the gate the barn and pen for the flock of sheep can be seen. Following a path with a width of a car track any visitor would pass by at the central adobe oven that is used for baking bread. At the rear-side of the oven, the outside fireplace is situated. Behind two trees the gathering shelter opens up, but can be closed at its all four sides during the winter months. Left of the shelter the black tent is set up. Right to shelter and tent, in small accessing distance there is the wooden hut that offers space for coarse housework tasks and storage of food and belongings. Behind that hut a shower with opaque walls made of twigs is set up. In the rear of hut and gathering shelter the summer shelter is placed. Slightly off to the front one can find the local water outlet.

The toilet, which is again merely a certain area outside the camp, is assigned to the shrubs at the slope that starts behind the gathering hut.

#### The tent

The black tent itself is rarely used in the summer months except for being a sleeping place for the grandfather. Along the short sides personal belongings, mostly textile furniture and clothings are piled up. There is a fireplace at its traditional position and a woven rug on the floor at the rear-side of the tent. The grandfather died in 2009 aged 76. In the same year the family constructed a new black tent which replaced the old one. The position of the tent is just the same but it is not used as a sleeping place during the summer season any more. As the grandfather was a beloved person within the family it may take time until anybody has the heart to move into the tent which carries his memories.

Here, it is important to mention, that the grandfather Nasuh Şimşek was a highly respected person in Sağlık and Ahmetli Köy. He was one of the few people in the region who managed to teach themselves to read without attending a school. It was his hobby to read history books and thus became a very essential source of knowledge to the people in the region. In addition, in spite of his old age and his hip handicap which

was the result of an attack of a ram, he still tried to fit in the daily working chores and was even well respected for knowing how to use the falling spindle. He was an active part of the tent building team in 2007 and dearly appreciated being able to witness the collective construction of a tent after a pause of 30 years.

### **Chapter 2.3.6 Common Characteristics of Spatial Organisation of the Four Households**

All the four examples show conceptional commons that still allow different characters of spatial organization. Here, I want to summarize shortly the conceptional commons that can be found in nearly each camp site. This listing helps to understand the basic modules on which a site organization is built on.

A camp site of a single household consists of:

#### **The tent**

Storage of food and belonging, resting place, indoor kitchen, guest's place

#### **The outdoor kitchen place**

Designated fire place with wind cover. Sometimes supplemented with a storage and food preparation hut and/or a baking oven made of clay

#### **The outdoor gathering place**

In small or temporary camps it may just be a flat place in front of the tent. In larger, longer lasting camps it is preferred as an elevated shelter made of wood open to all sides.

#### **The outdoor washing place**

Open water outlet of the nearest spring or local cistern. Sometimes supplemented by a covered shower cell.

#### **The outdoor toilet place**

In many cases vast place between the shrubs and bushes at the back of the camp. Sometimes installed as a covered pit latrine.<sup>205</sup>

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205 see as well: Böhmer 2004, p.50

### **The vegetable garden**

Even mobile families took a small number of vegetable plants with them which were planted near the tent. In the case of the four Karatekeli families, the vegetable garden was unseen from the main access paths to the tent.

### **The pen**

Supplemented with a shelter (barn) as sun cover for the animals. Encircled by stone pilings or fences.

One of the four Karatekeli families in the field research had already cut down the pen area as it has put a main focus on peach plantation. Camps can be enlarged by additional sleeping huts, tents or places. As well, special constructions and space assignments show characteristic specialisations of the families.

## Chapter 3

# The Yörük Three-Pole-Tent

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The main emphasis of this thesis is the Yörük Three-Pole-Tent which is shown to be a traditional symbol of Yörük identity in the architectural context within Turkey.

Whilst traveling in Turkey between 2002 and 2009, various interviews with Turkish kinsmen showed that the three-pole-tent is a central symbol for Yörük identity. Keen to discover Yörük tents that showed a variation to the design as to increased numbers of poles or drastical changes of the architectural shape, I asked for information regarding variations of design. The most common answer was that it always was a three-pole-tent. Only a few interview partners gave a positive response mentioning that they have already seen 4, 5, 6 or even 11 poles. This information correlates with literature information of Kunze, Böhmer, Eröz and Striessnig. Even fewer interview partners mentioned the tunnel-tents as documented by Andrews, Böhmer and Eröz.

Based on that impression gathered through several years of travelling experience and comparing this impression with the relative amount of information given in scientific literature, I propose that the three-pole-tent is a most common mobile vernacular dwelling type among the Yörük in the traditional sense.

Therefore, the main focus is set on this particular tent. Here, I want to introduce the palette of architectural features of the Yörük three-pole black tent in the following chapters.

## Chapter 3.1 Architectural Profile

### Chapter 3.1.1 Structural Features

*1- Black Tent: Whether made of goat's hair, single/solitairly multiple, it forms a house in its length. [...] For its pitch black colour it can be called Black Tent. For the hair it is made from, it may be called Hair Tent. From the weave it may happen to be called Cloth Tent.*<sup>1</sup>

Members of the Karatekeli families explained to me, according to their understanding, name and colour affirmation of the tent are mainly given by its roof (çadır). This may derive from the fact that the roof is the main protection of the interior from outside impacts as e.g. sun-rays or rain. More precisely, it is the result of the tent's whole constructional system while, for example, wall cloths and wind break walls are only an appendix to the construction giving no structural support and, economically speaking, the costs of a new tent are mainly dependant of the quality of the roof cloth while other parts of the tent (e.g. wooden poles, ridge pieces, ropes and wall cloths) are only a minor investment of money and workforce compared to the roof.

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<sup>1</sup> Eröz 1991, p. 97; quote: "1- Kara Çadır: Keçi kılından mamul olup, tek katlı, uzunca bir ev biçimindedir. (Resim No: 1,2,3,4) Simsiyah olduğu için (Kara Çadır) denir. (Kıl)dan imal edildiği için Kıl çadır da denir. (Kıl)ın dokunmasıyla (çul) elde edildiği ve çadır da (çul) lardan meydana geldiği için (Çul Çadır) da deniyor."

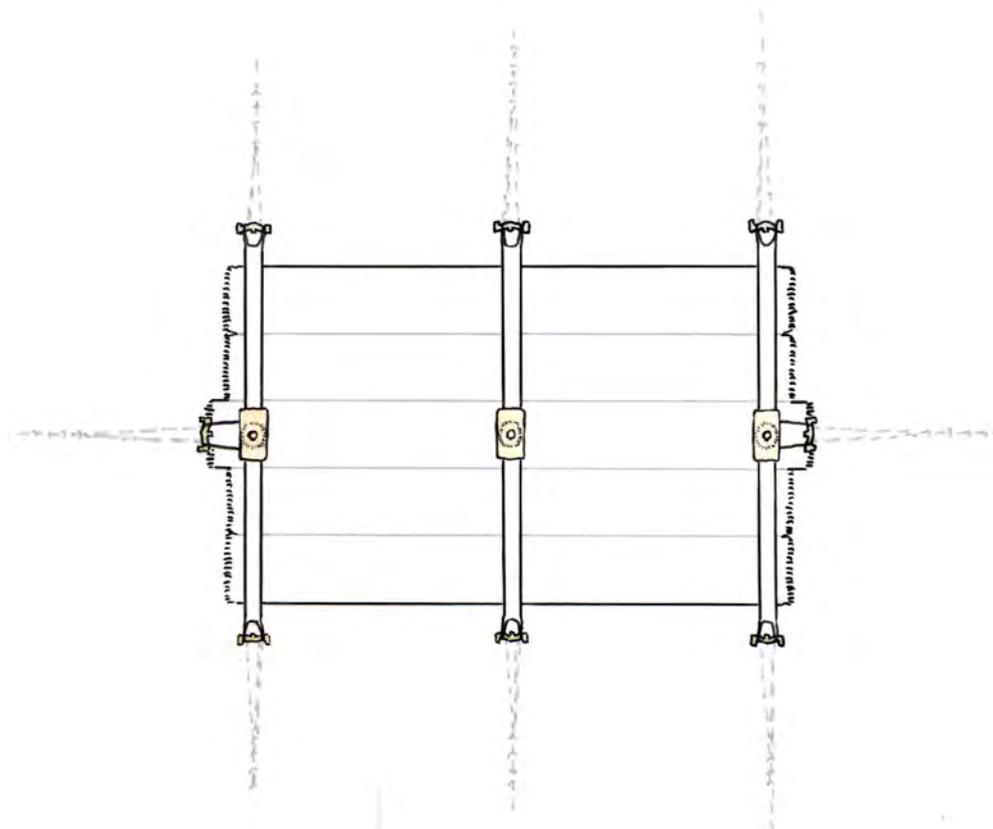


image 3.001: Outstretched roof cloth with stay-fasteners and ridge pieces. The ropes are adumbrated.

Taking a closer look at the composition of the roof, a combination of textile panels and textile belts stitched together form the particular rectangle shape. The average Yörük Three-Pole-Tent consists of 5 textile panels or more<sup>2</sup> being crossed by 3 belts at the fringe and the middle of the rectangle shape. Stay-fasteners are fixed to the six ends of the belts and two ends of the middle panel. At the cross-over point of belts and middle panel, the ridge pieces are sewn to the textile cloth. The sketch as well shows how the guy ropes are fixed to the stay-fasteners.

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<sup>2</sup> see Eröz 1991, p. 98: Eröz mentions 7 panels. Quote: "Herbirine (Kanat) veya (Kolan) denir. Çadırın mabrutu kısmı (Kubbe kısmı) 7 kanattan meydana gelir ve adına (Çadır) denir." (Note by the author: a translation of the quote of Eröz may give the misleading impression that he describes a tunnel tent as he uses words as "conical" or "dome" when describing the ridge and roof of the tent. But in context, he talks about the three-pole-tent.)

In regard to the dimension of the roof cloth, no fixed sizes can be provided but rather a guide of a possible dimension range:

The width of a textile panel can, according to the character of weaving production, vary between about 64 cm and 95 cm<sup>3</sup>. Smaller and larger widths are possible. Therefore, roof widths of five panels range from about 3,20 m to 4,75 m or more.

The length of the tent can be freely chosen between 4,50 m until 8,00 m. Smaller and larger lengths do occasionally exist but prove to be impracticable as the tent gains too much weight and instability when being oversized or provides too few habitable space when being undersized.

Somehow, the width of the panels available influences the possible range of length for a tent. E.g., tents of a rather narrow and long width to length relation like 3,50 m to 8,00 m are strongly avoided as the ground-plan of the tent would be rather impracticable in regard to the traditional interior design of the tents. Moreover, in regard to my record in the Aegean region, roof dimensions are chosen to provide a rectangle floor plan near to the golden ratio when being erected. For example: a small tent roof of about 3,20 m width and 4,60 m length would form a rectangle ground plan of about 2,80 m x 4,20 m. This ratio of 1:1,5 approximates the golden ratio (1:1,618).<sup>4</sup> Belt widths may vary between 20 cm and 40 cm. Exceptions do exist.

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see Borchhardt 1998, p.43: Bekir Y. of the Saçıkaraklı reports about tents that consisted of 8 panels.

see as well chapter 6.1.2 with examples of tents featuring 7 panels.

3 see as well Eröz 1991, p. 98: Eröz refers to 70-100 cm of panel width. Quote: "*Çadırın büyüklüğüne göre, 4 ilâ 8 metre uzunlukta 70-100 cm. eninde çullar hazırlanır.*"

4 I have chosen to refer to the golden ratio as there are no fixed rules of ratio in the traditional construction of Yörük black tents but only an aesthetic sense in this regard that somehow limits the range of ratio changes within intuitive borders. As the golden ratio is based on mathematical calculation and being as well praised to represent a certain human liking to proportions, I chose it to be a guide for imagining the preferred proportion of floor plans of Yörük Three-Pole-Tents in the Aegean region.

E.g. it would be improper to try the golden ratio on the floor plan of Four-Pole-Tents as they are preferably sized in a ratio of 1:2.

Or e.g.: the preferred proportion might vary in the regard of three-pole-tents eastern to the region of Denizli. As there are as well 7 or 8 panels forming the roof, some Yörük tribes may have a different idea of interior proportions. This proposition is built on assumptions only as valuable data is missing here.



*image 3.002: Pitched tent roof; Şimşek Camp, Sağlık Köy 2008*



*image 3.003: Ridge piece and pole*

The erected roof without the walls attached clearly shows how the construction works. It contains only few wooden construction parts: three poles, three ridge pieces and eight stay-fasteners.

*The black tent uses very little wood in its frame: Only a few other tents in the world, such as the Inuit ridge tents, use less. The minimal use of wood is possible because the black tent is a tensile structure (,tent' and ,tensile' derive from the Latin tendre, to stretch).<sup>5</sup>*

The majority material of the roof is the textile which plays a major part in the primary supporting structure. Therefore, the construction of the black tent is built only on two material resources: Trees and goats. As a third material, within the structure, the guy-ropes made of plant material (e.g. hemp, flax or sisal) may be counted. But originally, goat hair ropes were used instead of hemp, flax or sisal ropes as explained in chapter 5.1.1.

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5 Faegre 1979, p.13

The poles lift the tent up, bearing the pressure load. The ridge pieces above the poles help to spread the pressure over a larger weight bearing area, avoiding the piercing of the textile. At right angle to the alignment of the panels, the belts bear the tension down to the guy ropes which lead the tension load down to the ground by the stakes. The middle panel serves the same purpose compared to the belts by leading over the three pressure points of the ridge pieces and connecting to the two guy ropes that lead the tension down to the ground at the short sides of the tent.

The stay-fasteners serve the purpose of connecting two different materials to each other: The textile of the tent and the guy ropes. Moreover, they help to keep the guy-ropes flexible when being loosened or strained.

Taking a closer look at the materials in use, it is interesting to mention that the wooden parts are made from broad-leaf trees; preferably poplar for the poles, holm oak for the ridge pieces and stay-fasteners. As the ridge pieces demand a higher quality of wood that is quite expensive to obtain in hot dry regions, they are sometimes replaced by metal shoes (see chapter 5.1.1, image 5.002). The poles are planed on the surfaces. In relation to the tent's overall size they may be of 2,3 m up to 3,5 m long with a diameter of about 5 - 8 cm. The ridge pieces are carved wood with few decoration details. As well, the stay-fasteners are carved, containing certain notches that help keeping the guy ropes in position.



*image 3.004: Poles of a Yörük tent*



*image 3.005: Ridge piece of a Yörük tent*



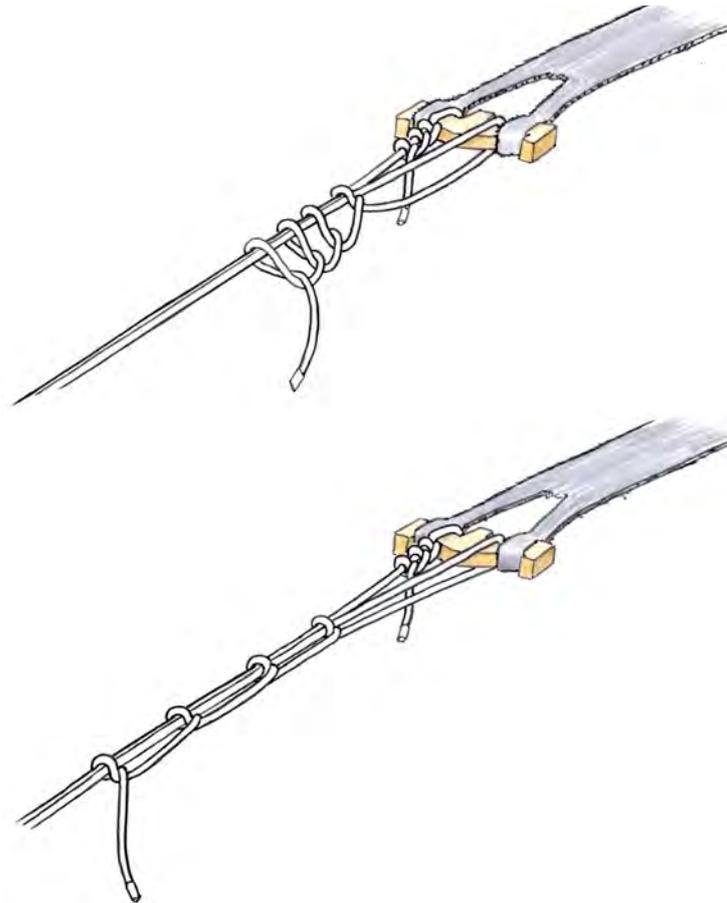
*image 3.006: Stay-fastener and pins of a Yörük tent*

The textile bears the most remarkable features of the tent. Its denomination “kara çadır” (black tent) derives from the textile’s blackness. Chapter 4 describes how the textile is produced. Overall, it is made of black goat’s kemp hair, spun to yarn of about 4 mm thickness and woven in plain weave. The weave shows pores between the threads of about 1 to 1,5 mm diameters. The quality of the goat’s hair, the thickness of the thread and the lucency provided by the pores form a textile composition that offers rain and heat resistance in a remarkable way. Chapter 3.1.2 will explain these features in detail.

The quality of the textile indicates the value of the tent by revealing its age and condition. The weave of the panels is able to withstand high loads of tension<sup>6</sup> which not only derive

<sup>6</sup> The results of tension tests in my diploma thesis in 2005 showed that a strip of 5 cm width with the long side parallel to the warp threads can withstand 142 N or 14,5 kg weight (see Ambrosch 2005, p.138). Tension tests on narrow textile strips do not represent the overall tension resistance of a woven panel of about 80 cm width. But the tests revealed that the textile withstands less tension when being

from the erection pressure of the poles but are also increased by the horizontal tension loads of sudden wind gusts. The weave of the belts is, in comparison to the panels, made of the same yarn but woven in a far more denser way, leaving no pores between the single threads. They are able to hold much higher loads of tension.



*image 3.007: Loose and tight position of the 4 half-hitched knots around the guy-rope.*

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wet. In the case of the warp thread strip it would be only 56 N or 5,7 kg weight (see Ambrosch 2005, p.135); thus 61% less . Multiplying the maximum tension load when being wet up to 80 cm of panel width, the result may be 896 N or 91 kg weight. It can be assumed that the panel of 80 cm withstands much higher loads of tension as the weave increases its consistency the broader it gets by diagonal forces within the plane. Therefore, a simple multiplication of the maximum tension force based on a result of 5 cm is not representable.

The guy ropes are made of plant material; preferably hemp, flax or sisal. Their thickness may start from 0,8 cm for small tents up to 1,2 cm for wide spans. Starting from the stay fasteners, the guy ropes lead down to the stakes returning back again to the stay-fasteners where they warp around that piece of wood once more ending in the loose end that is to be tied to the two tensed rope threads by 4 half-hitched knots. These 4 knots can be moved along the two rope threads under tension for straining and loosening the guy-rope's tension.

As already mentioned above, the erected tent roof needs to withstand horizontal pressures of wind. The occurring tensions under these impacts need to be taken by the guy ropes which are led to the ground by a rather flat angle. Occasionally, the angle of the rope is even more flattened and the span length of the ropes is prolonged by using additional poles outside of the tent.



*image 3.008: Yörük tent with far-stretched guy-ropes and exterior poles, 2001.*

In Western Turkey, the stakes are made of iron bars with minimum of 1 metres length driven deeply into the hard ground. Originally, they were made of wood when metal products were difficult or too expensive to obtain. In case the ground is too hard for stakes, large stones resting on wooden loops (forked branches) replace the stakes. There, the guy ropes are led through these loops.



*image 3.009: Yörük tent with stones and branches anchoring the guy-ropes (see left in front of the hut), 2001.*

Until now, the structural features of the tent only by the roof and its additional parts are described. Further parts of the tent as e.g. the cloth walls or the wind-breaking walls will be considered in the following chapter when it comes to the features of skin and form. As a third component, the interior design will be shown in the chapter after, when it comes to “interior organization”.

### Chapter 3.1.2 Features of Skin and Form



*image 3.010: Yörük tent fully equipped. Former camp of the Şimşek family, 2004.*

The whole tent, in particular the velum that forms the inner space protected from exterior influences, consists of its roof construction, the textile walls and the wind breaking walls at the lower perimeter. Eröz collected the most important Turkish terms for the single parts of the tent that help perceiving a closer architectural understanding for the whole design.

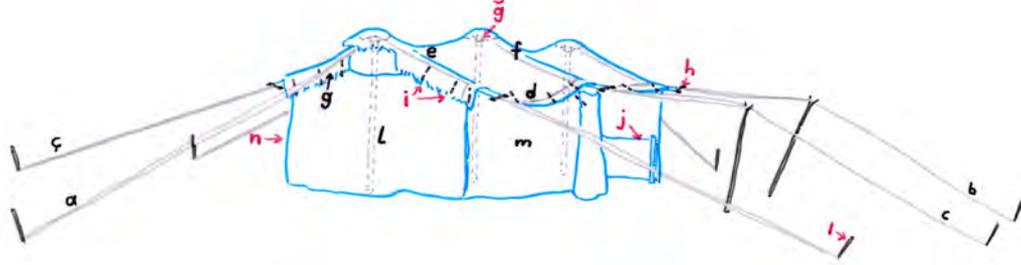


image 3.011: Sketch based on the drawings of Eröz<sup>7</sup>. (Red letters are added by the author and are missing in the original.)

The image above is a copy of the sketch provided by Eröz being added up with letters in red that are missing in the original version of the drawing. To each letter he lists Turkish expressions used by various Yörük tribes. In the following list I again offer these expressions and add them up with English translations and interpretations. In order to keep transparency for comparisons between the drawings of Eröz and the complements provided here, the Turkish letters of the original drawing are adopted.

- a) *Böğür bağı* → belly/flank link-up, 2 pieces  
Karakoyunlular: *baş-bağı* (head link-up)  
Karahancılilar: *yanbağı* (side link-up), *der*<sup>8</sup>
- b) *Pinti bağı* → scotch link-up, 4 pieces  
Karakoyunlular, Karahacılı, Yeniosmanlılar: *öğsüzbağı der* (“orphan” link-up)
- c) *Ön bağı* → front link-up, 1 piece  
Karakoyunlular, Yeniosmanlılar: term for back and front link-up is *ortabağı der* (middle link-up strip)
- ç) *Art bağı* → rear link-up, 1 piece  
Karakoyunlular, Yeniosmanlılar: term for back and front link-up is *ortabağı der* (middle link-up strip)
- d) *Siyek kolanı* → fence band, 2 pieces, (20-25 cm width)<sup>9</sup>
- e) *Böğür kolanı* → belly/flank band, 2 pieces, (20-25 cm width)

7 Eröz 1991 p.98

8 I was not able to find a proper translation for the Turkish word “*der*”. I suppose it is a dialect expression. Two Turkish expressions may be related to it: “*dere*” meaning “cullis” or “streamlet”; or “*deri*” meaning “skin” or “leather”. Sources: Ulusoy 2002. p.610-611; <http://dict.leo.org>, LEO GmbH, Sauerlach, 8<sup>th</sup> Oct 2012; Furtherly, I translated the expression “*der*” with “strip” deriving from “leather strip”. This translation is built up on the assumption that guy ropes may as well have been constructed from leather strips.

9 A small band of 20-25 cm seams the roof cloth in a longitudinal way. See image 3.012.

- Karakoyunlular, Karahacılılar, Yeniosmanlılar: *yankolanı* (side band)
- f) *Orta kolanı* → middle band, 1 piece
- g) *Siyek, siyeç* → fence  
Karakoyunlular, Karahacılılar: *saçak der* (roof strip)
- ğ) *Çanak* → pot / bowl, 3 or more pieces  
2 pieces are *Böğür çanağı* (flank pot) or *yan çanağı* (side pot),  
1-2 pieces *orta çanağı* (middle pot)
- h) *Bakara* → stay-fasteners, 8 pieces (tents with 4 poles have 10)  
Yeniosmanlılar, Encef, Sarıkeçililer: *çekecek derler* (shoehorn strips, stay-fasteners)
- i) *Sitil Çöpü* → wooden pins, many pieces  
Honamlılar, Gögebakanlılar: *çivi* (nail, tack)  
Sarıkeçililer: *sitil*
- ı) *Kazık* or *söğen* → stake, 8 pieces (tents with 4 poles have 10)
- j) *Dolama hasır* → run-around mat, wind-breaking wall, 60-70 cm, restrains wind and sand  
Yeniosmanlılar, Karahacılılar, Karakoyuncu: *dolak hasırı der* (puttee mat strip) (sometimes replaced by a stone wall)
- k) *Bağlar kıldan mamuldür* → bands made of hair<sup>10</sup>
- l) *Kapak* → cover, 2 pieces, at the head, foot or even flank cover
- m) *Ön sitili* → front cover, 1 piece  
Sarıkeçililer: *Gergi* (stretcher, rack), some tribes: *kanat* (wing flap)
- n) *art sitili* → rear cover, 1 piece<sup>11</sup>

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10 I could not associate this expression with any particular parts of the tent. It may be that it is a general term for woven bands as e.g. the belts.

11 Eröz 1991, p.98-102; All English expressions are freely translated and interpreted by the author (Pfeifer); source: Tureng Dictionary, <http://tureng.com/>, TURENG Çeviri Ltd, Caddebostan, Kadıköy – İstanbul, 8<sup>th</sup> Oct 2012; Ulusoy 2002



*image 3.012: Yörük tent with siyek kolanı (see element “d” on the sketch after Eröz). A wooden pin (sitol çöpü or çivi) is shown left below.*

The walls (kapaklar, ön sitil, art sitil) of the tent are pinned with wooden pins (sitol çöpü or çivi) to the roof cloth (çadır). The pins, made of twigs of bushes, are staked through wall and roof cloth from underneath upwards and then again from the outside to the inner side through both cloths. They are in a distance of 60-80 cm to each other and at right angles to the direction of the roof panels. Firstly, this way of staking ensures that rain water easily runs off to the eaves of the roof cloth. Secondly, the wooden pins pose a minor injury to the weave. And thirdly, they can be easily torn out when it comes to taking down the tent. It may appear that these pins could fall out of fixation but, quite the opposite, the surface of the planed wood and the yarn of goat’s hair provide a strong friction that keeps the pins in position.



*image 3.013: Yörük tent with wooden pins*

All wall cloths are rectangular. Regarding the short sides (flanks), a triangular opening beneath the ridge is created when the wall cloth (*kapak*) is staked to the cullis. Depending on height and overall size of the tent, wall cloths consist either of two broad panels, two middle-sized panels and a decorated belt or two broad panels and a middle-sized panel. The decorated belt or narrow panel is always put upside down, being staked by the wooden pins. Therefore, the decorated belt or panel can be seen from the inside of the tent.

As the wall cloths can flap into the interior when gusts of winds make the tent jolt, wind breaking walls (*dolama hasır*) are fixed along the wall cloths at the inside of the tent. Formerly, these walls of about 60-80 cm height were made of reed mats fixed with wooden stakes to the ground. Nowadays, plastic mats and iron bars are more common. Some nomads use corrugated iron sheets as well.

In some cases, stone walls set up in the inside of the tent serve the same purpose of wind protection and additionally offer a seating place or dry foundation for goods and bags.

Along the outside of the wall cloths it is important to dig a trench so that rain water does not trickle into the interior.

At the entrance of the tent, the wall cloth (*ön sitili or kanat*) is simply staked open, ready to be closed when desired.

The tent not only withstands sudden wind gusts but longer lasting storms as well. The impact of forces not only tests out the primary construction system but also secondary parts of the construction as, for example, the wall cloths. Stirred up sand grinds the cloth like emery paper. The thick and heavy weave of strong goat's kemp hair yarn withstands this. Small hairs standing upright from the yarn block the little stones of sand which would otherwise invade the pores of the weave.

Nonetheless, sometimes nature wins over the tent:

*The tent consisted of three poles and had eight panels. Winter time was horrible. Rain leaked through the tent and sometimes storms made the guy ropes break. Then, goats entered the tent bleating and camels peeped anxiously out of under the trees.*<sup>12</sup> (Report of a sedentary member of the Saçıkıralı (Bekir Y.) about his nomadic childhood.)

The citation above may give the impression that black tents are not rain repellent in general. Quite the contrary. This subject was a main issue in my diploma thesis in 2005. In the laboratories of the Institute of Building Construction and Technology / TU Vienna I built a rain simulator according to Bundesmann<sup>13</sup>. After acquiring an old black tent canvas of about 7-12 years of age, I was able to test the rain repellency of the textile. The samples were exposed to rain for 10 minutes. In the first test run, the roof samples repelled 50-85% of the rain<sup>14</sup>.

After I had discussed my first results with various constructors of canvas tents in Western Europe, I got the valuable hint, that, -in order to get conditions in the laboratory closer to events in nature-, I should turn off the wipers beneath the textile which continuously stroke the downside plane of the textile.

Actually, tents with organic canvases need to be constructed in that way so that no item touches the interior surface of the tent skin. Otherwise, the tent would leak at the

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12 Borchhardt 1998, p.43; original quote: "Das Zelt war dreistängig und hatte acht Bahnen. Die Winter waren schrecklich. Es regnete auch ins Zelt, und manchmal brachte der Sturm die Zeltstricke zum Reißen. Dann liefen die Ziegen meckernd ins Zelt, und die Kamele schauten ängstlich unter den Bäumen hervor."

13 EN 29865 Textiles - Determination of water repellency of fabrics by the Bundesmann rain-shower test

14 Ambrosch 2005, p.155

specific connection point as an adhesive bridge is built up between the moist canvas and interior space.

Therefore, I did not use any wipers in the second test run and the results were striking: The roof cloth repelled 70-99% of the rain<sup>15</sup>.

Considering the bad condition of the sample cloth (aged 7-12 years, being stored on soil ground, partly torn apart,...), the results showed clearly that the textile is able to be rain repellent.

Various authors claimed their opinion on that issue:

*First, fine mists of the rain invade the inside, but later the yarn swells and transforms the cloth into a raincover. 5 Minutes later, no rain invaded the interior, so that we could detect single leaks.* <sup>16</sup>

*Nowadays, during the cold and misty autumn and winter season, black tents get covered with plastic straps more often. This should avoid rain leaking in, although a relatively new and well erected goat's hair tent is able to repel rain. But, as the Yörük heat their tents by a furnace and not by an open fire which waterproofs the roof and incommodes interior space, the plastic straps means additional coating.* <sup>17</sup>

*Although the weave is loose enough to see daylight through the cloth, it is fair as rain protection. When wet, the yarn swells - closing the holes - and the natural oiliness of the hair sheds the rain for a while.* <sup>18</sup>

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15 Ambrosch 2005, p.166

16 Eröz 1991, p.104; original quote: "Yağmur yağınca evvelâ içeriye ince ince düşüyor, fakat sonra iplikler şişince muşamba haline gelir. Beş dakika sonra hiç yağmur düşmediği, içeri sızmadığını müşahade ettik."

17 Zimmermann 1994, p.127; original quote: "Heutzutage werden die Schwarzen Zelte in der kalten und regnerischen Herbst- und Wintersaison öfters mit Plastikplanen überdeckt. Dies hat den Zweck, das Durchdringen von Regen zu verhindern, obwohl durch ein relativ neues und gut aufgebautes Ziegenhaartzelt kaum Wasser sickern kann. Da die nomadischen Yörük statt mit einem offenen Feuer, das das Zeltdach zusätzlich imprägniert, dessen Raum aber stört, immer häufiger mit Öfen heizen, bedeutet eine Plane zusätzliche Isolierung." Provinz Afyonkarahisar 1991

18 Faegre 1979 p.12

*On this subject, P. Jaussen proposes: The goat hair tissue is almost waterproof so that winter rain does not pass, if not quite at the beginning when the tissue is not yet tightened, but the more after the necessary tension is reached, the water does not pass through, but flows to the right and left of the tent-like roof.*<sup>19</sup>

The rain repellency tests<sup>20</sup> and numerous tent erections during rainy seasons in Austria gave me the opportunity to observe closely what happens when strong rain starts to penetrate the roof cloth. The first 5-15 minutes, rain drops get dispersed into smaller drops when they hit the dry yarn of the textile. These split drops may splash through the pores of the textile producing a light mist in the interior. When the cloth is drenched, the mist stops and rainwater soaks into the textile without invading interior space. Within the cloth plane, the water flows down to the eaves' rim where it gets released by the textile in thick drops dripping down to the ground. Why does the water run down within the plane? Firstly, the threads with their numerous hairs provide a high capillary action that helps soaking the water in. The adhesive character of the yarn is much stronger than gravity so that water does not leak into the interior. Only, when a bridge into the interior is set up by touching the wet cloth at the inside or pressing an object against the textile, the water starts to drip off on that particular spot. Technically explained, water molecules start to leave the textile plane due to their adhesive character in regard to the object that had touched the plane. As gravity pulls down the water, its cohesive character helps tearing further amounts out of the plane. A weak stream of water is created. Therefore, the traditional construction design of a black tent avoids as few touching spots as possible.

Comparing this technical explanation to the descriptions by the authors quoted above it is quite interesting to draw connections. I tried to observe the swelling of the yarn when being wetted. The tendency of swelling differs from textile to textile. The old Yörük black tent that I purchased in Torbalı tends to swell when being soaked while the newly constructed black tents that were produced during the field research show nearly no swelling behaviour. The textile of the old tent consists of thicker threads with a stronger twist. The new tents bear thinner yarn with less twist. Both types are rain repellent. The new tents show a misty period in the interior for the first 15 minutes. The old tent shows nearly no mist at the first 5 minutes until it is totally waterproofed. That

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19 Feilberg 1944, p.111; quote: “*Le P. Jaussen dit à ce sujet; Le tissu en poil de chèvre est presque imperméable; l’hiver, la pluie ne passe pas, si ce n’est tout à fait au commencement, lorsque les tissus ne sont point encore resserrés; après a tension des fils, l’eau ne traverse pas, mais s’écoule à droite et à gauche de la tente dressée en forme de toit.*”

20 see Ambrosch 2005, p. 144-170

comparison leaves another important factor unmentioned: The old tent is impregnated with bonfire fumes, the new tents are not.

In Austria, the new tents may withstand 2-3 days of rainshower until a similar kind of mist starts to invade the interior again. The old tent never leaks during rain showers of one week or more.

Therefore, I claim that the fume impregnation and the tendency of swelling when being wetted improve the character of rain repellency considerably.

Fume impregnation is an interesting subject. It means that a newly built tent has not yet reached its full potential of sheltering. Only, after months of usage and fumigation by bonfire, the maximum rain repellency may be reached. The resin particles in the smoke get nested in at the interior surface of the textile. The hydrophobic resin at the inner surface increases chances that water molecules do not tend to leave the textile plane into the interior. Therefore, it supports the tendency of flowing water within the textile plane down to the rim.

*Compared to the yurt which is covered with felt, the advantage [of the tent] is how the weave dries quickly after rain showers and how it is pervious to light and air. Furthermore, the hard wool of goats rarely catches fire.*<sup>21</sup>

Rain repellency is not the only improvement for the tent when getting fumigated by bonfire. Carbon-particulate matter of bonfire fumes generates a fire proof surface on the textile. It helps rendering the tent secure against fire particles that get catapulted out of the bonfire.

*[...]Additionally, the goat's wool catches fire less easily as its tiny hairs scorch when being touched by the flames [...].*<sup>22</sup>

It is not the carbon film alone that renders the tent practicably fire proof but also the feature that wool textiles without any chemical supplements show a certain resistance against fire. A carpet salesman at the Dereli camping site in Selçuk demonstrated to me how he was unable to scorch a carpet with his lighter. He claimed that this proves the carpet to be completely hand-made as there is no machine oil worked into the textile

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21 Zimmermann 1994, p. 121; original quote: *"Die Vorteile gegenüber der mit Schafwollfilz überzogenen Jurte ist das schnelle Trocknen des Gewebes nach einem Regenschauer sowie die Licht- und Luftdurchlässigkeit. Außerdem fängt die harte Ziegenwolle selten Feuer."*

22 Striessnig 1991, p.102; original quote: *"[...]Zusätzlich fängt die harte Ziegenwolle weniger leicht Feuer, da die abstehenden Härchen bei der Berührung mit den Flammen versengen[...]."*

threads. The weaver Adnan Yarar in the village Olukbaşı supported this information by explaining that they cannot avoid the petroleum oil to be worked into the thread when being spun and woven by machines. Only when being hand-made they are able to guarantee that the textile contains no petroleum and thus offers the ability of fire resistance. On a third occasion, at the carpet shop Urartu Hali in Van City of Eastern Turkey, the carpet weavers explained the same difference to me.

Pfeiffer and Schmidkunz claim that wool fibre is hardly inflammable but when being set on fire, it only shows a small flame burning the matter slowly and being extinguished easily<sup>23</sup>. Being packed together into a thread and further on packed into a weave or in a knotting technique, it is not very flammable when being penetrated by minor flames, but, of course, a whole tent or carpet would burn when the impact heat overcomes a certain level of tolerance. In regard of the every day use of tents this may only happen when the tent was set on fire on purpose or in the course of extreme carelessness when a bonfire was built up far too big and left alone with plenty of fuel lying around connecting the flames to tent parts.

### **Chapter 3.1.3 Interior Organization**

The interior organization of tents is strongly connected with the assignment of zones to certain chores or, as sometimes described in anthropological literature, to genders or in particular to certain members of the family. In the first instance, I want to start with the description of interior space by Eröz which is closely built up onto the assignment of Turkish terms to the particular items within the tent.

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23 Pfeiffer/Schmidkunz 1995, p.21

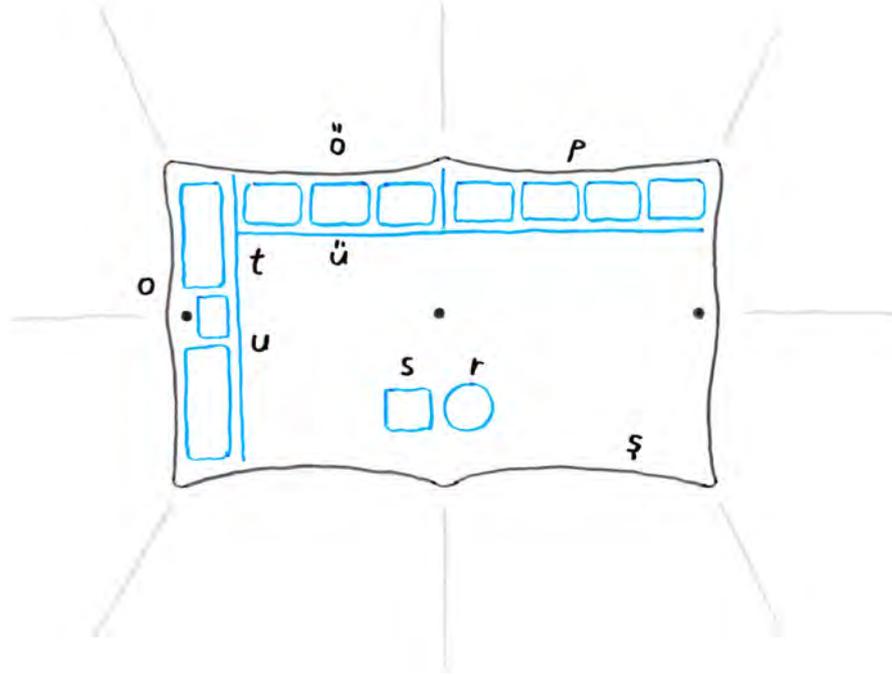


image 3.014: Sketch based on the drawings of Eröz<sup>24</sup>.

- o) *Yüklük, yataklağ* → closet, baggage, couches
- p) *Azıklağ, azık yüzü* → provisions, food area  
(potatoes, bulgur, pole beans, chick peas,...)
- ö) *Giyesi yükü* or *geysi yükü* → dressing baggage
- r) *Ocak* → fire, this word as well means: family, society, home
- s) *Kazan haranı* → kettle, cauldron  
*Kap kaçak yeri* → smuggler's / poacher's repository place<sup>25</sup>
- ş) *Kaplık, eşik* → cover, wrapper, doorstep
- t) *Misafir yeri* → guest sitting place
- u) *Ev sahibinin yeri* → sitting place of the family head
- ü) *Komşu yeri* → neighbour sitting place, as well for the elderly<sup>26</sup>

24 Eröz 1991, p.98

25 "Kap" means "vessel", "repository" or "container"; "kaçak" means "smuggler", "fugitive" or "poacher"; sources: Tureng Dictionary, <http://tureng.com/>, TURENG Çeviri Ltd, Caddebostan, Kadıköy – İstanbul, 8<sup>th</sup> Oct 2012; Ulusoy 2002 p.702; <http://dict.leo.org>, LEO GmbH, Sauerlach, 8<sup>th</sup> Oct 2012; I have found no explanation that helps understanding the backgrounds of this term.

26 Eröz 1991, p.98-102

Reading the sketch based on Eröz, anybody who enters the tent faces the food provisions at the first half of the rear long side of the tent opposite to the entrance, being added up by the dressing baggage at the second half of the rear side. Left to the entrance, fire burns for tea or food with a small area installed for kettle, cauldrons or pots.



*image 3.015: This Yörük tent shows its food storage at the front wall next to the entrance; Şurgun family, Sağlık Köy 2008*

The rear short side of the tent is flanked by the baggage hosting further possessions of the family. Leaning against the baggage which is stored in soft textile bags or covered by carpets, the seating places for the elderly, the guests and the family head are invisibly set up. In most cases, the seating area between the fire place and the baggage flanking is marked with reed or plastic mats covered with a felt or woven carpet. Occasionally, flat cushions mark the seating positions.

The sketch shows the floor plan of a tent that features the entrance on its right side. The same floor plan is horizontally reflected, when the entrance is established on the left side of the tent.

According to my experience, the assignment of seating places can vary according to family constellation, varied interior organization and construction of the tent.

As for example at the Şurgun family, guests were seated at position u and t, while elderly and family head sat down at position ü. On this occasion I have asked the family members how they decided whom to seat where and they explained to me that the seating occurs according to practicability. As e.g.: Guests rarely need to stand up when being attended to while the head of the family needs to rise more often in order to organize a proper hosting or the daily chores at the camp when his person is needed. The elderly (men and women) do fulfil some tasks while attending to a guest as well but need to rise less often than the family head. Therefore, the busiest people are seated closer to the entrance.

The female members of the family are assigned to serve the guests with tea and food. In most cases the wife of the head of the family was seen to tend the fire, as well as the tea ceremony and food preparation. In most cases, the daughters of the household support their mother by taking over the job of the tea ceremony and/or for the food preparation. In some cases, the grandmother helps out as well. Being an important head of the family she administers the jobs of the daughters in order to support the wife of the family head.

Female members tend to sit down near the fire place, when resting and talking to the guests.



image 3.016: *The fire place (ocak) with the cauldron; Şurgun family, Sağlık Köy 2008*

At this point it needs to be stated that although different areas of action are assigned to male and female members of the family, both sexes can equally be involved in friendly discussions with the guests. Occasionally, depending on the set of characters, the wife of the family head may lead the conversation.

The description above does already provide certain assignments of areas to genders of the family. Nonetheless, I want to be careful to settle things like that. In the following passages I want to examine the interior organization of the tent with several citations in literature and then, later on, return to the gender issue.

A description of Borchhardt of the interior organization of a house of a settled Yörük family offers important analogies to the tent (translated into English by the author):

*An external staircase led to a roofed porch of the upper floor, the preferred residence of the family during the hot summer season. One of the two rooms situated at the back of the porch was equipped with an open fireplace and being used as kitchen. In the other room, just like in a tent, cushions and mattresses were piled along the walls serving for the night rest on the floor which was covered with felt mats and kelims. Like during nomadic times, this room*

*was a living-, resting and hosting place, just the same as the women did craft their sewing and weaving work there. These rooms could as well be divided by a corridor which served as kitchen in this case while the smaller room provided space for the rations which were piled in bags according to nomadic practice.*<sup>27</sup>

The multiple possibilities of usage of the interior during the course of the day coin the interior organization of the tent. The guest area during the day may turn into a resting place during night or sewing and weaving space for women during the day time. In regard to these changes, the inner floor plan stays free of any furniture except for the fire place and the kettle area.

After having accomplished the field research, the filming team, my husband and I were introduced into how to organize our new black tent after setting it up. The Şimşek family showed us how to set the sleeping places during night time in the most efficient position while using that space for gathering and talking during daytime. In that way, they introduced us to a simplified floor plan adapted to our needs that derived from their black tent. It was without question that the space was provided for multiple use.

The fast change of the interior from night to day and from day to night goes along with the practical alignment of baggage along the walls. It is of importance to understand how the baggage is stored, as that way of storage offers secure protection against small animals and insects who can invade possessions and it also transforms the goods into cosy cushions allowing the sitting person to recline against them. In addition, it helps preserving a tidy and bundled-up image of the interior:

*Household goods: Foodstuffs, clothing, tools and prized heirlooms all were stored and transported in highly decorated flat-woven sacks, cuval. The bags would be arranged along the long side of the tent facing the entrance, thus forming a backdrop of texture and colour to domestic activities.*<sup>28</sup>

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27 Borchhardt 1998, p.33-34, quote: “Eine Außentreppe führte auf eine überdachte, dem Übergeschoß vorgelagerte Veranda, im heißen Sommer der bevorzugte Aufenthalt der Familie. Von den beiden dahinter liegenden Räumen war der eine mit einem offenen Kamin ausgestattet und diente als Küche. An den Wänden des anderen Raumes stapelten sich wie im Zelt Kissen und Matratzen, die nachts auf dem mit Filzmatten und Kelims ausgelegten Boden zum Schlafen dienten. Wie zur nomadischen Zeit war dieser Raum Wohn-, Schlaf- und Empfangsraum zugleich, ebenso wie die Frauen hier ihre Näh- und Webarbeiten verfertigen. Beide Räume konnten auch durch einen durchgehenden Flur getrennt sein, der in diesem Fall als Küche diente, während in dem kleineren Raum die Vorräte nach nomadischer Praxis in Säcken gestapelt wurden.“

28 Bates 1983, p.15

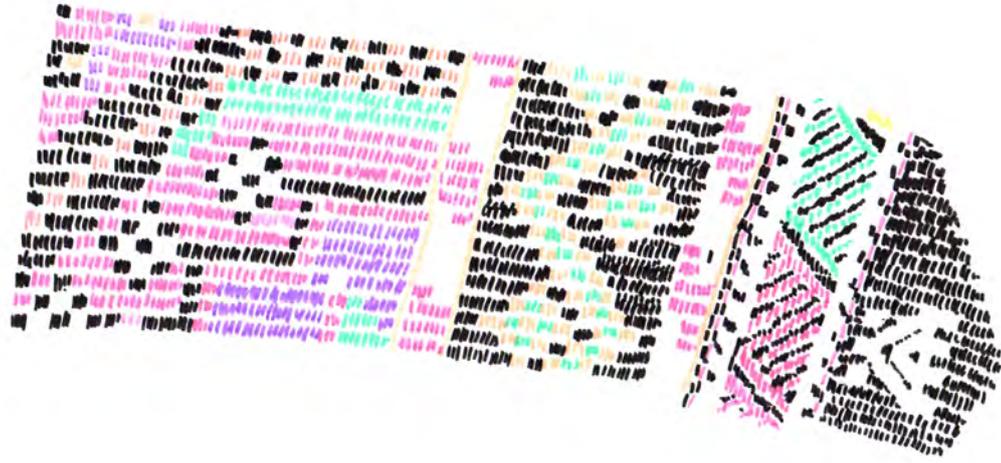


image 3.017: Traced sketch of a photo showing details of a pattern of a Yörük çuval.<sup>29</sup> Colour-shades vary slightly from the original.



image 3.018: Traced sketch of a photo showing an ala çuval of the Kılaz Yörük aşiret in Western Anatolia<sup>30</sup>. The pattern of the çuval is simplified in this picture.

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29 Source: Landreau 1978, image of front cover

30 Source: Böhmer 2004, p.266

The çuvallar are one of the integral traditions of decorative weaving of the Yörük. Woven patterns do not only represent the family's ancestry but bear symbolic meanings within themselves as e.g. scorpions, pregnancy, trees of life or even light bulbs or motor keys<sup>31</sup>. Approximately 100 years ago, Yörük women dyed their wool with natural materials (e.g. plants, minerals or animal material). Later, synthetic colours were introduced, showing more brilliance.<sup>32</sup> Nonetheless, the tradition of natural dyeing did not perish and is still alive in some region as e.g. in the mountains of Bozdoğan.

During my various journeys inside and outside Turkey, I tried several techniques to organize my own tent quickly and efficiently as project work rarely leaves time for tidying a tent regularly. I have learned that the technique of bundling-up the goods in flat-woven sacks is the most efficient one. It not only helps to store goods quickly but also helps to find desired objects among the bags. Moist, dust, insects and animals are all kept outside the bags. Even being exposed to strong rain for a few minutes, the goods stay dry inside a flat-woven bag.

In the traditional sense, the designs of the bags, named çuval in Turkish language, bear traditional patterns of the aşiret as all textile goods were once crafted by the women of the household. Nowadays, as new tasks are assigned to the female members of the family due to economical changes, sacks and kelims may as well be bought or traded from relatives or on the weekly bazaar.

A description of Böhmer helps imagining how a resting place at the Yörük is installed for the night (translated from German into English by the author):

*It went without saying that I had to spend the night in the tent in spite of descending to my car in the darkness. Because of me, the herdsman boy, related to the family, had to spend the night outside. To my right, the old man stretched himself beneath the cotton quilt. I as well got such a quilt and to my left a young couple crawled underneath a larger one, whispering. Special sleeping mats do not exist in a Yürük tent. In the tent, the ground is covered with goat's hair weave. Above that there is a large felt carpet that warms sufficiently.*<sup>33</sup>

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31 Landreau 1978, p.97-104

32 Drey / Warth 1994, p.136

33 Böhmer 2004, p.66; quote: "Selbstverständlich mußte ich im Zelt übernachten, sollte nicht in der Finsternis zu meinem Auto absteigen. Meinetwegen mußte der Hirtenjunge, ein Verwandter der Familie, draußen übernachten. Rechts von mir streckte sich der alte Mann unter einer Baumwollsteppdecke aus, ich erhielt auch solch eine Decke, und links von mir kroch das junge Paar mit Geflüster unter eine größere. Besondere Schlafunterlagen gibt es nicht in einem Yürükzelt. Der Erdboden im Zelt ist mit einem Ziegenhaargewebe bedeckt. Darauf liegt ein großer Filzteppich, der genügend wärmt."

Being invited to sleep in the camp of the Şimşek family thrice, I as well experienced the exactly same sleeping equipment adding it up with a small cushion with cotton cover and a fill of grain and straw.

The description of Zimmermann of the interior organization of a black tent summarizes the above mentioned elements of design, shows similarities to the sketch based on Eröz and leads back to the issue of gender-assigned areas (translated from German into English by the author):

*A Yörük tent is divided by an invisible line in the middle. It runs from the rear long side through the middle pole to the front wall. Seen from the front, the men's, guest's and residence area is situated at the left while the women's section with its fire place, cooking and household goods is situated to the right. After having slipped out of the shoes and having entered the tent, colourful weaves being piled at the rear tent wall attract attention. It is about the woven bags which contain clothes and small items. At their front they are richly decorated with patterns, longitudinal or in cross direction to the design. The design and colouring of these patterns depends on the clan-ship and is passed down to young girls from the elder women. Bags for foodstuffs (cereals, flour, beans, etc.) rarely show rich ornaments and are held in few colours, often-times of white-brown character. Adverse moist, they get put on stones or brush-wood. Just the same the colourful patterned mats and covers get stored at the rear-side of the tent which serve as bedclothes in the night.*

*The front long side of the tent stays clear of goods. Some sticks at a length of about one metre prevent damage to the tent wall at the inside next to the fire place. The same purpose may be served with tightly woven reed mats which additionally offer protection from draught and dust.*<sup>34</sup>

34 Zimmermann 1994, p.125-126; quote "Ein Yörük-Zelt trennt eine unsichtbare Linie in der Mitte. Diese verläuft von der hinteren Längswand an der Mittelstange vorbei zur Vorderwand. Von der Vorderseite her gesehen liegt oft links die Männer-, Gäste-, und Aufenthalts-, rechts die Frauenabteilung mit Feuerstelle, Koch und anderen Haushaltsgeräten.

*Wenn man die Schuhe ausgezogen hat und in ein Zelt tritt, fallen einem bunte gewebe, die an der hinteren Zeltwand gestapelt sind, auf. Es handelt sich hier um Websäcke, welche Kleider und kleinere Gegenstände aufnehmen. Sie sind auf der Vorderseite in Längs- oder Querrichtung reich mit Mustern versehen. Die Ausgestaltung und Farbgebung dieser Muster hängt von der Stammeszugehörigkeit ab und wird an junge Mädchen von älteren Frauen weitergegeben. Säcke für Lebensmittel (Getreide, Mehl, Bohnen, etc.) weisen selten reiche Ornamente auf und sind in wenigen, oft weiß-braunen Farben gehalten. Gegen Feuchtigkeit stellt man sie auf Steine oder legt Reisig darunter. Ebenso werden auf der Zeltrückseite die buntgemusterten Matrasen und Decken verstaubt, die nachts als Bettzeug dienen.*

*Die vordere Längsseite des Zeltes bleibt frei. Einige, etwa einen Meter hohe Stöcke auf der Innenseite verhindern eine Beschädigung der Zeltwand an der Feuerstelle. Dies wird manchmal auch von eng geflochtenen Schilfmatten erreicht, die zusätzlich noch dem Schutz vor Zugluft und Staub dienen."*

The issue of assigning areas of the Yörük tent to men and women is difficult and one which has resurfaced ever since I started to study literature about the Yörük tents. Since 2004 I tried to observe an analogy to my gathered knowledge in literature and to this point still have difficulties to divide the Yörük black tent in the way as Zimmermann proposed. It is actually true that mainly the men reside with the guests in the gathering and resting area of the tent. It is the traditional role of the male head of the family to entertain the guest while his wife focussed on the drink and food supply. According to their roles they reside in their places that serve their purposes, but, as soon as one part of the constellation is missing due to field work or necessary errands, the situation changes. It is rare but it happens that men produce the tea or prepare a small meal for the guest while the women of the household are out. Again, it happens that the women reside at the host's seating place entertaining the guest when the men are out.

I even witnessed the constellation of women sitting at the host's place until the male head of the family arrived. He sat down next to his wife being nearest to the entrance and did not show any attempts to demand his place in return. He was a highly respected man inside and outside the family.

Nonetheless, these events may differ from family to family. In another case I witnessed how the male head of the family insisted on his traditional seating place. In that particular case, I well knew, that the head of the family had difficulties in gaining respect inside and outside of the family.

Once again it is necessary to mention that the Şurgun and Şimşek family both organized their seating according to the chores that needed to be carried out.

Therefore, the areas of the tent are not gender based in the first instance. The first instance may be the role-playing of each member in the family. In particular, the seating places are more constantly used in regard of the role the person plays and less in the regard of the person's sex. Only, when it comes to taking a closer look on who is assigned to which role, the gender issue rises and there, indeed, a gender mainstream is actually visible. This, speaking of maybe the second instance, is less a question of interior design but rather of social interaction. Of course, in reverse, the social constellation influences architecture, but I would not draw a direct line in-between and rather interconnect it to the "person's current social role and tasks". Therefore, I suggest to interlink these categories in the following way:

space assignment ↔ person's current social role and tasks ↔ mainly gender-based assignment with occasional exceptions

In case of the Yörük tent, space is primarily defined by the tasks fulfilled within it. These tasks are predominantly linked to the person's sex but can be broken up to the other gender when the constellation of the family is outstanding due to any circumstances.

### Chapter 3.1.4 Usability Features

Apart from the living comfort a black tent offers its inhabitants, it also bears a number of usability features which support easy handling. Firstly, it is well adapted to transportation demands by providing a light construction weight and an easy packaging system. An average Yörük tent of the length of 5 m shows a weight of about 55-65 kg<sup>35</sup>. Additionally, iron stakes, ropes and poles increase the load by 6-10 kg depending on the design of the iron stakes of a length between 50 and 100 cm. Altogether, 60 - 75 kg can be reached.

The large sized tent of the Çetinkaya family with about 8m length may have reached 110-130 kg in sum.

In the old days tents were carried by camels or mules. A tent was not only designed to fit on a single animal in regard to its size but also in regard to its weight. In the case of camels, loads of about 100 -200 kg can be calculated, depending on the length of journey and on the size and training of the animal.<sup>36</sup> A Yörük explained to me that 120 kg per camel is the appropriate maximum load as it is wise not to overstrain the animals. Concerning mules, loads up to 100 kg are manageable.<sup>37</sup> In their case, weights of 60-75 kg for an average 5m tent is possible. It is possibly more efficient to divide the load onto two animals with 28-31kg for the tent roof and a wall cloth on one and the remaining 32-44 kg on the other animal. Bags and packages could have been added to each load in order to reach an average level of load per animal.

The larger tents of about 8 m length with their 110 -130kg were rather carried on camels and not on mules as it may have put them above the limit of strength on longer migration routes. This may be plausible and connected to the fact that larger tents are associated with prosperity, so it is the same case with the ownership of one or more

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35 The weight of a tent is partly calculated based on the results of technical tests: see Ambrosch 2005, p.110-114

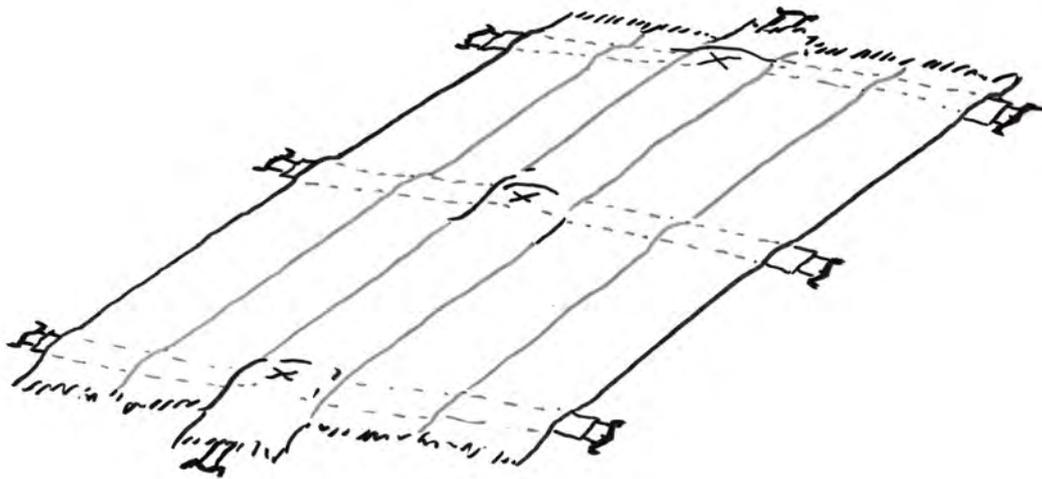
36 Sources: Rodrique 2009, <http://people.hofstra.edu/geotrans/eng/ch2en/conc2en/ch2c1en.html>, 16<sup>th</sup> Oct 2012; Kamelhof Rotfelden GmbH & Co. KG, Kamelweg 1, D-72224 Ebhausen-Rotfelden, <http://www.kamelhof.de/510488985712f0405/51048898d80e26c03/index.html>, 16<sup>th</sup> Oct 2012

37 Howel / Garba 1998, p.244

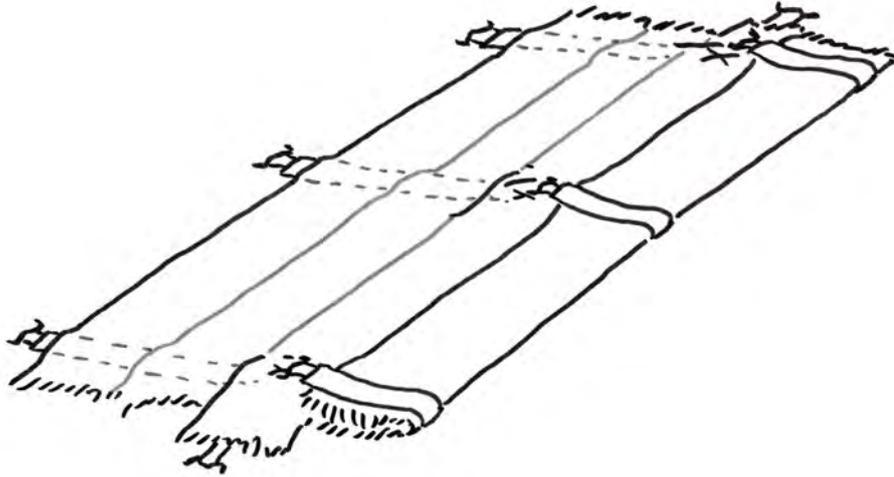
camels.

Altogether, Yörük tents do fit well into the scheme of mild animal transport. However, in modern times, journeys are accomplished by motorized support as e.g. trucks or tractors with wagons.

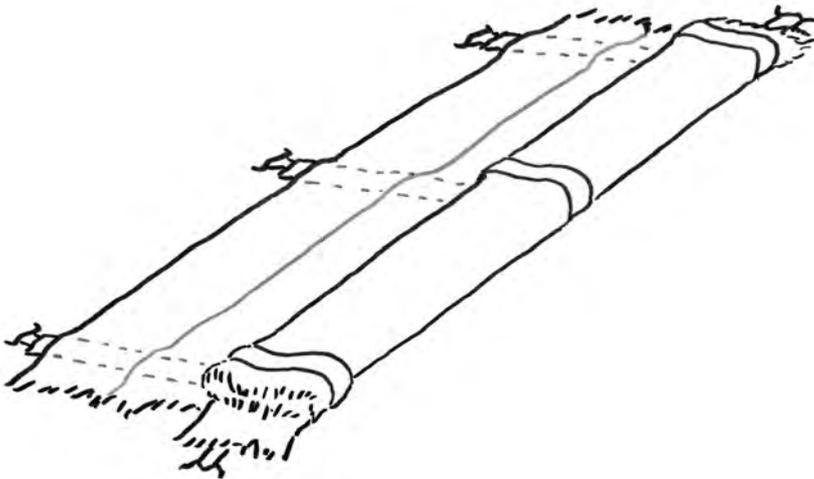
Staying with the issue of transport, it is interesting to investigate how a tent needs to be packed, in particular, the tent roof. The Yörük families taught me two ways of packing: One way fits for fast lifting of the tent roof onto wagons of motorized support, the other one fits for tying the tent onto an animal's saddle. Both ways offer a gentle folding of the textile in order to prolong the tent's lifespan and start with the same folding technique which gets slightly altered to the end according to the desired result. The following sequence of sketches shows how:



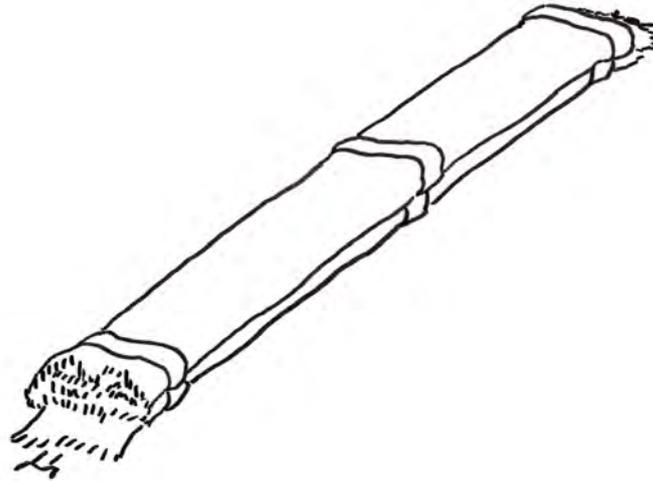
*image 3.019: The tent is stretched out to the ground with the ridge pieces and belts facing down. That way, it will be unfolded into the right position for pitch-up for future needs.*



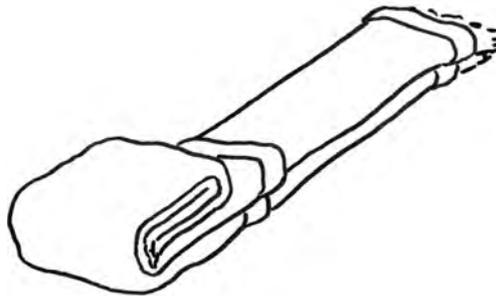
*image 3.020: The textile needs to be bend at the stitching, exactly along the panel's direction.*



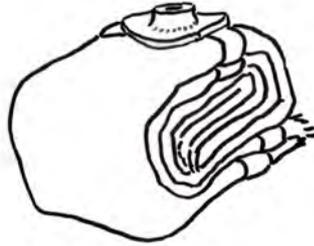
*image 3.021: A further step of folding the tent along the panel's direction.*



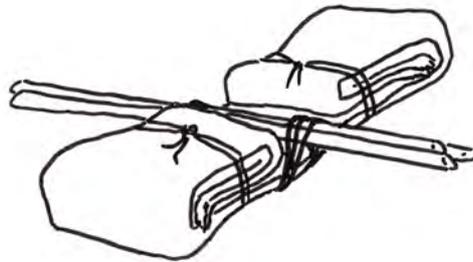
*image 3.022: The whole procedure is done symmetrically laying one tucked side of the tent on the other producing a bundled roll that rests on the middle panel with its ridge pieces.*



*image 3.023: Now the roll gets folded (not rolled) from one end up. From that point on, the desired result for transport needs will become significant.*



*image 3.024: Folding technique for motorized transport. Continued to fold the roll up to the other end. When things are done right, the middle ridge piece will stick up at the top, finally. For longer transport, the bundle can be tied up with ropes.*



*image 3.025: Folding technique for animal transport. The other end of the roll needs to be folded until the package shows two humps left and right to the middle belt. Both humps are fixed with a rope near to the middle belt. There, at the centre, the poles can be tied onto the bundle. The whole construction must be flipped upside down before being lifted onto the animal. As well, two persons can easily carry the bundle over a longer distance by pushing it up at the poles.*



*image 3.026: Tent roof packed for motorized transport*



*image 3.027: Tuareg tent roof of the Nouaji bound onto the last camel in the caravan, Sahara (Zagora region) 2008. Though Tuareg tents differ from Yörük tents, the folding and binding technique of the rectangle tent roof is the same. Generally, the poles are tied up on the camel first with the tent bundle being thrown over as a second step. In case of mules, the poles do not get tied in the middle of the bundle for they would irritate the animal's neck. There, poles are tied up on the bundle saddle outside off the middle in order to provide freedom of movement for the mule.*



*image 3.028: Tuareg elder of the Nouaji tribe binding the tent roof to a camel, Sahara (Zagora region) 2008*

The wall cloths are folded in a similar way, always started by bending the textile along the stitching and then folding up the roll to a handy bundle. Then, the bundles are tied left and right to the animal's saddle. Quite often, the tent's guy ropes are used for the packaging.

Another important feature of usability is the easy pitching-up of the tent. For demonstrating the single steps of construction, I will use a series of photographs that I had already shown in the diploma thesis back in 2004<sup>38</sup>. Since then, I had hoped to produce a new sequence with Yörük showing the pitching-up. Though they proceed exactly according to the following description, their action shows a completely different image that does not allow a step by step explanation. The reason lies within the mingled situation during construction: While one of the men is still tying ropes to the stay-fasteners, the other one is already lifting up the pole and ridge piece at the other end of the tent and so on. Thus, the scenery appears to be totally chaotic and still, the result is much

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38 Ambrosch 2005, p.59-60

better than the one in the following documentation that was created by us in Austria. While we needed 30 minutes for raising the roof cloth, the same task was done in 5 minutes by the Yörük. In chapter 4.1.2, the erection of a newly constructed tent by Yörük men and women is shown.

The particular steps of pitching allow one person to lift up a tent alone. After a year of practice, I was able to do so with a tent of 4 metres length. Traditionally, it is the women's task to set up the tent. According to the Yörük, extremely large tents as for example the 8 m tent of the Çetinkaya family, cannot be pitched alone as this size is already very tricky when being pitched. These tents tend to sway considerably during pitching.

The comments in the following sequence are the result of personal experience and gathered information from the Yörük during the field research.



*image 3.029: As already shown in the sequences for tent folding techniques, the tent roof must be spread onto the ground with the ridge pieces and ropes facing down. The position of the tent roof marks the floor plan of the to be erected tent.*



*image 3.030: See description at image 3.031*



*image 3.031: The guy-ropes need to be tied to the stay-fasteners being led to the stakes and back to the stay-fastener again where they get fixed with 4 half-hitched knots as shown in chapter 3.1.1. This means, that the stakes as well are driven into the ground at their estimated position before the tent is pitched up. Depending on the size of the tent, the desired wind stability and*

ground conditions, stakes are distant to the tent's eaves about 3-10m. The guy ropes should not be stretched tight to the stakes for a certain tolerance is needed for elevation. The necessary length can be estimated by lifting them from the floor up to the height of one's own knee but not more. That would be the right tolerance of additional length.



image 3.032: See description at image 3.033



image 3.033: Now, the middle pole can be erected. It is necessary to crawl under the spread tent roof to find the ridge piece and to stick the upper end of the pole into its basin. Then, the ridge piece and the whole tent roof can be pushed up by the help of the pole that gets gradually hauled up onto a vertical position. If the guy-ropes were prepared at the right length, the loose tent with its erected middle pole will be able to stand alone, slightly swaying but not falling over. That will even work when harsh winds are blowing and it is an important detail when only one person pitches up the tent.

The Yörük Black Tent

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*image 3.034: See description at image 3.035*



*image 3.035: Further on, the poles at the flanks are set into position one by one. Again, the tent would stand on its own during the steps of erection so that a single person is able to do the whole work.*



*image 3.036: Final task is to fasten the guy-ropes in two steps ore more by moving the 4 half-hitched knots along the leading ropes outwards. The position of the poles might need correction in some cases.*



*image 3.037: Here, showing a different event of pitching up a tent in Austria (2006), the walls cloths get pinned to the roof's eaves with wooden pins.*

Finally, the stakes for the wind-breaking mats are driven into the ground, the mats tied to them, a trench is dug around the tent, reed mats and carpets laid out inside the tent and later, all the equipment carried into the interior and set to its defined position. The pitching of the tent is completed when the first flames start to crackle at the fireplace.

A single Yörük woman may accomplish the whole task from naught to the crackling fire in less than an hour, so I was told.

Zimmermann as well describes in detail, how a Yörük tent gets erected, allowing to compare the description above with interesting variations in the procedure:

*In most cases, it's the women who pitch the tents. First, they spread the tent cover on the cleared ground. The tent poles are already put underneath on their right places. Then, the tent's stakes, firstly the ones to the right and left of the main belt, get driven into the ground, in doing so their positions get skilfully measured by eye without effort. A woman crawls under the tent cover, puts the front pole in its hutch and raises the roof a bit. A second woman comes to her aid of lifting up the main pole now. In the end, the remaining poles get placed into position. By re-tightening the ropes at the stay-fasteners and readjusting the poles, the tent receives its firmness.*

*The ground now gets covered with canvases, woven carpets and felt rugs and further fitments get placed inside. The pitching of the tent is a celebratory business for the Yörük, and two women need about 30-45 minutes for lifting or putting down a black tent. Around the tent a trench is drawn so that rain water drains off.<sup>39</sup>*

Zimmermann pictures how a certain order is pursued in the way the stakes are set. In the case of the field research, similarities could not be observed there. He as well men-

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<sup>39</sup> Zimmermann 1994, p.122-124; quote: "Meist sind es die Frauen, die die Zelte aufschlagen. Sie breiten zuerst die Zeltdecke auf dem gesäuberten Erdboden aus. Die Zeltstangen sind schon zuvor an den entsprechenden Stellen daruntergelegt. Dann werden die Zeltpflöcke, zunächst die rechts und links des Hauptgurtes, in die Erde geschlagen, wobei die Abstände mit sicheren Augenmaß ohne Mühe abgeschätzt werden. Eine Frau kriecht vorne unter die Zeltdecke, steckt die vorderste Stange in die ihr zugehörige Öse und richtet das Dach etwas hoch. Eine zweite Frau kommt ihr zu Hilfe, um nun die Hauptstange hochzustellen. Zum Schluß setzt man die übrigen Stangen. Durch Nachziehen der Stricke an den Winkelhölzern und Nachstützen der Stangen erhält das Zelt seine Festigkeit.

*Der Erdboden wird nun mit Geweben und Filz- und Webteppichen ausgelegt und die weiteren Einrichtungsgegenstände untergebracht. Das Aufrichten eines Zeltes ist für die Yörük eine feierliche Angelegenheit, und zwei Frauen brauchen ungefähr 30-45 Minuten, um ein schwarzes Zelt auf- oder abzubauen. Um das Zelt herum wird im Winter eine Rinne gegraben, damit das Regenwasser ablaufen kann."*

tions a certain trick that was not experienced during field research: The tent roof gets slightly elevated with a flank pole being stuck into the ridge piece in a bevelled way by one person before the centre pole gets pitched by a second person. In that way, a tunnel to the middle ridge piece is formed and crawling under the whole tent cloth is less inconvenient than without doing so. But that trick cannot be done alone.

Zimmermann also describes how the poles are already placed under the spread tent roof on the ground at the beginning. This as well was not observed during the field research.

Zimmermann estimates that two women may need 30-35 minutes for installing the whole tent. This time span possibly includes the placing or packing of the fitments.

Another usability feature is the easy adaption of the tent to various kinds of terrain. Except for the interior floor ground that is preferably flat, the surrounding terrain does not necessarily need to be flat. Guy-ropes can be fixed on humps and basins, on trees, concrete grounds or soft soil. Terrain anomalies would only influence the tent to a minor degree. The fixation of the guy-ropes can vary from stakes of different sizes to stones and branches as already mentioned in chapter 3.1.1. The whole construction consists of flexible joints only, so that the finite form is defined only by the length of tension connections as e.g. belts, panels and ropes. By adjusting the guy-ropes in length, an upright position of the tent can be reached in any condition.

As well, the distance of the stakes to the tent's rim can be shortened down from 10 to 2m without great losses of stability. Short staked tents need a stronger anchoring to the ground and do not allow additional external poles that haul up the ropes. They would sway too much due to the strong angle the rope needs to turn. The bending of the guy-ropes over external poles suits only for far staked tents.

Taking a look at a well staked black tent, it was interesting to observe how the guy-ropes are an important element of design and space definition. They are a relevant part of the characteristic appearance of a black tent. And, practicably speaking, it is impossible to ignore their existence although they are thin and light to the eye in contrast to the heavy looking black tent body. It is necessary to avoid stumbling over them before advancing on a black tent. Maybe it is without question that these ropes pose more than just a technical detail. They have gained a social function, too (translated from German into English):

*The guy-ropes fulfil, as inconspicuous as they seem to be, an important social function. Within their area peace is the rule: This space is the private sphere of the family. Whoever was accepted to this area as a guest, enjoys right to hospitality and will be defended against attackers if necessary.*<sup>40</sup>

This custom reported of Creyaufmüller is referred to Mauritanian tribes living in black tents. Nonetheless, it is an old tradition of the Yörük as well as of many other tribes in various regions that live in black tents.

## Chapter 3.2 The Yörük Tent in Comparison to other Black Tent Types

Mobile tensile constructions of black hair yarn can be found in various parts of Northern Africa, the Arabian and Persian region, in Turkey and in the Tibetan highlands. Based on Andrews, Faegre and Feilberg, a simplified overview of black tent distribution is provided here:

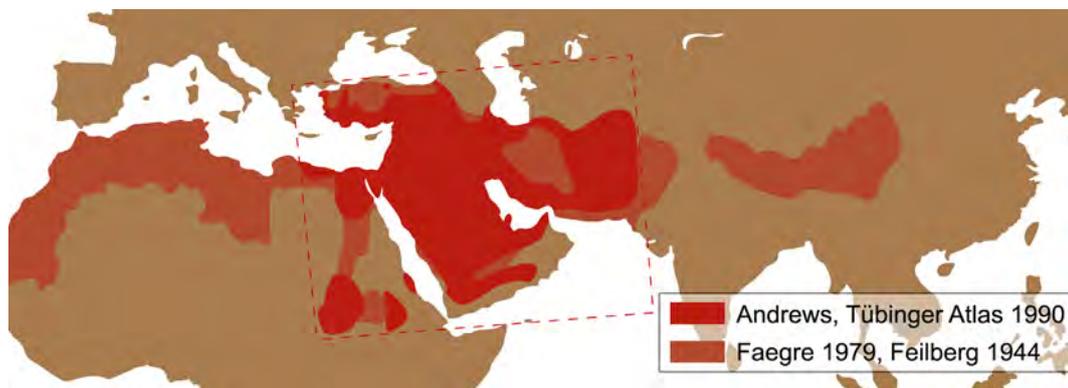


image 3.038: Distribution of mobile tensile constructions with black hair velum

As mentioned in a lecture by Peter Alford Andrews, an amazing number of tribes using incredible variations of the tensile black hair yarn construction is existing. In the course of time a publication based on a long-term research by Peter Alford Andrews is to be expected. As it is not in my field of expertise to provide a fair coverage of black tent

<sup>40</sup> Creyaufmüller 1999, p.19; quote :*”Die Zeltschnüre erfüllen, so unscheinbar sie sind, eine wichtige soziale Funktion. Innerhalb ihres Bereichs ist Zeltfriede: Dieser Raum ist die private Sphäre der Familie. Wer als Fremdling in diesem Bereich als Gast akzeptiert wurde, genießt Gastrecht und wird gegebenenfalls gegen Angreifer verteidigt.”*

types available I want to set focus on a selection of tent types that were documented so far. This selection should help understand the possible scope of construction variations. It is important to note that the following categorizations and constructional descriptions do not offer an accurate picture of types. As e.g. given in the first passage about Bedouin tents it is possible that several tents of different tribes are discussed in the same overall categorization. This lack of accuracy shows that the data about black tent types worldwide needs to be expanded and refreshed in the scientific world.

### **Bedouin Black Tents**

The Yörük black tent can best be compared with the Bedouin black tent which offers a similar characteristic of roof construction with separated wall velums fixed to the eaves' rims of the roof cloth. A difference worth mentioning is that belts are only used for the inner poles but not for the flanks. At the Yörük tents, the middle belt has to bear larger amounts of tension than the belts at the flanks. Therefore, parallels in a technical detail can be seen here. Dependant on size, the number of poles can vary at the Bedouin black tent. The minimum number of poles for the smallest tent construction is 9, counting a high pole at its centre with 8 flank poles keeping the eaves' rim up. The velum design of larger tents would be expanded in length adding extra belts that are lifted up by three poles each: a high one in the middle and slightly shorter ones at the flanks. While a photograph of Wilms<sup>41</sup> shows how the roof cloth ends at the flanking poles on the short sides, photographs of Thierry and Danielle Mauger<sup>42</sup> indicate that the roof cloth is prolonged far over the poles at two facing sides of the tent. The cloth itself consists of woven black goat hair yarn, sometimes with camel hair mixed into the thread.

The photographs of Mauger give clues that ridge pieces must be used above the poles. Descriptions of Feilberg point onto the use of a round plate-like ridge pieces, while the photographs of Wilms and my own records show a direct contact of the poles onto the roof cloth. Stay-Fasteners are either made of wood or metal. The far outstretched character of the guy-ropes, which could reach a length of about 30 metres, bore a usability advantage in the old days when rivalries between the tribes were more common. The ropes posed to be a tricky barrier for mounted invaders as the horses or camels could not avoid stumbling over them. Just the more, the long horizontal anchoring ropes support the resistance against sand storms.

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41 see: Wilms 1985

42 Mauger 1986, images A1 + A2



*image 3.039: A new Bedouin tent; Harran Ovası, Turkey, 2005*

### **Kurdish Tents in Eastern Turkey**

Kurdish tents in eastern Turkey differ strongly from the Yörük black tents in size, position of poles and year round usage. While the Yörük tent never needs to withstand loads of snow, quite the opposite can be said about the Kurdish tents. My travel to the city Van at the most eastern point of Turkey gave me the opportunity of interviewing a Kurdish tent constructor and a Kurdish architect in regard to the mobile dwelling forms of the nomads in the nearby mountain ranges. They explained to me that in winter, of course, the black tent velum needs a frequent clearance of snow loads in order to remain habitable. The occasional exposure of the tent roof to snow and ice may explain its increased incline, in comparison to the rather flat Yörük or Bedouin black tent roofs. The Kurdish black tent shows a generously large interior space that serves well the need of large occasional gatherings.

Regarding the arrangement of poles, Kurdish tents feature a special anomaly among the known pole constructions of black tents: As seen in the photograph below, the centre pole gets forked into two additional lateral poles above its middle.



*image 3.040: Forked poles of a Kurdish tent; Van, Turkey, 2005*



*image 3.041: Exhibited Kurdish tent; Van, Turkey, 2005*

DI Ferenc Zámolyi travelled into the same region around Van and allowed me to publish his photographs in this thesis. His pictures show another Kurdish tent type which is as common as the type described above. Here, the poles do not get forked but are set vertically singled out, forming a similar outside impression of the tent.



*image 3.042: See description at image 3.043*



*image 3.043: Kurdish nomads in the mountains near Van City, Turkey, 2005 (Ferenc Zámolyi). A fence made of reed mats divides the interior in female and public area. The public area may as well be defined as male area that serves for hosting guests and family gatherings of both sexes. To the female area only female guests would be allowed in.*

Both Kurdish tent types do not use any stay-fasteners or belts. Instead, along the narrow panels of 40-60 cm width, the cording seam extended into cords made of goat hair yarn down to exterior poles where they get wound around the pole's top. The exterior poles at the flanks are driven deeply into the soil, bearing a height of about 60 -120 cm above ground. A horizontal bar connects them at the top where the cords get fixed.



*image 3.044: Flank poles and guy ropes of a Kurdish tent, Van, Turkey, 2005*

Transversal to the panels all poles are connected with a flax rope underneath the velum. At the front of the tent, these guy ropes are lead to high exterior poles which are set in line to the interior poles, producing a sectional arch of tension. The same anchoring happens at the rear with lower poles or with no poles at all, leading the guy ropes directly down to the stakes.

Reed mats, woven together by diagonal goat hair threads, define the tent's walls inside the ring of exterior poles.



*image 3.045: Rear side of a Kurdish tent with decorated reed mat, Van, Turkey, 2005.*

### **Tents of the Tuareg Nouaji tribe**

Faegre claims that the Tuareg did not adopt the use of the black tent canvas from their Arabian invaders because their women refused to be assigned to the everyday task of weaving. Instead, they just took the construction system of the Arabian black tent,

modified it and exchanged the black cloth with goat's leather<sup>43</sup>.

During my desert journey in 2008 in the region of Zagora (Morocco), I have learned by the Tuareg tribe "Nouaji" that this proposition was not that true. They explained to me that the black tent bears the same tradition of usability as the leather tent or the mat hut. Their women do weave the panels themselves and their tribe would even construct a tent on demand at any time. Their tents show similarities to the Berber black tents in Morocco. When I asked if they used leather tents, they answered me that their tribe barely did as they were too hot for their needs, but yes, leather tents do exist among other Tuareg tribes. For traversing the hot Sahara plane, the tribe took one of their smallest black tents and a modern canvas tent with them in order to give shelter to their guests in case of sandstorms. We were lucky to experience a storm. The modern tent was squeezed by the storm whilst the old black tent stayed unharmed.



*image 3.046: Tents after a sandstorm. The modern canvas tent at the right got squeezed while the traditional Tuareg black tent on the left stayed unharmed; Sahara (Zagora region), 2008*

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43 Faegre 1979, p.70



*image 3.047: Model of a Tuareg tent. The proportions are manipulated showing an emphasis on the v-shaped stay-fasteners; Zagora, Morocco, 2008*

In these 11 days of journey, I experienced the cool shelter inside the black tent and I was taught how to set it up.

Knowing the character of weave of the Yörük black tents I could compare it to the weave of the Tuareg tent. Just the same it was woven in plain weave differing strongly in weaving density. The warp thread was even more compact than the weft thread. In a square of 100 cm<sup>2</sup> (10 x 10cm) I counted about 45 warp threads to 20 weft threads. Yörük textile examples showed approx. 36 to 19 (roof cloth) there<sup>44</sup> or even less (see chapter 5.2.4). The yarn itself was tighter twisted and revealed bright hair streaks that may indicate the mix-in of camel or bright goat hair.

In regard of the pressure bearing structure, the two poles at the centre are set up like an “X” connected on top with a slightly arched, approx. 60 cm-long ridge piece. In case of strong winds, the crossing of the poles in the middle of their x-position would be bound with a scarf or a piece of rope.

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44 Ambrosch 2004, p.151



*image 3.048: Crossing poles within a Tuareg tent; Sahara (Zagora region), 2008*

5 panels, 3 broad ones of about 80cm width in the middle and 2 narrow ones of about 40 cm width, form the rectangular skin of the tent which is bent over the ridge piece down to the flanks. The flanks' eaves are anchored down to the floor by short guy ropes that are fixed to v-shaped wooden stay-fasteners. The flank part of the tent canvas is hauled up by little poles of about 60-70 cm length that help fixing the walls of blankets to the roof canvas. At right angle to the direction of the panels a belt holds the stitching in place running from the back flank over the ridge down to the front poles that lift the entrance opening up. A wooden stay-fastener connects the belt to a guy-rope that runs down to the front stake. Altogether 14 stakes are needed, 4 and 4 at the side flanks and 3 and 3 at the front and back of the tent.



*image 3.049: Tuareg elder of the Nouaji tribe connecting the wall blanket with metal pins to the tent roof; Sahara (Zagora region) 2008*

The stakes were made of metal with a length of about 40 cm which is similar to the stakes we used for the newly constructed Yörük black tents. I thought that it would be easy to drive them into the sand and that their short length might prove to be insufficient. Quite the contrary, it was surprising how intense the resistance of the sand was whilst I drove the stakes in. The dry compressed ground in Turkey or the stony ground in Austria was softer compared to the Sahara sand. Once driven into the sand, the stakes were simply unmovable.

### Black Tents in Mauritania



*image 3.050: Tent with flat loom; Adrar, Mauritania, 1999 (Creyaufmüller)*

Creyaufmüller published a description of a black tent type in Mauritania in 1999. His publication is still one of the most detailed regarding architectural information about the traditional Mauritanian black tent. He pictures the tent as a pending canvas dipped up on two poles which are entangled at the top shaping a slightly off-centred copped peak. The two high centre-poles are joined in a round plate-like ridge piece. At the four eaves' corners below, anchoring ropes bound around v-shaped stay-fasteners spread the tent cloth towards the ground. Further guy-ropes fixed to the flanks help forming the

tensile shape. The panels of approx. 80 cm width are sewn together at right angle to the broad entrance front. The eaves' rim at the entrance is held up by two poles from which belts lead inside across 1,5 panels.<sup>45</sup> A thin cloth is stitched to the narrow flanks' eaves being held down to the ground by stones or stakes keeping wind and sand off the interior space while the roof's eaves are probably lifted up by short poles. Creyaufmüller mentions how the Mauritanian nomads had to suffer under the post-colonial troubles, losing their tents and being forced to take refuge in the western Algerian desert. Nowadays, it is nearly impossible to find recent photographs of that traditional Mauritanian black tent type. Sales of historical postcards presenting that particular tent type give clues that they were more common in the old times. In particular, I have found a picture of a tent belonging to a Marabout in a historical narration about resistance activities during colonial occupation in Mauritania.<sup>46</sup>

Hatton presents an old photograph<sup>47</sup> showing a huge assembly of Mauritanian black tents. Additionally, he explains the construction of the tent which fits closely to the description of Creyaufmüller:

*The Moor black tent is different from all other North African black tents, not only by its omission of the Western tension band system, but also because it is supported by two crossed vertical centre poles set into a short ridge-piece. It is smaller than most other black tent designs and has little height, except under the peak which is supported by the centre poles, to provide resistance to the desert winds. Their woven panels are also very narrow in width -sixteen inches wide for the roof sections and eight inches wide for sections reinforcing the front and back edges. Distinctive seam stitching is done in light coloured yarn which contrasts with the dark goat-hair fabric.*<sup>48</sup>

Moreover, recent pictures of tents of similar construction with white modern weaves are available, showing the same type with a rather symmetrically centred copping. Dujarric mentions that these white tents had become more popular and finally draws a comparison to the black tent type.

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45 see: Creyaufmüller 1999

46 see: Traoré 1997

47 see: Hatton 1979, p.92

48 Hatton 1979, p.93

*Nowadays, the white tent (bénié) is increasingly used, especially in the south). It is made of cotton bands stitched to one another and laid one on top of the other in two or three layers. The roof and the angles are often decorated with motifs embroidered in black wool, while the interior is lined with coloured cotton patchwork. Lighter than the black tent, the white tent is also less resistant and does not give protection from the rain.*<sup>49</sup>

### **The barrel vaulted Baluch Tent (Afghanistan)**

Baluchistan is an arid, mountainous region in the Iranian highland that stretches over the east of Iran, the south of Afghanistan and the south-west of Pakistan. The black tents of Baluchistan are of several different types of construction. In the following passages the barrel-vaulted tent is presented as documented by Andrews on the basis of his own research and of a study of Ferdinand and Edelberg<sup>50</sup>.

The barrel-vaulted tents of the Baluchi and the Brahui of Afghanistan and Pakistan are characterized by an arched construction mainly made of willow wood. Andrews explains how Ferdinand proposes that the tent's construction system is a result of combination between arched hut and the usage of black tent cloth. The arched hut was once widely spread in the Middle East, but was slowly replaced by other tent and housing types. Andrews then refers to Richard Tapper<sup>51</sup> who proposes that the arched construction is an archetype of the black tent in general. It reminds him of the old type of the tunnel tent. The arches, often constructed of two flexible rods bound together into the arched position<sup>52</sup>, find stabilisation over the canvas and the outside guy ropes which are led over semi-high poles that are placed at the short flanks of the tent<sup>53</sup>. There are no ropes placed between the arches. Mats in the lower part of the tent protect the interior of occasional gusts of wind and sand.

The space beneath the arches can be used in an ergonomic optimal way compared to types of tents with straight poles which tend to stand in the way in the area of maximum height. Modern camping tents constructed by arched rods provide the same advantages and therefore pose a direct comparison to the comfort of the arched construction of the black tents.

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49 Dujarric 1997, p.2106

50 Klaus Ferdinand, Lennart Edelberg *The Baluchistan Barrel-vaulted Tent and Its Affinities* in Folk 1, Copenhagen, 1959, p.27-50.

51 see as well: Richard Tapper, *Nomads of Iran: A political and social history of the Shahsevan*, 1977, Cambridge University Press (2<sup>nd</sup> edition November 2006)

52 see: Hatton 1979, p.84

53 Feilberg 1944, p.98

The velum of the barrel-vaulted black tent in Baluchistan normally consists of 5 panels with a width of about 1 metre. At the flanks 2 additional panels get fixed with wood needles. Belts are not required in this tent type as the barrel-vaulted construction supports the velum gently and high tension forces can be avoided. The loops at the eaves' rim of the velum are reinforced with felt pieces letting them rest on the semi-sized poles that shape the walls at the short sides. The arches made of willow consist of two rods of approximately 3-5 cm thickness that are bound together lengthwise.



*image 3.051: Baluchi tent set up for tourist attraction, purchased in 1977 (Geissmann)<sup>54</sup>*

### **Tibetan Tents**

The Tibetan black tent is known to be an exception to the rule in regard to material source. The textile is created from yak hair instead of goat hair. As these two hair types show similar characters in thickness and length, the change of material does not much influence the features of the woven canvas. Altogether, all attributes mentioned about the goat hair textile can as well be applied to the yak canvas<sup>55</sup>.

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54 Photos and tent ownership: R. Geissmann, California USA, rgeissmann@sbcglobal.net, <http://www.antique-carpets.com/index.html>

55 Weihreter 2001, p.79-80; see as well: Nomachi 2998, p. 97

As black tents are constructed for the usability in dry hot regions, it is quite surprising that the nomads in the Tibetan highland region with its relevantly cold temperatures use the same mobile dwelling type. They do not use the heavy yurt which is much more suitable for cold climates because the black tent bears less weight for climbing the steep slopes of the Tibetan mountain ranges.

Sayid Budi pictures Tibetan nomadic life in black tents near Gansu in China in his internet blog:

*Each nomad family has specific areas designated by the government where they can graze their animals. The government also regulates when and where they move. They move 2 or 3 times per year. Most nomads now are only semi-nomadic. They live in their yak wool tents for 6 to 8 months each year and live in small mud-brick homes the rest of the year*<sup>56</sup>

Black tents are used all over the Tibetan highlands. Drew describes an intense utilization in the north-eastern area of Tibet.<sup>57</sup> And then again, Weihreter mentions a variation of the black tent in western Tibet.<sup>58</sup>

The construction of the Tibetan tent is impressive with the elegant dislocation of pressure strained parts into the exterior. The shape of the tent is created by the wooden poles that are placed outside the tent's space. Due to this speciality, authors tend to describe the tent to be like a "spider".

*In all black tents, the main pole or arch supports are internal.-Called ba-nag by the pastoralists who inhabit the high plateau of central Tibet, the spider-like Tibetan tent is the exception. It is a box tent not unlike the Kurd and Qashgai tent with a roof awning that is extended almost horizontally, but in this instance, the unusual system of restraining stays passes over poles placed well outside the walls of the tent. This frees the interior of obstructing poles.*<sup>59</sup>

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56 Budi 2011, *A Typical Tibetan Nomad Tent, Exploring The Myth of Shangri-La, West China : Day 7*, <http://www.flickr.com/photos/docbudie/6029540272/>, 19<sup>th</sup> Oct 2012

57 Drew 1997, p.351

58 Weihreter 2001, p.78

59 Drew 1997, p.351

Nonetheless, the interior is not totally clear of all poles. A set of two poles connected at the top with a long ridge rod is fixed by 6 pieces of belt and rope units which are connected to the exterior pressure poles. As the outside poles are higher than the tent's top, the ropes lead upward to the poles' heads before being turned downwards towards the stakes<sup>60</sup>. The shape of the tent's velum, which consists of panels of 50-60 cm width,<sup>61</sup> resembles to a dome offering maximum space to minimum surface.



*image 3.052: Tibetan black tent; 2005, (Philipp Roelli)*<sup>62</sup>

The Tibetan tent type varies from region to region showing versions which are partly fixed on foundation walls<sup>63</sup> and/or are completely leaving out the exterior pressure poles, letting the velum alone bear the tension stability that is necessary for the inner two poles and the ridge piece.<sup>64</sup>

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60 Feilberg 1944, p.104

61 Weihreter 2001, p.79-80

62 Published in this thesis under the GNU-Licence for free documentation provided by <http://wikipedia.org>

63 Feilberg 1944, p.104

64 Weihreter 2001, p.85-92

## Chapter 4

# The Documented Black Tent Construction

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### Chapter 4.1 Building a Black Tent

#### Chapter 4.1.1 Tent Accessories, Building Process, Day 1

In the year 2007, the families Şimşek and Şurgun built for us two Yörük tents. The building process got filmed and documented on Video<sup>1</sup>. For each tent, the two families needed one and a half days of preparation and building time. Step by step, it will be documented what was done in these 2 days, explaining the building process of a Yörük black tent. On the first day, the main focus was on the acquisition of material and accessories. The single steps of that day will be described with the help of image sequences:

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<sup>1</sup> see: Ambrosch 2010

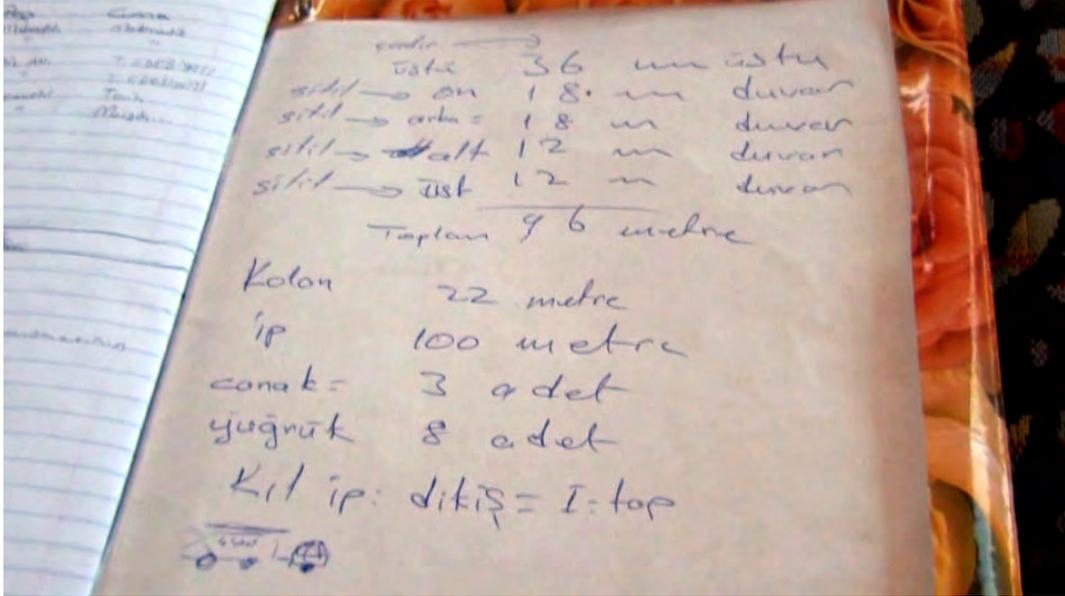


image 4.001: Early in the morning at about 7 o'clock, before hitting the road to Bozdoğan, Mehmet Şimşek summed up the necessary dimensions and numbers for the single items

After an hour's drive to the weavers' village Olukbaşı in the region of Bozdoğan (detailed description of this particular village in Chapter 4.2), we met the weaver Adnan Yayar who could sell us the desired black cloth panels for the black tent. It was tradition for the Yörük to weave the panels for their tents on their own, but due to economic changes it became more efficient to buy them in the weavers' villages (details about the Yörük weaving tradition in Chapter 5.2).



*image 4.002: Mehmet Şimşek and Mustafa Şurgun negotiated the price of the black tent cloth with Adnan Yarar for about half an hour. The custom of negotiations appears to be aiming for lowering the price as much as possible. But it rather is a way of honouring the weaver's work. It would render the weaver unhappy to have short negotiations there, although the customer would pay a considerably higher price.*

They lowered the announced price for the cloth down to a fifth in the end. Altogether, we paid 35 Euro (35.000.000 lira) for 4,5 rolls of hand-made textile (1 roll contains 27 metres cloth of 85 cm width).

This is a considerably low price, adequate for the Yörük, them being the most honourable customers. Strangers and foreigner would not get that special price.

Although this scheme of price setting seems to be unfair to strangers and foreigners, it ensures that local people or people who are close to the producers (regular customers) get a stronger regional support. That way, local economics are not overrun by foreign investments so easily.



*image 4.003: Adnan Yarar weighs the textile as the price is associated with the weight of the product. In particular, the calculation of the price is connected to the quality of the textile. Adnan Yarar offers two quality categories: black tent cloth of quality category 1 and quality category 2. Category 1 is used for black tent roofs; category 2 is reserved for tent walls.*

Category 1 is made of a yarn that was produced from extra-long cashmere kemp hair. It is recommended for strong tension. Category 2 is made of shorter kemp hair and thus might break more easily as the friction between the single hairs within the yarn is less strong. This difference shows with how much attention to detail the people in the weavers' villages sort out the raw wool. More details about their manufacturing can be read in chapter 4.2.

In our case, panels of a quality between category 1 and 2 were bought for roof and walls homogenously as Adnan Yarar did not have any panels of category 1 in store and had introduced that new category type recently.

The woven belts for the tents were included in the price as they have low production costs being made by machine. Adnan Yarar explained that they do not do the belts on the hand-loom as it does not pay off for the weavers. Actually, most of the products sold in the village can either be retrieved from a factory hall and are thus machine-made or be retrieved from the weavers, being thus hand-made. Yörük und local people prefer the more expensive hand-made products due to quality reasons that get more thoroughly explained in the sub-chapters of chapter 4.2.



*image 4.004: On our way back from the weavers' villages we made a stop at the city Tire<sup>2</sup> which is famous for its old crafts, in particular in the sector of rope and yarn manufacturing. It is a centre of felt production as well.*

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2 “Tire” means “thread” or “cotton thread”.



*image 4.005: After a while we found a carpenter who would reconstruct the old ridge piece for us. The dark ridge piece derives from the old tent of the Şimşek family, being blackened from the fire fumes in the tent. It serves as a model for the new ones.*

Contrary to the traditional ridge piece which was made of broadleaf wood, the new ones are manufactured from the far softer pinewood.



*image 4.006: The ridge piece is cut out by the help of a belt saw.*

As seen above, the ridge pieces are cut out with the help of a belt saw. Here, another big difference to the traditional ridge pieces can be found: The old ones were carved, not cut. A carved piece of wood withstands friction and the influence of moisture much better than a cut one as the carving rather works along the fibre, leaving the small pipes of the fibre rather complete or closing them up at the open ends due to the pressure performed in the process. Therefore, the wood stays more sealed on the surface and weaknesses in the structure are getting worked around by the carver. In case of a cut piece, the pipes of the fibre stay torn open. There, the wooden piece is more exposed to outside influences that demolish the fibre or break the structure.



*image 4.007: The trough of the ridge piece is carved out with a gouge. Then, with an electric drill, four holes -one for each corner- are drilled for fixation on the central panel later.*



*image 4.008: Similar to the ridge pieces, the stay-fasteners are cut out of the same type of pinewood.*

The carpenter does not only manufacture the 3 ridge pieces but the 8 stay-fasteners also. Here, in analogy to the ridge piece, we find the same differences to the traditional production.

Finally, all pieces get slightly planed at the edges. Later on, in the evening, Mehmet Şimşek and Mustafa Şurgun paint the wooden pieces with wood stain in order to make them more resistant against water. The traditional ones did not need such conservation. Originally, the fumes of the bonfires in the tent preserved the wood effectively.



*image 4.009: While the carpenter was about to finish his work, Mehmet Şimşek and Mustafa Şurgun took the opportunity to buy the 0,8 cm hemp guy-ropes for the tent which are produced locally in Tire.*



*image 4.010: Further on, they bought the wind-breaking and flooring mats made of synthetic material.*

The wind-breaking mats were originally made of woven straw or reed. For the flooring, below the kilims or felt rugs, reed mats were used in order to protect from moisture or cold or to simply even out the pressure of little stones on the ground.

The synthetic mats of 80 cm width for the walls and 160 cm width for the ground last longer and are not that delicate in handling.



*image 4.011: At the blacksmith's shop, Mehmet Şimşek and Mustafa Şurgun retrieve the stakes for the tent.*



*image 4.012: In the middle, on the floor, the eight stakes can be seen which were made from structural steel bars.*

The shopping of the tent accessories was nearly complete. Finally, we made another stop at the village Ahmetliköy where we met relatives of Mustafa Şurgun. They invited us to some tea and gave us the three poles for the tent made of young poplar stems. They were retrieved from a young poplar tree plantation the family had good trading connections with. Most of the family members in this village will help sewing the tent on the next day.



*image 4.013: Again, all tent accessories we acquired on the first day of tent construction fit in our tiny trailer (100 x 80 x 40 cm).*

Mehmet Şimşek, Mustafa Şurgun, my husband Herbert Pfeifer and I returned to the camp of the Şimşek family late in the evening. Though we had started early and went swiftly through the necessary steps, it took us a whole day accomplishing the acquisition.

As already mentioned in this chapter for several times, the shopping of goods is already several steps away from the traditional black tent construction. In chapters 5.1 and 5.2, I will get deeper into that subject.

## Chapter 4.1.2 Tent Roof and Walls, Building Process, Day 2

Our day started at 7 o'clock. During breakfast together at the Şimşek camp, members of the Şimşek and Şurgun family arrived, most of them being old experts of black tent construction. 35 years have passed since they had built their last tent. Now it would happen once more. Then, shortly before 8 o'clock they started preparing the ground for the black tent construction.



*image 4.014: From left to right: Mustafa Şurgun, Mehmet Şimşek and Emina Şurgun clean the ground of rough stones and tiny burrs.*

The cleaning of the ground is done with shrub twigs. The pasture is covered with tiny burrs left by plants (apparently related to *Agrimonia*) that had flourished during spring. These tiny objects are quite a nuisance as they itch strongly on human skin.



*image 4.015: The textile panels are laid out on the ground.*



*image 4.016: Cutting of the panels into the desired length.*



*image 4.017: The pattern of the roof is laid out on the ground. The panels are pinned down to the ground with large nails made of steel. The fringe is evened out with a thread drawn across. In the middle of the image, Nasuh Şimşek can be seen, with 74 years of age he is the oldest tent builder within the group.*



*image 4.018: Total view of the working place.*



*image 4.019: After the panels have been put into position, they are stretched by beating. Here, both ends of a panel are held tightly by the tent builders, while two of them raise the cloth over a horizontal pole. Another tent builder starts beating the cloth under tension with a second pole. That way, the two pole carriers and the beater slowly walk up along the panel until the whole length of it has been beaten.*

This particular step in the working process was not documented so far, but is mentioned on the website of the Peker weavers<sup>3</sup> from the weavers' village Dutağac as well. In chapters 4.2.1 and 4.2.6 the village Dutağac and the Peker family will be introduced a bit closer.

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<sup>3</sup> Peker 2012, *Hakkımızda - Peker Dokumacılık - Kıl çadırı, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/features.html>, 17<sup>th</sup> Dec 2012



*image 4.020: After beating, the panels are stretched to a surplus of about 10-15 cm and are pinned down to the ground again.*

The beating and therefore pre-stretching of the panels is an important factor for ensuring the steadiness of the tent when being pitched up. The stretched cloth tends to expand less under permanent tension and thus reduces the swaying factor of the tent during sudden wind impacts. In chapter 5.2, a Yörük tent is described that was not pre-stretched. Such a tent does not fulfil its purpose adequately. It may fall over easily after several days of standing.



*image 4.021: The sewing of the tent starts.*

The tent is sewn together under high tension. The sewers need to pull the panels together at right angle to their direction and alongside away from the pins at their ends. Like the pre-stretching, the sewing under tension ensures the desired stiffness of the tent.



*image 4.022: The gap between the panels must be closed by pulling hard at the stitch. The stitch itself is an abutted seam which must be followed exactly suit according to tradition for ensuring rain impermeability there. This image shows step 1 of the seam.*



*image 4.023: Abutted seam step 2*



*image 4.024: Abutted seam step 3. Pulling the edges together.*



*image 4.025: Abutted seam step 4. Now, the other side is stitched from underneath. All stitches must be started underneath. As seen in these pictures, “bent narrow twists” were used as needles.*

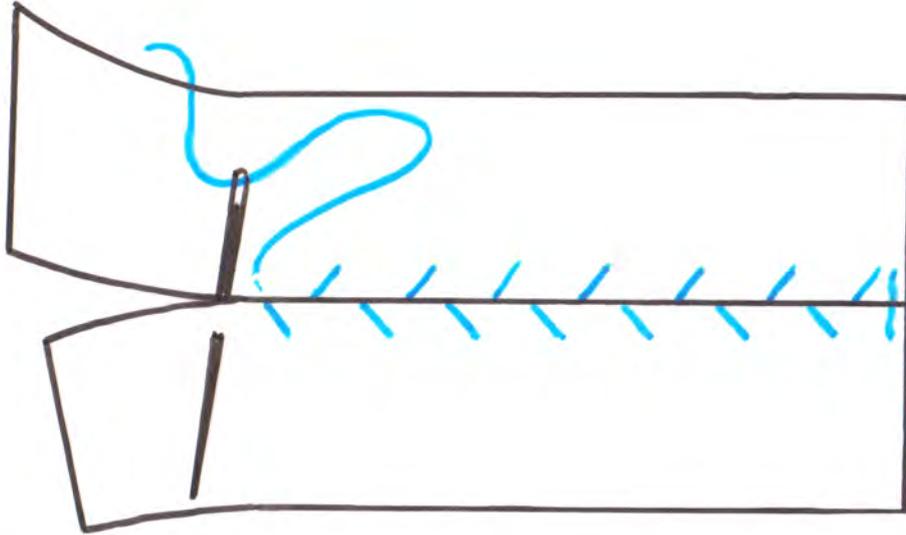


*image 4.026: Abutted stitch step 5. Pulling of the yarn. Afterwards the same stitch will be performed on the other side slightly moving diagonally backward.*

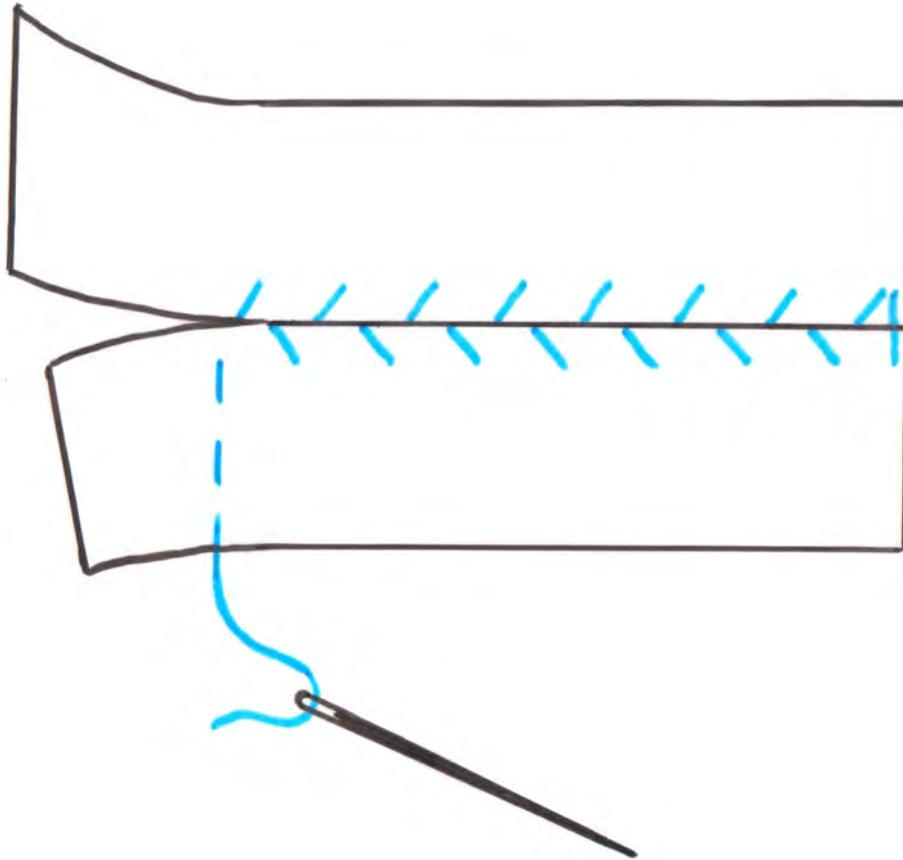
In Western culture the “baseball stitch<sup>4</sup>” is of the exactly same pattern of stitching. In Western Turkey, this seam bears the name “Yörük stitch”.

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<sup>4</sup> Garripoli / Maribelmade 2010, *How to sew the baseball stitch* (by maribelmade) - The Rigid Heddle, from Ask The Bellwether, 23rd April 2010, <http://therigidheddle.tumblr.com/post/543419126/how-to-sew-the-baseball-stitch-by-maribelmade>, 17<sup>th</sup> Dec 2012



*image 4.027: The Yörük stitch*



*image 4.028: Basting stitch for securing the thread. The thread is simply cut after a few stitches. It is left untied.*

All stitches, except for those starting at the end of the panels, are not secured with a simple knot but with a basting stitch<sup>5</sup> at right angle to the seam. That way it keeps the thread flexible within the tent's plane when exterior forces stretch and bend the textile.

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<sup>5</sup> IATSE 2012, *Hand Stitches*, IATSE Local 470 Union Stagehands, Appleton USA, <http://www.ia470.com/wardrobe/stitches.html>, 17<sup>th</sup> Dec 2012



*image 4.029: Simultaneously to the stitching of the panels, the belts are measured and put into position.*



*image 4.030: The belts are added on the panels by a simple overcast or whip stitch<sup>6</sup> along the edges.*

<sup>6</sup> IATSE 2012, *Hand Stitches*, IATSE Local 470 Union Stagehands, Appleton USA, <http://www.ia470.com/wardrobe/stitches.html>, 17<sup>th</sup> Dec 2012



*image 4.031: The additional 30 cm of the belt off the fringe are divided and looped over the stay-fasteners where the sling is tightly sewn around the notches. Left below, the overcast or whip stitch can be seen.*



*image 4.032: The flags of the centre panels can be frizzled if desired. The frizzled ends cover the ridge hole lightly, keeping off flies and allowing ventilation.*



*image 4.033: The ridge piece needs to be fixed exactly at the middle of the central panel.*



*image 4.034: There, it is sewn through its 4 holes to the belt and panel. The stitch is set in a way that an "X" appears on the outside of the roof cloth. It is recommended to do the stitching several times, maybe even with separate yarns as they break easily due to friction on the wood.*



*image 4.035: Before or after fixing the flank ridge pieces – this depends on how the group chooses to do the work-flow – the cord for the stay-fasteners at the short sides needs to be fixed. The plaited bundle of black goat hair yarn is sewn to belt and panel.*



*image 4.036: Then, the plaited cord is pierced through the weave.*



*image 4.037: Plaited cord pierced through.*



*image 4.038: The loose ends of the cord. Later on, they are looped around the notched ends of the stay-fastener and sewn tightly to it.*



*image 4.039: The heads of the poles are narrowed down with the “orak” (chop sickle) in order to fit in the trough of the ridge pieces.*



*image 4.040: Long before pitching-up, the guy-ropes are measured and cut.*



*image 4.041: Shortly before noon, the tent roof is finished. It will be pitched up instantly so that the continuing work can be done in the shadow. The climax of daily heat will be reached at 2 pm. Long before that, the whole tent needs to be finished.*



*image 4.042: Just as described in chapter 3.1.4, the roof is fixed to stakes and guy-ropes before being erected.*



*image 4.043: First, a flank pole pushed into the ridge piece's trough leans against the tent, lifting the flank slightly up. As the guy-ropes are stretched out the proper way, the pole does not need to be held. It stands freely. At the back, a member of the Şurgun family holds the other two poles ready to add them to the tent.*



*image 4.044: The whole scenery seen from the other side. The centre pole stands in place already and the last flank pole needs to be inserted. Meanwhile the front flank pole is put into an upright position. As seen, the guy-ropes are already tightly drawn, holding the unfinished tent in position. Until now, nobody had to correct the length of the guy-ropes.*



*image 4.045: Here again is seen the last pole, put into position.*



*image 4.046: The flexible knots, consisting of four half bitches, are moved or they are completely knotted anew.*



*image 4.047: All eight anchoring spots need to be pulled tight.*



*image 4.048: Total view of the finished roof.*



*image 4.049: The length for the wall panels is measured. Afterwards, two panels for each side will be stitched together without any pre-stretching.*



*image 4.050: The wind-breaking walls are installed on the weather side of the tent. Metal bars of about 1,40 m length are driven into the ground, holding the mats upright. Each mat is sewn to the bars on two spots.*



*image 4.051: While some are still busy with finishing the tent's walls, others are already starting to party. After all, it has been 1,5 days of intense work in the strong July heat for Mustafa Şurgun.*



*image 4.052: Finally, we all celebrated under the cooling tent roof in the middle of 1 pm heat (appr. 45° C). We stayed there for quite some time as the tent provided a considerably cool shade compared to outside conditions.*

According to tradition, a young goat was slaughtered in the morning of this day and roasted on the open fire. For lunch we all got served a festive meal.



*image 4.053: Nasuh Şimşek aged 74 was overwhelmed to see a new tent being built after a break of 35 years. In 2007, he was the leading head of the sewing team, remembering how things needed to be done and being strongly involved in the stitching of the panels. Later on, he carved the wooden pins for the wall cloths, as well.*



*image 4.054: Midday rest under the new tent.*



*image 4.055: The finished tent. The walls were first pinned to the roof with iron nails. The surface friction of the iron was strong enough to hold the tent. Later on, wooden pins were carved out of bush twigs and replaced the metal pins. Left, in front and on the right, pieces for the second tent to be built can be seen.*

The following persons were involved in the tent building process and support of the building team (order of names according to couple or generation, as they were given to me by the Yörük themselves):

The Şimşek family:

Mehmet Şimşek

Fatma Şimşek

Nine Ayşe Şimşek

Dede Nasuh Şimşek

Serpil Şimşek

Sezgin Şimşek

The Şurgun family:

Mustafa Şurgun

Teslime Şurgun

Halil Şurgun

Emina Şurgun

Taner Şurgun

Keziban Şurgun

Dede Mehmet Şurgun

Nine Keziban Şurgun

## **Chapter 4.2 Production of the Black Tent Textile in the Weavers' Villages**

### **Chapter 4.2.1 The Weavers' Villages**

Mehmet Şimşek and Mustafa Şurgun bought the textile panels at the village Olukbaşı. Far from their camps near Torbalı, it takes a 45-minutes' drive south-east over the local highway and winding mountain roads until Olukbaşı is reached by car. It is one of the three villages that are well known for their goat hair manufactures all over Turkey. Eröz mentions these particular three villages as well, naming Biresse (former name of Olukbaşı), Dutağacı and Koyuncular located in the mountains massif of Mount Madran near the University town of Bozdoğan in the Aydın region. He describes how

Yörük nomads had settled in these villages starting manufacturing goat hair products like strings, ropes, bags, saddle bags, kilims, etc. They acquired their wool resources from Yörük kinsmen that still lived a nomadic or partly nomadic life. The products got sold by merchants settled in Nazilli or by the villagers themselves who had established branches of their trade in Aydın, Istanbul, Adana and Maraş.<sup>7</sup>

As I have not known about the book of Eröz before 2010, I had to gather this particular information myself, together with my husband. He supported me in accomplishing a breath taking journey for searching and finding the weavers' villages which were nothing but a myth to us until we finally found them.<sup>8</sup> Altogether, my collected information fits well with Eröz' description. For example, the weaver family Peker of the village Dutağac explained to me that their trade is set up in Nazilli and Adana as well.

Olukbaşı is a village situated lowest of the three, being a gate to the other two villages as the only road to them leads through Olukbaşı. It was formerly known as Biresse, but was newly named 40 years ago<sup>9</sup> as the old name showed its Greek origins. This seems to be a late exception to the rule because the change of village names to Turkish expressions happened far longer ago.

It appeared to me that Olukbaşı was the richest settlement, being most influential on the others as it controlled the ways to them. Together with Dutağac, they maintain a weaving factory with automated looms. Additionally, they have their own grooming factories at the entrance of the village.

With regard to the crafts, the village is strictly organized in hierarchies. With the patron on top (who as well holds the position of the mayor and supposedly holds a strong position in merchandising) and a few influential weaver families (supposedly 5-8), the whole village is organized below them, gaining jobs and economic stability. As the weavers sell a good amount of their products directly to their clients, they stand higher in the hierarchy compared to the spinners and carders which are paid by the weavers. Single households are assigned to spinning, dyeing or grooming. To a certain extent, they may as well own looms that are partly used for commercial weaving as well. It seems that the task of sewing (e.g. bags, saddle bags, cushions, etc...) is given as a special assignment, too. With regard to international sale, the weaver Adnan Yarar explained to me that products of the factory hall are sold abroad to the Middle East and Africa.

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7 Eröz 1991, p.173

8 see chapter 1

9 Regarding the date, I needed to rely on oral information given by university students coming from that village. I could not verify it by some other instance. Nonetheless, I have reason to believe that the change of name happened in more recent times and not at the beginning of last century as the local bus system still announced travels to Biresse, letting the new name Olukbaşı being unmentioned.



*image 4.056: Olukbaşı, 2007*



*image 4.057: A house in Olukbaşı, 2008.*

Dutağac is the second village in the row. The Peker family appears to be the chief weaver family there, employing a large number of households for weaving, spinning, grooming and dyeing. Apart from the large factory that was set up with Olukbaşı, large halls for grooming machinery are installed within the village, too. The Peker family supports the information of Adnan Yarar and adds the fact that they sell groomed cashmere wool to Italy and China as well. Their domestic trade is set up in Nazilli, Denizli, Aydın and Adana. In Nazilli, they maintain a second weaving factory. According to their information, all three villages produce black tent textiles for already about 85 years. The factory hall was set up 40 years ago.



*image 4.058: An alley in Dutağac*

The third village Koyuncular is unknown to me. Back then, I had no idea that a third one was specialized on the craft of black tent cloths. Later on, I heard rumors but many of the local people claimed that the third village would not exist. Only later, I was able to gather more information about it. I would have had to pass through both villages in order to reach Koyuncular but manners required to make a stop at each of the known villages to say hello at any chance and therefore my limited time ran out.<sup>10</sup>

The Peker family told me that nomadic Yörük families still live in the mountains past the third village Koyuncular which may be a good hint for future research opportunities.

I gathered that the two villages known to me produce the following products:

Groomed cashmere wool by machinery, groomed kemp goat hair by machinery, spun kemp hair by hand and machinery, kemp hair ropes, woven kemp hair panels by hand and machinery, simple Yörük kilims with dyed or undyed wool colour ornaments, bags and saddle bags, cushions, goat hair brushes groomed and bundled by hand, modern black tents, black tent halls and covers on demand, modern tensile architecture made of kemp hair panels, etc... .

Also, they sell cotton ware made of leftover canvases from t-shirt production:

Woven cotton carpets, car seat covers of cotton weaves, door mats and decoration mats of cotton weave, etc...

Following economic changes, they constantly adapt their production to demands.

Eröz also mentions the following products being sold: animal feed bags, alopecia banks, hoes, halters, etc. He explains that the south-eastern provinces of Turkey are well known for their crafts done locally and sold in the larger cities.<sup>11</sup> I also noticed that cities in the southern regions are specialized on certain products as e.g. Tire with the sale of organic ropes and felt products, Nazilli with the sale of goat kemp hair products or, more in the centre of Turkey, Afyonkarahisar with the crafts of traditional tin, iron and glass manufacture.

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10 It was not always the case that I stuck to the rules of manners or politeness, but on some occasions I decided it was wiser to do so. As an example to the contrary, I was quite rebellious about getting leave for visiting the weaving factory with the video camera a second time. It is always a question of balance and sense of the situation at hand.

11 Eröz 1991, p.173-174

Eröz states that the goat hair manufacturing specialities of the three villages derive of a long tradition of thousands of generations being built on a fine network of resources and sale all over the country. In the old days, they posed an important support for cavalry and artillery by producing riding equipment (as already mentioned: food bags, hoes, halters, sackcloth, etc.).<sup>12</sup>

## Chapter 4.2.2 Raw Wool

Raw wool for black tent velum derives from cashmere goats. With regard to Anatolia, it is convenient to speak of the Anatolian black goat, an internationally acknowledged cashmere breed. Although it may seem to be correct to take notice of pure breeds that help classifying certain attributes as e.g. the quality of hair, practice shows a totally different situation. Pastoralists in Turkey rarely hold a single pure breed but rather an individual mix of breeds that is optimized by their own breeding methods. Therefore, the attributes of goat hair may differ strongly from pastoral family to pastoral family. As well, most flocks are mixed in fur colours, showing mainly black coats with smaller numbers of animals with reddish brown, blonde and shaded grey. Most of the flocks only contain very few white goats in the mix.

Numerous breeds all over the world can be associated with the term “Cashmere Goat” which embraces certain common qualities as e.g. comparably big body size, floppy ears and long hair. They endure extreme temperatures from minus 40° C up to 30° C. In autumn, these animals increasingly produce their fine down beneath the strong kemp hair which protects them from the winter cold. In spring, the goats rid themselves of that down. That is the time when this fine wool may be combed out by hand for further processing. Each animal provides about 150-200 g of Cashmere wool depending on its size and age.

The strong kemp hair is cut twice a year, being used for carpets and flat weaves. Quite contrary to sheep, cashmere goats do not get shorn.<sup>13</sup>

In Turkey, it is more common to cut the goat’s hair twice a year without combing the down out first. Therefore, the collected hair contains both kinds of wool.

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12 Eröz 1991, p.174

13 see for further explanation: chapter 5.2.1

Weseler 2012, *Kaschmir-Ziegenhaar*, Weseler Teppich GmbH & Co. KG, Wesel Germany, <http://www.tretford.eu/cms/tretford/journal-artikel.html?id=1592395>, 27<sup>th</sup> Oct 2012



*image 4.059: Black Cashmere goats of the Çetinkaya family*



*image 4.060: Coloured Cashmere goats of the Şimşek family*

Raw goat hair wool is either directly delivered to the villages by the pastoralists in Turkey or by merchants holding contracts with several numbers of pastoralists. As already mentioned previously, seasonal deliveries can be expected in spring and autumn according to the “shearing”<sup>14</sup> periods for cashmere goats<sup>15</sup>. In chapter 5.2.1, the manual shearing of goats by pastoralists, in particular by Yörük nomads, is described more closely.

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<sup>14</sup> As already mentioned above, the “shearing” of goats is rather a “cutting” of hair and is therefore slightly different to the shearing technique for sheep.

<sup>15</sup> Nagal 2006, p.21: “In case of goat, shearing is performed twice a year, first shearing in March (Spring clip) and second in September (Autumn clip).”

According to Adnan Yarar of Olukbaşı, 6 tonnes of wool are processed in the three villages each year. Compared to the international scale of traditional cashmere production in the Middle East and Asia of 6000 tonnes/year with China being the main producer,<sup>16</sup> this number is indeed impressive. He explains that all pastoralists herding cashmere goats in Turkey deliver their hair to these villages. This may be true to some extent, assuming that a remarkable majority of hair production in Turkey is brought to these villages, considering the fact that the provinces near to the location of the villages provide the most ideal conditions for breeding cashmere goats. Nonetheless, it may be necessary to compare this statement to the data of production amounts in the kilim and carpet industry of Turkey. But even on that account I could gather the information that the main production of kilims and carpets is settled around Nazilli<sup>17</sup>. Additionally, literature research indicated that the main manufacture of cashmere kemp wool is done in this particular region. Still, official numbers are missing here, especially those making a clear distinction between cashmere wool and cashmere kemp hair. And, as well, the trade and franchise patterns of the more eastern provinces inhabited by Turkmen, Kurd or other minorities need to be considered. Here, reliable data is missing, and as the carpet industry is well established in the eastern provinces, it may be likely to contradict the statements above or to put them into a new relation.

The wool is delivered and stored in single plastic bags with the dimension of 1,20 x 0,80 m (sacks of two-dimensional design) or in larger plastic sacks of about 2,5 x 2,5 x 3 m (sacks of three-dimensional design). In some cases, the wool is spread on the floor in order to dry out in the sun before being further processed or stored.

The raw cashmere wool is a mixed resource of fine cashmere wool and coarse cashmere kemp hair. Both hair types offer quite different attributes that will be taken into account in the further processing.

Before discussing details on goat hair, it may be necessary to take once more a closer look at the features of animal hair in general:

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16 Botha / Roux 2008, p.2; referring to Nagal 2006, p.9 who describes which regions are meant: “Common goat hair for textile use come from some Asiatic countries that supply cashmere namely China, Outer Mangolia, Pakistan, India and Turkey.”

Leeder / McGregor / Steadman 1998, p. 13, mentions 5000 tonnes / year in the same geographical area in the year 1998 (10 years earlier)

17 Oral information given by Tumer Duygulu, owner of the carpet shop at Selçuk Garden Camping, Isabey Mah. Kalealti No. 6, Selçuk, 2005; This information was approved by the weaver family Peker and by Adnan Harrar in the years 2006 and 2007;

*The animal hair grows in two principle coats, the outer coarser coat is called as “outer coat” which is relatively glossy and stiff. This outer coat overlaps and forms protective shield against water, rain and snow, can measure up to 15 inch. The inner down hair growth is called as the “inner coat” or “under coat”, which is closer to the skin, hence soft and shorter than the outer hair thus acts as insulator and protects against heat (camels) and cold (Angora goat, Angora rabbit and Camels), measures 1 to 5 inch in length.*<sup>18</sup>

Nagal, who especially investigated goat and camel hair, describes above how the animal fur can be divided into the outer coarser coat, mainly built of kemp hair, and the inner down hair, also called the “under coat”.

A simple distinction between these two types of hair can be made by comparing the diameter in cross-sectional view. Negahdari and Salehi mention that the average diameter of commercial goat fibre is 30-150  $\mu\text{m}$  and can go down to 25-68  $\mu\text{m}$  for Iranian cashmere goats.<sup>19</sup> Leeder, McGregor and Steadman do even present a thickness of about 15-19  $\mu\text{m}$  for Cashmere breeds in Australia. Regarding kemp hair thickness, the results of Lungu, Recordati and Ferrazzi offer a range between 111 and 145  $\mu\text{m}$  in the Romanian regions.<sup>20</sup> Depending on the breed, thickness in hair can vary considerably and here, numbers regarding particularly the Anatolian black Cashmere goat are missing. The Anatolian Cashmere goat is the main provider of Cashmere hair in western Turkey.

As well, the length of hair differs strongly between the breeds. For the Cashmere down lengths of about 35-70 mm<sup>21</sup> can be expected. Negahdari and Salehi start with numbers of 2,5 cm (in rare occasions even less) for the down and go up to 23,5 cm and 26,7 cm for the kemp hair<sup>22</sup>

The weavers of the villages near Bozdoğan explained that the average sizes of black kemp hair differ strongly, depending on the herder's breeding abilities. They then sort out the different lengths, using them for different qualities of yarn providing different qualities of woven panels.

Another interesting data may be the rate of fleece weight per animal per shearing period

Numbers in weights of the fleece per animal are given here by Negahdari and Salehi:

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- 18 Nagal 2006, p.9
  - 19 Negahdari / Salehi 2010, p.27
  - 20 Lungu A. / Recordati C. / Ferrazzi V. 2007, p.441
  - 21 Leeder / McGregor / Steadman 1998, p.8
  - 22 Negahdari / Salehi 2010, p.30

Anatolian black goat: 381 g  
Rajasthan goat breeds: 400-600 g  
Iranian cashmere breeds No.1: 100-1000 g  
Iranian cashmere breeds No.2: 222-400 g

There, the Anatolian black goat appears to lie in the middle field of fleece weights.

Before the collected hair is combed, it needs some preparation depending on how the wool was gathered and how it will be processed further. In case of the Turkish weavers' villages, the shorn hair sometimes needs to be divided by hand according to its natural colour before being combed by machines. This job is done by the women and children of the village.

In many cases, raw animal wool is also cleaned, before being processed. In some cases it may be washed with pure water or just beaten with a bow. Grömer shows a photo of a Turkish woman in the region of Kuşadası<sup>23</sup> beating the raw fleece with a bow in order to fray out the wool so that dirt particles fall off.<sup>24</sup>

The cleaning process can be skipped when the fleece is rather free of foreign particles or, as in the case of the weavers' villages, the carding machines do that job in one go.

### Chapter 4.2.3 Combing, Carding

The wool preparation for spinning takes place in industrial halls situated at the fringe of the villages. There, 4-5 machines being attended to by 1-2 men, rumble without break from early in the morning until late in the evening. The goat hair gets dried, tumbled, combed and carded there. A huge drying and tumbling machine helps putting the raw wool into the right condition for further processing on the automated carding machines. The men attending to the wool need to wear masks for protecting their lungs from the fine hair dust that floats in the air. Ear protection is worn too, as the noise of the 35 to 40 years old mechanical machines is overwhelmingly loud.

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23 A city situated 20 km south-western to Selçuk at the Aegean shoreline.

24 Grömer 2010, p.72



*image 4.061: Drying and tumbling machine for raw hair and wool. Sometimes, alternatively, the drying is done by laying the wool out on the road being exposed to the warm sunlight.*

What happens in these halls actually? Let's start from the early basics of wool preparation which help us understand what the automatic machines do accomplish in one go. The combing is a main step of wool preparation that needs to be differed from "carding". Taking a look at the historical development of combing and carding techniques, a short summary of Thorn tells the significant difference there and provides a good understanding of the basic goals of combing and carding:

*From the Roman period wool had been prepared using a pair of combs with long iron teeth, one with a handle and the second on a stand. These produced long rovings of fleece, short sections of which were tied to the top of the distaff. Combing was done either by the spinner or by a professional wool comber. A second tool was introduced in the fourteenth century known as the carding comb [...], carding combs are bushes comprising of hooked wires on a wooden base, closely resembling a modern dogbrush. First the wool was teased by hand to remove tangles and dirt [...]. The wool was then combed using the iron combs to produce*

*a roving, this extracted the shortened fibres [...]. The waste from combing was carded and rolled off the combs a into a “rolag”, Rovings produced worstened yarn in which all the fibres were parallel, rolags were spun into woollen yarn, a softer warmer thread. Carding was a long and tedious process.*<sup>25</sup>

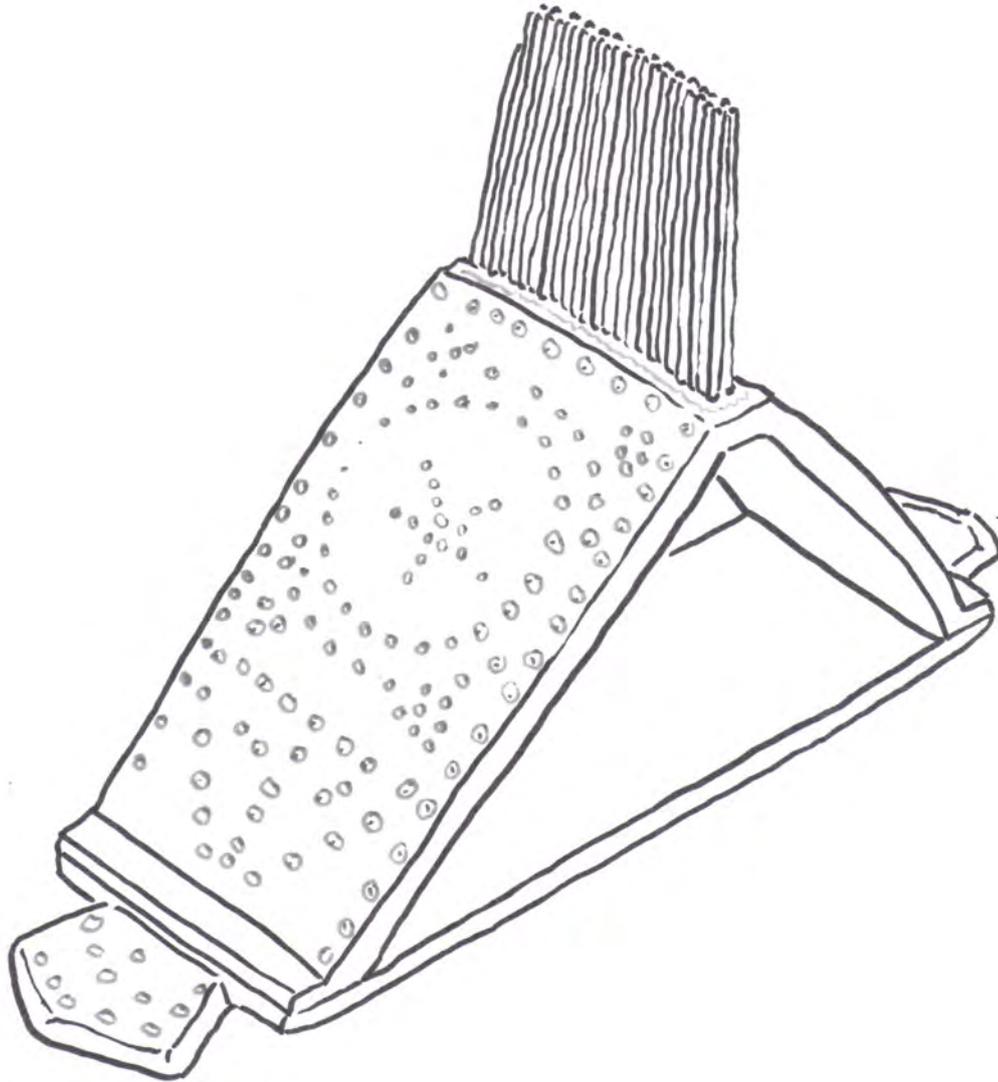
In Olukbaşı, the film-team and I were lucky to record the manual combing of white goat hair for brush production. There, the wife of a weaver shows us how she combs the hair by hand, dividing the straight kemp hair strands from softer irregular twisted hair bundles. Here, a division between kemp and down can be observed. Following the description of Thorn it may be that the soft hair bundles were carded in the next step for producing the material for a fine woollen yarn.



*image 4.062: Combing by hand in Olukbaşı.*

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25 Thorn 1993, p.13



*image 4.063: Sketch: Turkmen comb in Bergama, Turkey<sup>26</sup> The sketch shows a traditional Turkmen comb that can be compared to the photo sequences above.*

As already mentioned by Thorn, a different tool is needed for the carding process which helps producing soft long fleeces of short-haired twisted wool:

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<sup>26</sup> Neergaard 2000, *Comb Bags in TurkoTek Discussion Boards*, 02-29-2000, [http://www.turkotek.com/salon\\_00037/s37t3.htm](http://www.turkotek.com/salon_00037/s37t3.htm), 17<sup>th</sup> Nov 2012



image 4.064: Sketch of a carding tool depicted by Eröz. Turkish expression of parts and translation: a) Ağac Taban (wooden base); b) Teneke taban (tinplate base); c) Demir Dişleri (iron teeth); ç) İp geçirmek için delik. Bu ipe bir yere asılır. (sling for hanging up the carding tool)<sup>27</sup>

With regard to kilim and carpet production, results of the field research indicate that combing devices but no carding brushes were used for preparing kemp hair. Böhmer as well only describes the usage of combing boards consisting of a set of sharp iron nails which stand up straight from a board. There, the goat hair gets pulled through for several times. That way, the fabric is sorted into a parallel way. Böhmer mentions that the process of combing is skipped by women who are skilled enough to simply prepare the kemp hair fleece by hand before spinning it.<sup>28</sup>

In regard of the traditional Yörük hand spinning with the falling spindle, no combing was observed in the field research as well (see chapter 5.2.2).

The traditional way of wool preparation by beating the wool with a bow, then combing and maybe carding it, helps understanding which multiple processes are done by the automatic combing machines in the weavers' villages. The following sequence of images shows what happens to the raw wool when being driven through such a machine:

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27 Eröz 1991, p.179

28 Böhmer 2004, p.187



*image 4.065: Wool being driven through a machine. The raw wool is laid out on the combing machine's pick-up tray and is then slowly taken up by rollers.*



*image 4.066: The wool is driven forward by several fine-toothed rollers on which rows of fine needles take the fibres apart by swift left and right movements along the axis. There, the wool is spread out over the whole width of the machine and cleaned from foreign particles. This process can be compared to the manual beating with a bow.*



*image 4.067: In the middle of the machine the downy hair is expelled, being manually collected by men periodically. This is analogue to the traditional way of collecting the downy left overs on a combing board which are carded on carding brushes in a second step.*



*image 4.068: At the end of the machine a fleece of coarse kemp hair with parallel fabrics is laid out on the floor, being periodically collected by men and stored into sacks for spinning. This fleece may be compared to the brushes of straightened hair being obtained from the combing boards.*



*image 4.069: Overall view of a combing machine*

In the film material of the field research, the head of the weaver family Peker explains roughly what is done by the combing machines and how the cashmere is used for further processing:

He holds a bundle of goat hair in his hand and starts picking it apart, dividing the downy hair from the coarse black strands. *“The white fluff is the cashmere. The machine combs the wool. Now, after the machine has combed the wool, the cashmere is separated from the kemp hair. Yes, that way it gains the cashmere. We collect the fluff and ship it to Italy, China. They spin the wool into a fine yarn. And continue processing the yarn into various products. These products are sold on the international market at high prices.”*<sup>29</sup>

Seen from an international point of view, it can be said that the coarse kemp hair is just a fall-out in cashmere production that gets used locally. As this statement is indeed an intriguing idea, it may be weakened by the fact that the black kemp hair weave as well is sold on an international level as being described more closely in chapter 4.2.6.

#### Chapter 4.2.4 Spinning

The three weavers' villages near Bozdoğan run two main processes of production in regard of goat hair weaves: One by hand and one by automatic machines. After gaining the combed hair from the combing machines, the production is split into these two categories of spinning the yarn.

Both techniques bear surprising details which can be best understood when taking a look on the history of spinning techniques first.

With the beginning of the Neolithic (in our case at about 5600 BCE), archaeological evidence is found that the spinning of yarn by hand was improved by introducing the spindle. A wooden stick of about 20-30 cm length and a momentum weight, the whorl, helped producing a thread.<sup>30</sup>

Wall paintings in the tombs of Baqt, Khety, Daga and Chnemhotep dating back to 1991-1781 B.C. show, aside of many other archaeological findings in that epoch, Egyptian spinners using a spindle with a whorl mounted uppermost, contrary to European spinning.<sup>31</sup>

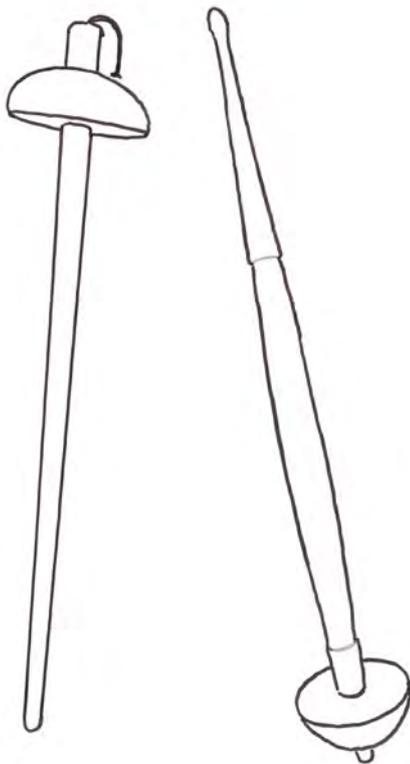
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29 Ambrosch 2010, translated from Turkish into English, DVD position 35:46:00 – 36:18:00

30 Grömer 2010, p.80

31 Thorn 1993, p.4

In ancient Greece, women were depicted using the drop spindle method with the whorl being placed at the bottom of the spindle rather than on the top.<sup>32</sup> Paintings on vases show how the distaff with the bundle of roving was held in the left hand when fabrics were torn out by the right hand's thumb and forefinger while the rotation of the drop spindle spun the fabrics into a thread. The thread became longer until the spindle reached the ground. Then, the thread needed to be rolled up so that the spinning can be continued. Archaeological evidences show that the whorls were made of clay.<sup>33</sup>



*image 4.070: Sketch of photograph showing left a Greek wooden top-whorl-spindle with a hook made from an iron nail and right a Greek bottom-whorl-spindle with a stone whorl. Original photograph by B.Nutz, Institute for Archaeologies, University of Innsbruck.<sup>34</sup>*

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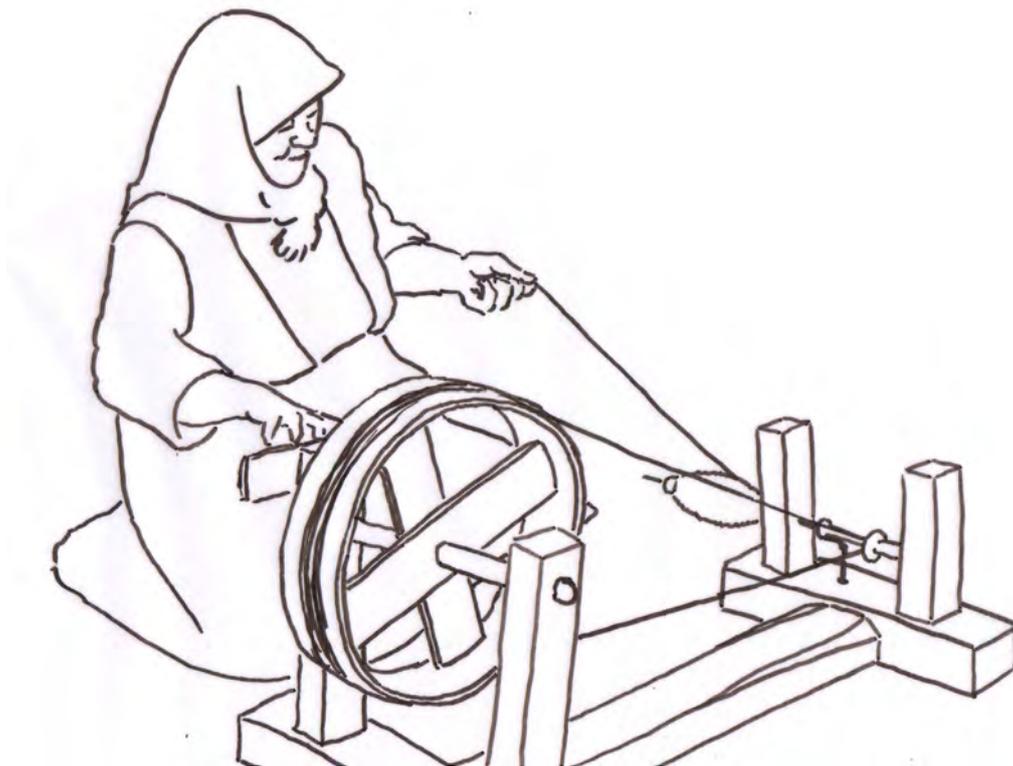
32 Thorn 1993, p.6

33 Hägermann / Schneider 1997, p.125

34 Nutz 2012 *Griechenland / Greece in A short spindle typology*, [http://www.uibk.ac.at/urgeschichte/projekte\\_forschung/abt/spindeltypologie/-greece.html](http://www.uibk.ac.at/urgeschichte/projekte_forschung/abt/spindeltypologie/-greece.html), Institute of Archaeology, University of Innsbruck 25<sup>th</sup> Nov 2012

The use of the drop spindle where the spindle hangs loose on the thread during production is just one of several techniques. In chapter 5.2.2, several images show how it is done. Another technique is the placing of the rotating spindle in a clay bowl or simply on the ground as being documented in Northern America, North Africa or in Tibet. Spinning may also be done horizontally by rotating the spindle by hand freely or on the lap when sitting.<sup>35</sup>

With its history of about 600-800 years, the spinning wheel was a rather young invention in comparison to the 7000-year-old spindle. The original spinning wheels were driven by hand with a horizontally placed spindle activated by a large fly wheel and a drive band. One hand pushes the wheel, the other hand leads the thread from the rolag to the spindle. The counter-spinning of two threads into a yarn and the spooling of the yarn were still separate operations done back then.<sup>36</sup>



*image 4.071: Sketch of a woman working at her spinning wheel (çark) in the region of Pamukkale (1997).*

35 Grömer 2010, p.83

36 Grömer 2010, p.81

Only then, in the 15<sup>th</sup> century, the invention of the spinning wheel with flyer helped combining spinning and spooling in one operation.<sup>37</sup>

*It is likely that the first addition to the wheel was the flyer, a mechanism which wound the thread onto a bobbin as it was being spun. The flyer was a horseshoe shaped frame bearing hooks fastened to a central axle, hollowed to take the thread. The flyer and axle were driven directly by the drive wheel. A separate bobbin with a groove at one end was slotted onto the axle. Round the bobbin's groove was fastened a cord to produce friction as it turned. The thread was passed through the hollow axle from the spinners side, out and over the hooks of the flyer and tied onto the bobbin. When the drive wheel was turned and the spinner held the thread steady, this thread would pull the bobbin around at the same speed as the flyer. As the spinner released the thread it was wound on to the bobbin, the friction band ensuring that the bobbin turned slower than the flyer. This use of a flyer is known as "bobbin drag" because of the friction cord.*<sup>38</sup>

In the renaissance, another great improvement of spinning was made by the introduction of the treadled wheel, a spinning wheel device driven by foot.<sup>39</sup> Several detail inventions in regard of bobbins, preparation of rolags or designs of swifts improved the spinners' work. But only then, in 1764, a great step forward was done by the mechanisation of spinning with the invention of the Spinning Jenny by James Hargreaves.<sup>40</sup>

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37 Grömer 2010, p. 81-82

38 Thorn 1993, p.15

39 Thorn 1993, p.17

40 Thorn 1993, p.22

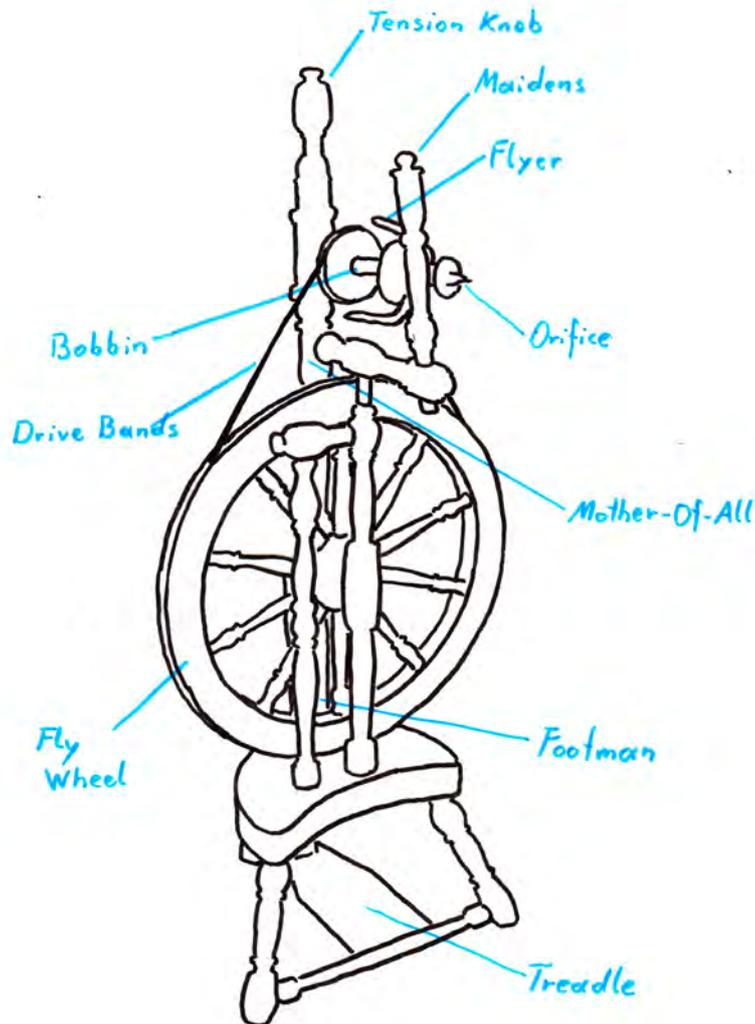


image 4.072: Sketch of a replicated spinning wheel from the 1870 to 1890, Dakota, USA.<sup>41</sup>

Before getting back to the special technique of spinning by hand in the weavers' villages, an explanation of a basic necessity for producing a well-balanced yarn is needed. As already shortly mentioned in the history summary, a yarn is spun from two threads. Starting from the roving bundled into a rolag, a fine thread can be spun by the spinner in one go. This thread bears a single twist, holding the fabrics together by the friction

<sup>41</sup> Woodsmith 2008, *The Spinning Wheel - De-Constructing an Original in Norse Woodsmith*. *Woodworking Tools and Projects*, <http://norsewoodsmith.com/content/spinning-wheel-de-constructing-original>, 21<sup>st</sup> Feb.2008, 30<sup>th</sup> Nov 2012

of the twist. But the fabrics within threads of such a single twist tend to unwind again or render the thread to be slightly uneven, being bent by the twist. In order to keep the balance of the thread, it needs to be counter-twisted with a second thread of the same twist. This second stage of spinning produces a yarn.

There is even a terminology about the differing directions of twists: z-spun thread is twisted clockwise while s-spun yarn is twisted anti-clockwise. The “Z” and “S” are figurative symbols that can be applied on the twisted yarn by comparing their diagonal centred lines with the angular direction of the twist when being observed from the side. Therefore, regarding the balance of a yarn, z-spun threads are combined into a s-spun yarn or just the same the other way round.

Now, taking a look on the spinning tools of the spinners in the weavers’ villages, a rather unknown design of spinning wheels can be disclosed, that allows doing the spinning of the threads and the yarn in one process. The sequence of images shows how it is done:



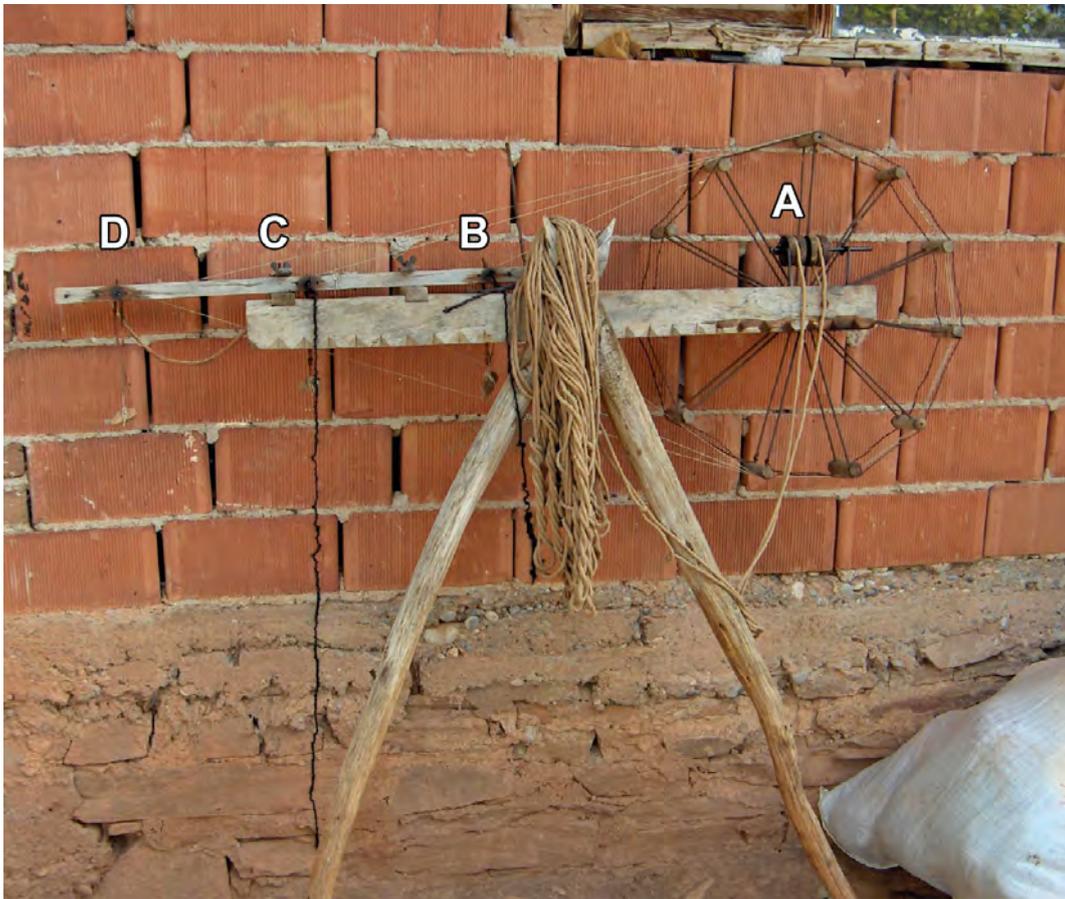
*image 4.073: The photograph shows two spinning wheels propped up along a wall in the village Dutağac. Spun threads and cords are pulled taut to the spinning wheels while work is in progress.*



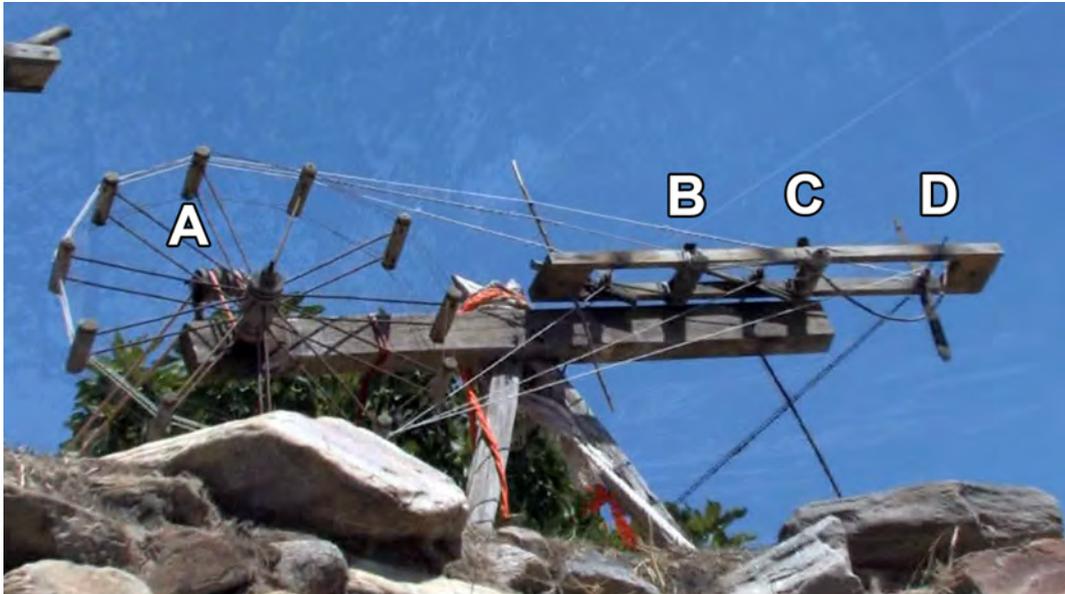
*image 4.074: The spinner is connected to the cord with a belt bound to her waist. She moves continuously backwards and thus pulls the cord that drives the fly wheel. Likewise, unseen in this picture, she spins threads with her left and right hand each that are growing in length while she keeps moving. Therefore, she walks a certain path of length while activating the fly wheel. Readymade yarns are tucked to the ground at the left side of each spinning wheel. A yarn from the previous session is spun at the same moment when the spinner produces two new threads.*



*image 4.075: This photograph shows how the sack with the roving is bound to the belt of the spinner. Out of that sack she produces two thin threads that are spun by the spinning wheel.*



*image 4.076: Spinning wheel leaning against a wall, Olukbaşı 2006. A closer look at the spinning wheel explains how threads and yarns are spun in one process. A) The rollers and the cord are part of the driving system that keeps the wheel spinning when the cord is pulled by the spinner while walking backwards. B & C) Two spindles on which the threads-to-be-spun are fixed. B will be spun from the bundle of roving in the sack through the right hand of the spinner. C will be produced through the left hand. D) This spindle helps twisting the yarn out of two threads which were done in a previous spinning session. The drive band connecting the spindle with the fly wheel is looped like an “8” so that the spindle runs the counter-rotation. In order to avoid friction, a small twig stuck near to the belt’s crossing helps pushing it slightly apart.*



*image 4.077: Spinning wheel seen from the backside. This photograph shows more closely how the driving cord is bent over rollers down to a roller at the axis of the wheel (A) and how the spindles (B, C, D) are connected to the wheel with a drive band. Close to the spindle D the crossing of the band for counter-rotation can be observed.*



*image 4.078: The spinning path is about of 30 metres length which defines the seamless length of the yarn. At the end of the path each yarn is cut and tucked down to the floor. After the spinning is done, the yarns are rolled up into a bundle being connected to each other with a single knot.*



*image 4.079: Grandmother and granddaughter spin the threads while the grandfather of the household rolls up the bundles of readymade yarn. Spinning work is done in the morning and in the evening during the hot summer season and lasts for about 2-3 hours at each session.*

The spinning wheels in the weavers' villages allow a fast production of yarn that is treasured for its high quality by Yörük men and women. Nonetheless, for answering the international demand on yarn made of black goat kemp hair, a mechanized production strategy is pursued as well. The factory at the end of Olukbaşı uses automated machines which were imported from Germany and Italy in the 60's and 70's that combine the process of combing and spinning in one go.



*image 4.080: Automated machine combing and spinning the goat's hair into a thread in one process. At this stage, the counter-spinning to a yarn is not done yet.*



*image 4.081: An extra machine spins the threads into a yarn and spools it to a bobbin that fits into the automatic weaving machines. Here, more personnel is needed for supervising and correcting the spinning. Also, the mounting and un-mounting of the bobbins must be done by hand.*



*image 4.082: The yarn-spinning machine is installed the full length of the factory hall.*



*image 4.083: Blocks of yarn ready to be mounted on a weaving machine.*

Experts differentiate strongly between handmade and machine-made yarn. The mechanized production offers a seamless yarn that was produced under high tension. It is polluted with machine oil, tends to break more easily and is stiffer than the handmade one. Therefore, craftsmen and -women prefer to use a handmade yarn despite its connection knots at about every 30 metres. This yarn is known to be more flexible, tolerates higher tensions and is free from any fossil oil pollution.

The considerable differences in quality between both kinds of yarn explain how the handmade product still survives modern demands of cheap mass production.

Comparing the conditions of production on a human level, even there big differences in quality can be seen. The spinning wheel allows an ergonomic way of working within a quiet and healthy environment outdoors which rarely gets influenced by bad weather conditions during the summer season. The daily schedule of work in the traditional way of spinning offers short sequences of work with long breaks in between being filled up with other working tasks. That way, the women and men working in that sector change ergonomic conditions every 2 or 3 hours. That helps supporting a good body condition. Quite contrary, relevant noise and air pollution affects the workers at the factory badly while attending to the machines during the whole day in a constantly unchanged working position. Nonetheless, as it is a deeply anchored tradition in Turkey,

short tea breaks every 1-2 hours ease the day's work.

As seen in the pictures, traditional spinning is mainly women's work which is occasionally joined in by elder men. In the factory, I only met people of younger generations of approx. 20-40 years of age. Women are assigned to the delicate task of attending the yarn-twisting devices of the yarn production machine while men rather attend to whole machine blocks that need more severe correction when malfunctioning as for e.g. the combing-spinning system.

Traditional spinning is somehow a business within a household where members of the family are assigned to it. It is altogether a traditional craft of the family. Factory spinning is done by people of different households no matter which background they come from, as it is the scheme of employment in the modern context.

## Chapter 4.2.5 Weaving

Similar to the topic of spinning, a short overview of the historical development of looms starts here. But unlike spinning techniques, it is quite impossible to provide a small sketch of the overall development from the earliest beginnings until to mechanized production in modern times, as the diversity and spread of loom constructions show immense numbers worldwide. It is even exceeding the range of this thesis to provide all loom constructions found in the Middle East.

Therefore, I restrict the historical summary to the earliest times of loom development and will set focus on three main types of loom constructions found during the field research. Further on, events of mechanized production in modern times will be mentioned for referring to the machines in the factory hall of Olukbaşı.

Broudy explains that the idea of weaving clearly preceded the loom and suggests to associate early basketry and mat making in the Mesolithic Age to the development of wattle shelters, windbreaks and further on wattle houses in the Neolithic Age being the fore-running techniques to textile weaving. He mentions how certain patterns of basket plaiting appear as well in cloth like tapestry, gauze, twill and embroidery.<sup>42</sup> In comparison to other scholars discussing the earliest beginnings of textile weaving, he offers the oldest documentation of archaeological evidence for woven cloth:

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42 Broudy 1979, p.9-11

*In the early 1960s fragments of plain woven cloth with up to 30-x-38 threads per inch-as fine as today's lightweight wools-were found at Çatal Hüyük in Anatolia and dated c. 6000 B.C. [...].*<sup>43</sup>

Further on, Broudy suggests how an earliest type of loom frame may have looked like: It consisted probably of a cord stretched between two uprights from which the warp threads were freely suspended. There, a horizontal cord was woven into the vertical ones, not unlike the making of baskets where twigs are being woven into upright rods.<sup>44</sup>

The detailed research of Broudy on the history of weaving is even more thrilling with regard to this thesis, as he describes how a very early finding of loom documentation can be directly correlated with looms used by Bedouin nomads today:

*The earliest representation of a loom, for example, dated c. 5000 B.C.; illustrates a horizontal ground loom from Badari [...]. On this loom the warp is stretched horizontally between two beams pegged a few inches above the ground. The three crossings at the left side of the loom represent picks of the weft; the three lines across the middle of the warp probably represent the sword beater, heddle rod, and shed rod. Its simplicity is such that a similar loom is still used today by Bedouin nomads; if they have to move in mid-weave, they simply pull up the pegs and roll up the loom – cloth, warp, heddles, batten, and all.*<sup>45</sup>

Tietzel explains how textile weaving developed in all regions where the acquisition of wool came naturally from living animals. In antique times, it can be found among the Egyptians, Greeks and Romans, and in the history of Northern Europe.<sup>46</sup>

He states that the course of development is unclear as there are big differences between the simple looms being used by the Egyptians in the second millennium BCE and the more sophisticated ones in the 6<sup>th</sup> century CE in the Near East. It is unknown how and when transitions from simpler types to enhanced variations took place.<sup>47</sup>

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43 Broudy 1979, p.13

44 Broudy 1979, p.14

45 Broudy 1979, p.14

46 Tietzel 1988, p.9-10

47 Tietzel 1988, p.15

Archaeological findings of loom weights support the existence of warp-weighted looms since the Neolithic Age.<sup>48</sup> The warp-weighted loom is a vertical loom type with weights of clay or stone straightening the warp down from a horizontal beam.<sup>49</sup> Germanic tribes and farmers in the region of today's Switzerland already used it at approx. 3000 B.C.<sup>50</sup> Warp-weighted looms are well documented in Egyptian, Greek and Roman era. In detail, interesting variations between the various warp-weighted loom types can be found. Most significant is the different direction of beating the weft. While various illustrations on Greek vases from the 6<sup>th</sup> century BCE<sup>51</sup> show looms with the weft being beaten upwards, the Greek historian Herodotus describes how Egyptian weavers applied the weft to the lower end of the vertical loom, beating it downwards.<sup>52</sup> In the Roman era, archaeological records show that the weft was already applied to the lower end of the loom at around 100 CE.

As already mentioned by Broudy, horizontal looms can be dated back to 5000 BCE. This type plays a main role in the history of nomadism as it not only offers an easy installation on the ground but as well a swift deconstruction without destroying the unfinished weft. When the nomadic family had to move on, the loom could be loosened from the ground and rolled up with warp and weft over the beams into a fine bundle. In chapter 5.2.3, there are more details on horizontal looms used in the present.

An Egyptian illustration at the tomb of Chnem-hotep dating back to the 12<sup>th</sup> dynasty at approx. 2000 - 1785 BCE allows us an understanding of how the earliest horizontal looms looked like:

*The tomb of Chnem-hotep at Beni Hasan has provided what is probably the clearest illustration [...], It is also the most frequently reproduced drawing, though the details vary slightly in many of the early hand-drawn reproductions. The loom appears vertical but in fact the warp is stretched horizontally between two beams held in place by pegs pounded into the ground. At the far end a cord has been chained across the warp to keep the threads in order. Some cloth appears to be wound around the cloth beam, though it is not clear how it is kept from unrolling. The loops on the left side of the cloth are weft fringes, indicating*

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48 Grömer 2010, p.113

49 Hägermann / Schneider 1997, p.480

50 Tietzel 1988, p.13

51 Hägermann / Schneider 1997, p.126

52 Tietzel 1988, p.14

*that the fabric had only one selvage.[...] The weaver on the right holds the sword beater and appears to be beating in the last shot of weft. The weaver on the left, who seems to have two left hands, is holding what is probably the heddle rod with one of them and resting the other on what might be a heddle jack, a support for the heddle rod.* <sup>53</sup>

The number of loom types is endless. In particular, for understanding the most important systems of hand-made looms it helps distinguishing certain categories. First, it is convenient to become acquainted with the two-bar-system:

*The idea of stretching the warp between two bars is so fundamental to the weaving process that it occurs with various modifications in virtually all cultures that weave cloth. The two-bar system is found on treadle looms, tapestry looms, and back-strap looms alike, and in one or more of its various incarnations it has become the best way to hold warp threads parallel.* <sup>54</sup>

The vertical and horizontal looms presented in chapter 5.2.3 (this chapter sets main focus on looms used by Yörük nomads) belong to this particular type.

Regarding the weavers' villages, it is important to mention two more subcategories in the technical distinction of loom types:

The three-bar system and the two-bar treadle loom.

The weavers' villages near Bozdoğan prefer using two-bar treadle looms for the hand-made black tent panels as they are ergonomically well adapted and allow a swift production. But, in the village Olukbaşı, for the real connoisseurs of black tent weave, certain panels are done on a vertical three-beam loom providing a cloth that is way on top in quality compared to products from the treadle loom or from the mechanized loom. The weavers explained to me that the warp is stretched in a more gentle way over the bars of the vertical three-bar loom which poses to be an important factor regarding cloth quality. Indeed, the tension of the warp is an often discussed subject in that regard.

In the year 2007, the weaver Adnan Yarar claimed that this particular loom type was already used for 800 years. Only much later I was able to verify his information and found it to be quite accurate according to the description of a Palestinian three-bar loom by Broudy which may have originated during Talmuc times 500 - 1100 CE:

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53 Broudy 1979, p.38-39

54 Broudy 1979, p.38

*It differs from the Roman loom, however, in several important respects, the most interesting of which is a third beam [...] behind and away from the loom, attached to a wall or other support, that affords the weaver a longer warp and a unique means of adjusting the tension. While it employs the traditional shed rod and heddles, the heddle rod is fastened to its supports and functions like the fixed heddle arrangement of the Bedouin ground loom vertically. A third distinctive feature is the way in which the loom is warped [...]. With the ball of yarn laying on the ground, the warp is wound alternately in continuous loops around the beams and back over a warping rod that is fastened by one end to an upright, Thus, with the weaver witting in front, the entire warp can be slowly shifted around as the weaving progresses.<sup>55</sup>*

Additional to this description, Broudy sketched down how a three-bar loom is set up by a single thread. In the image below, I tried to reconstruct his sketch adding it up with a section view for closer understanding. Then, I also show how such a three-bar loom can be narrowed down to a two-bar system with a minor change.

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55 Broudy 1979, p.49

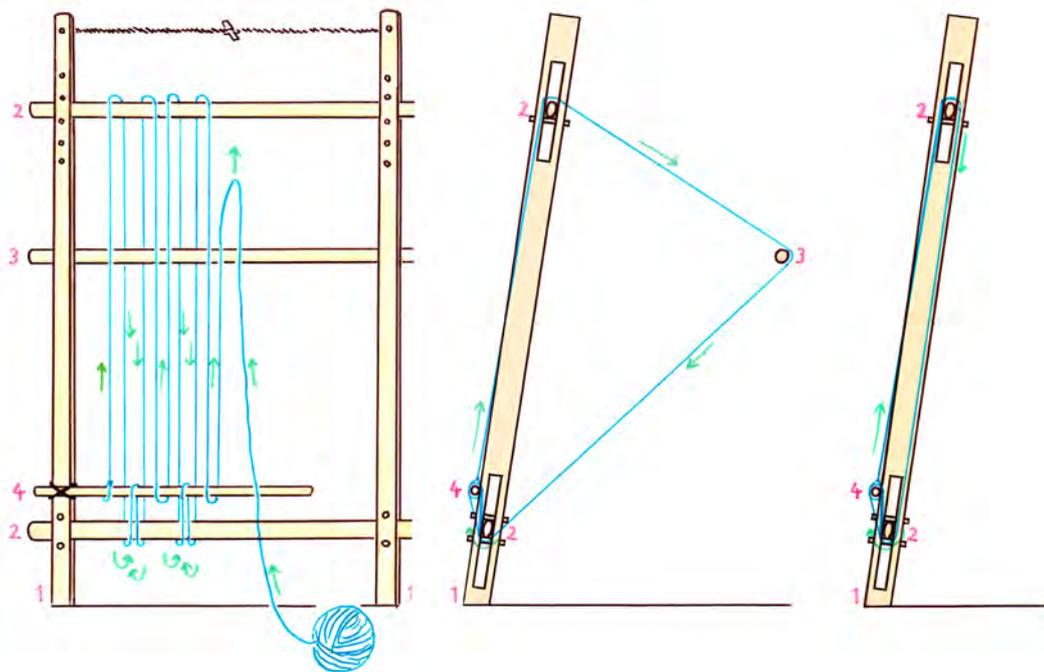


image 4.084: A Palestinian three-bar loom after Broudy<sup>56</sup> with section view and its modification into a two-bar system by the author based on her own experiences with the Turkish three-bar-loom. 1) Uprights; 2) Upper and Lower beams; 3) Third beam 4) Warping rod<sup>57</sup>

The weavers of Olukbaşı were so kind to show how the three-bar loom is set up. As they wanted to produce a short panel only, they skipped the use of the third bar (as shown in the sketches above), making it simple for a short demonstration. But normally, with the third bar installed, panels up to a length of 35 metres can be done. Based on the filming material of the field research, a sequence of images is presented there:

56 Broudy 1979, p.49; image 3-15

57 Expressions after Broudy 1979, p.49



*image 4.085: Running the warp thread over the upper beam.*



*image 4.086: Looping the thread around the warping rod (made of metal in this case). The warping rod's purpose is only to ensure a continuous warping of the threads around the beams. When the weaving is started, it stays fixed to the end of the weft. As the warp is looped around the beams, it will be moved around them during the weaving process, carrying the warping rod upwards at the back of the loom.*



*image 4.087: The weaver measures the width of the warp according to the desired design of the panel.*



*image 4.088: An extra thread is looped around the warp threads and the rod heddle.*



*image 4.089: Total view at the three-bar loom with the third bar left out at the back.*



*image 4.090: After the threading of the rod heddle is completed, the shed rod is stuck into the warp behind. Below, the sword beater can be seen. The weaver is about to drive a bobbin through the warp starting the weft. At the back of the lower beam the metal warping rod being fixed at the end of the weft can be seen. Now, during the weaving process, it will slowly move upwards with the weft at the back of the loom.*

The weavers claim that the work on the vertical loom can be done much quicker than on the more popular horizontal treadle loom. But, on the other hand, treadle looms offered a more ergonomic seating position for the weavers which may be taken strongly into account considering the many working hours during the year.

Before showing sequences of the treadle looms used in the weaving villages, some historical information about this type is provided here:

*The developed horizontal treadle loom appeared in Europe about the year A.D. 1000. The earliest surviving illustrations show an already perfected invention with revolving cloth and warp beams, treadles that were connected to counterbalanced heddle harnesses, and possibly even a suspended reed-beater. [...] While little is known about the origin of this medieval European loom, most experts believe that it was descended only indirectly from the early East Asian progenitors.*<sup>58</sup>

Technically, the treadle loom bears the idea of delegating some of the hand's work down to the feet. The heddle harnesses open and counter-open the shed being directed by the feet's movement on treadles. As the weaver does not need to lift his/her hand for changing the shed, it appears plausible to believe that the treadle loom allows swifter work on the weave than the vertical three-bar loom. But, in case of the treadle loom types at the weavers' villages, the treadles and harnesses need a certain effort of body action for being moved due to their strong friction. It may be that a change of the shed done by hand is swifter on the vertical loom, still.

The following sequences show the weaver Adnan Yazar working on a panel of black tent cloth with his treadle loom:

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58 Broudy 1979, p.102



*image 4.091: Treadle loom in Olukbaşı. On the left, on a car seat, empty bobbins made of wood are stored. Above, on the box, the bobbins are filled with yarn ready for use. The weaver sits or stands at the loom, handling the reed and the bobbin. Behind the reed, the two heddle harnesses can be seen. Below the loom, two treadles help navigating the harnesses. At the right, the warp is bent over two beams and rolled up over a cylinder. Here, panels up to a length of 27 metres can be done.*



*image 4.092: The bobbin is driven through the shed.*



*image 4.093: The heddle harnesses open and counter-open the shed.*



*image 4.094: The harnesses are connected to chains running over rolls above. They are counter-balanced.*



*image 4.095: Below, the harnesses are connected to the treadles by which the up and down movement can be directed with the feet.*

In the factory hall of Olukbaşı, mechanized looms replace the weaving handicraft providing an output for larger consumer ranges. Just like the spinning machines, they were imported from Germany and Italy in the 60's and 70's.

Historically, it is interesting to mention that the first mechanized loom was invented by Edmond Cartwright back in 1785. Being called the “Power Loom”, this engine was driven by steam. Quite contrary to the success story of the “Spinning Jenny”, the first mechanized spinning device, the Power Loom did not get such a strong response as the weavers feared the loss of their jobs by being replaced by the machines. Only later, at the beginning of the 19<sup>th</sup> century, considerably improved weaving machines took over.<sup>59</sup>

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59 Bowden 1919, [http://www.archive.org/stream/risegreatmanufa00bowdgoog/risegreatmanufa00bowdgoog\\_djvu.txt](http://www.archive.org/stream/risegreatmanufa00bowdgoog/risegreatmanufa00bowdgoog_djvu.txt), 15<sup>th</sup> Dec 2012



*image 4.096: A mechanized loom in the factory hall of Olukbaşı. The spool rack feeds the warp for the loom. Here, a black tent cloth for Arab tents is produced. Contrary to the black goat hair threads, the white threads are herbal, made from cotton.*



*image 4.097: A closer view on a spool rack.*



*image 4.098: From left to right the yarn runs from the spool rack to the weaving machines forming the warp.*



*image 4.099: The weavers supervise the performance of the bobbin and occasionally need to correct little errors. The weft runs on rolls down below a platform to the backside of the weaver's working place where it is rolled up. Weaving machines produce panels at the length of up to 70 metres.*

Interviewing the weavers, it was interesting to notice how much emphasis was placed on the difference of production quality. They take the differences clearly into account, weighing the balance of quantity and quality accurately according to consumer's demands.

In case of the mechanized loom products, they explained that the weave is of the lowest quality available as the warp are too much stretched by the machines and machine oil pollutes the cloth. Here, panels for black tents will only last for a few years which is ok for their business as the consumers of these kinds of panels prefer buying new tents again and again instead of repairing them. Regarding the mechanized looms, it is important to mention that the panels may reach a width up to 1,60 m which as well meets certain demands that cannot be fulfilled on hand-looms.

The horizontal treadle loom provides panels of a far better quality. First, the threads are only stretched to a certain extent, being handled gently and, second, the hand-loom makes sure that the cloth does not get polluted by machine oil. These two factors are important for the long lifespan of a panel. Here, local people and Yörük nomads are the main consumers.

The vertical three-bar loom is rarely used and only fulfils special requests done by some experts. It is said, that the three-bar loom guarantees to produce panels that are more evenly woven and more gently handled. Indeed, the looped warp is less stretched than the warp on the treadle loom.

Taking a look on working conditions, it is also interesting to notice differences. In the factory hall, a swift production from dawn till dusk is most relevant. There, time dearly costs money. Large quantities of cloth are exported daily, providing an impressive sales volume. For the factory workers, only tiny breaks in between and a longer lunch break are possible.

On the opposite, the work on the hand-loom does not demand such a seamless production. Although weavers spend many hours on the looms, major breaks in the middle of the day and occasional breaks according to personal demands and demands within the family are no problem. The production speed does not need to be set to the maximum.

Topping this out, the work on the vertical loom is the most moderate one. Not speed but handling quality is relevant, demanding a calm attitude for a careful and sensible working process. Here, time is mostly relevant in the aspect of having time for quality work.

Quite similar, it is possible to sketch three different social images. As the factory hall cannot be considered to be a family business anymore, working groups do not need to be related to each other. Just similar to the workers on the spinning machines, weavers at the factory are of younger age, working longer shifts and having no family bonds to the job being done.

But, regarding the hand-loom business, each weaver is nested into his or her family, working in family surroundings, relying on family support during or in between the working processes. It is a tradition, handed down from generation to generation, being a label for the household.

The weavers are even much more connected to their identification with their type of hand-loom. In particular, if it is a vertical three-bar loom or a horizontal treadle loom. They are the unique experts in their surroundings. Therefore, the treadle loom weaver represents a mainstream weaving while the vertical loom weaver represents a specialized weaving of higher demands. In accordance to this difference, the social status and lifestyle differs between the weavers though it is difficult to claim which status is higher. In this case, it might not be a question of higher or lower status but rather of how life organization is differently defined according to the type of loom the weaver is assigned to.

Concerning the gender issue, I could not help noticing that only men attended to the automatized weaving machines. It appears to be almost the same with the hand-loom business. But having visited the weavers' village at least 5 times, I was able to meet occasionally women who worked on the hand-loom as well.

#### **Chapter 4.2.6      Sale or Construction**

Sales of the weavers' villages meet a lot of demands. First, most of the product categories will be listed, sketching down their product attributes. Then, these products will be connected to the types of sales describing consumer target groups showing how offer and demand meet.

The weavers' villages sell the following products:

a) goat kemp hair products

aa) kemp hair yarn made by hand

features: unstretched yarn, free of oil pollution, not seamless

ab) kemp hair yarn made by machine

features: stretched yarn, polluted with machine oil, seamless production

ac) panel weaves in black or in colour by hand

features: gently stretched, free of oil pollution

lengths: up to 27-35 m

widths: up to 95 cm

ad) panel weaves in black or colour by machine  
features: stretched under high tension, polluted with machine oil  
lengths: up to 70 m  
widths: up to 160 cm  
note: panels can be of mixed cotton and/or sheep wool threads

ae) kemp hair tents and architectural designs  
note: modernized reconstruction of Yörük-style tents for tourist attractions or architectural designs on demand as e.g. roofing of a sports hall

b) cashmere hair products

ba) non-woven fabrics

c) cotton rag products

ca) woven cotton rag rugs  
note: cotton leftovers from the T-shirt production are transformed into weavable threads of 1cm width. Those are woven into rugs.

cb) cotton car seat covers  
note: The rag rugs are tailored into car seat covers.

The product categories b and c pose to be an additional income for the villages. The main focus lies on the production of products in the category a.

Products, production processing, consumer target groups and level of prices in the category a:

a) goat kemp hair products

aa) kemp hair yarn made by hand  
→ processed into hand-made weaves  
→ or directly sold on national level, especially to local kilim weavers or nomads  
amount: product output is considerably small compared to industrial production  
pricing: moderate or high prices per kg yarn

ab) kemp hair yarn made by machine  
→ processed into machine-made weaves  
→ or occasionally exported on international level, especially to Arabian and African states  
amount: mass production output, large sales volume  
pricing: low prices per kg yarn

ac) panel weaves in black or in colour by hand  
→ directly sold on a national level, especially to local nomads or kilim shops  
→ occasionally processed into hand-made tents or architectural designs  
amount: product output is considerably small compared to industrial production  
pricing: moderate or high prices per kg cloth or per running meter  
note: The dimension of the products meet the demands of local transportation (small packages that can be carried by hand)

offer and demand: The weaves feature a hand-made character (uneven weaves, occasional errors) and guarantee a long lifespan. The consumers lay stress on traditional panel dimensions and detailed distinction in cloth quality. E.g. the yarn is differed in goat hair length: Yarn of long goat hair bears higher tensions, yarn of shorter goat hair bears less and saves costs.

Therefore, weaves of different kinds of yarn feature different quality levels. Kilim shops and nomads lay stress on such a distinction in order to make accurate use according to quality and price.

ad) panel weaves in black or colour by machine  
→ exported on international level, especially to Arabian and African states  
→ occasionally processed into hand-made tents or architectural designs  
amount: mass production output, large sales volume  
pricing: low prices per kg cloth or per running meter  
note: The dimension of the products meet the demands of optimized overseas transportation (large dense packages)

offer and demand: The weaves show an even character with machine-made accuracy but do not last for long. According to the design demands on tent cloth in the Arabian and African countries, patterns are woven in. There are traditional patterns as e.g. white stripes for Bedouin tents which need to be spotless white. This may only be done with white cotton yarn. As herbal yarn tends to rot faster than animal hair products,

the panels have a low lifespan.

Consumers in the Arabian countries who can afford the import of tent panels do not lay stress on long duration of the tents but rather on their impressive new appearance as the tents are used for representation.

Some patterns are new designs that change each season in order to offer temporary sales according to fashion.

ae) Kemp hair tents and architectural designs

→ directly sold on a national level, especially to local tourism facilities

occasional sale on demand

prices calculated in advance dependant on quality of textile and working hours



*image 4.100: A machine-made Bedouin tent cloth protects the sacks of raw wool from weather influences in front of the factory hall.*



*image 4.101: Sacks of raw wool in the factory hall. In front: a roll of natural colour weave and several rolls of decorated belts are stored.*



*image 4.102: Tent panels of extraordinary light colours (natural colours, undyed). Sometimes, nomads ask for tent panels that are not black in order to construct special tents of certain assignment. E.g. a white goat hair tent is called to be a “tent for kings”. This picture shows a canopy installed in Dutağac made of left-overs.*

Additional to the sale of products, the weaver’s villages offer design and construction of tents or architecture. In the village Dutağac, the weaver family Peker features a website promoting their products and know-how in architectural tent design:

Nomad tents, resting places, places for observation, accommodations, tents for mountain festivals, Ramadan iftar tents, cafes and restaurants, beach umbrellas, roof coverings, oriental corners, and so on.<sup>60</sup>

Further on, they describe the features of the Yörük tent:

*In winter, rain and snow proof.*

*(The hair goat tent swells due to rain. Therefore the pores of the hair weave get closed as it swells during rain. Thus, the flow of outside air into the interior is cut off and it does not get cold inside [...]) [...]*

*Lets daylight dimly in and provides continuous air circulation.*

<sup>60</sup> Peker 2012, *Hakkımızda - Peker Dokumacılık - Kıl çadırı, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/features.html>, 16<sup>th</sup> Dec 2012

*Harmful insects and animals (snakes, scorpions, spiders, etc.) will not get inside the tent thanks to the structural tissue.*

*Each floor is easy to install.*

*Can be easily folded down for transport.*<sup>61</sup>

Additionally, they show large numbers of references, various kinds of architectural design done with black tent panels:

Domes, restaurant garden roofing, garden tents, sports halls, festival halls, football arena barrel-vaulted roofing, exhibition hall roofing, etc.<sup>62</sup>

The designs show impressive dimensions, demonstrating a strong competence in architectural design and a remarkable status in market competition.



image 4.103: Restaurant garden roofing with black tent cloth in Selçuk

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61 Peker 2012, *Hakkımızda - Peker Dokumacılık - Kıl çadır, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/features.html>, 16<sup>th</sup> Dec 2012; translated from Turkish into English

62 Peker 2012, *Products - Peker Dokumacılık - Kıl çadır, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/urunlerimiz.html>, 16<sup>th</sup> Dec 2012

They offer also the traditional construction of Yörük tents, featuring all traditional construction features as described in chapter 4.1.2 with one small exception: The stitching of the roof cloth is not done evenly but with a raised seam unless demanded differently. This raised seam tends to be a major weakness in the question of rain impermeability. The raised seam derives from Arabic influences and will be further discussed in the following chapter 5.1 as we find here a variation in the historical black tent construction.

## Chapter 5

# The Historical Black Tent Construction

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### Chapter 5.1 Building a Black Tent

#### Chapter 5.1.1 Tent Accessories

In accordance to the project's subject there was the need to gather a considerable amount of data to construct an overview of the traditional building processes and designs from at least 20 years ago and before, when the influences of globalisation were not yet very advanced in rural Turkey. This undertaking was possible by examining existing Yörük tents of considerable age, collecting various information in literature and interviewing Yörük people on former tent building traditions. As the sources differ in region and timeline, any claim to present a particular traditional Yörük tent is not valid but rather a mix of different designs, and details of methods regionally and historically developed. The Yörük tribes, and even the families within the tribes, differ in small cultural details, with each family developing its own identity within the cultural pattern. These small differences may not be visible at first sight but may gain importance when the observer focuses on single construction parts of the tent. In this section, the examples show how and why this is the case. Regarding the tent accessories, I will hop from one construction to another, to discuss the variations.

#### Ridge Pieces

In chapter 4.1.1, Mehmet Şimşek and Mustafa Şurgun asked a carpenter to construct the ridge pieces for them. Formerly, the ridge pieces were made by the Yörük themselves. According to information from the Karatekeli, and consistent with general knowledge in woodcraft, ridge pieces are best constructed from hardwood as it shows

the best characteristics in hardness and durability. The wood material can be obtained from the Taurus mountains, where oak forests thrive along the slopes.<sup>1</sup> As shown in chapter 4.1.1, the new ridge pieces are a fairly exact copy of the original ridge pieces of the old tent of the Şimşek family, though a bit smaller, bearing a less deep socket hole for the poles and made of soft wood. Therefore, comparing the reconstructed piece with two originals of other tents, important differences can be seen.



image 5.001: a) reconstructed ridge piece, Şimşek family b) original ridge piece, Durabay family c) original ridge piece, Torbalı tent

The Durabay family gave me the original wooden parts of their dismantled tents for

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1 Mayer 1994, p.104-109

further investigation. Their ridge piece contains a carving showing the date “1971”. The ridge piece of the Torbalı tent is part of the tent that Salih Elden (see chapter 1) obtained for me at the Bazaar in Torbalı. According to the Yörük tradition of using and reusing the hard parts of the tent for as long as possible, it can be assumed that the piece of the Torbalı is as well at least one generation old but probably much older. Here, I propose to assume a similar age to the piece of the Durabay family.<sup>2</sup> Comparing the three ridge piece samples from above to below, important differences can be seen.

The Şimşek ridge piece (a) is slightly smaller<sup>3</sup>. The reconstructed piece bears a socket hole that is less deep than the original. The reason for this is that soft wood cannot be thinned out too much because of the risk of breaking. As the original was made of oak, it allowed a far deeper socket. As width and length of the ridge piece are relatively smaller, it rather works for smaller tents than larger ones. The overall size of the bearing area influences the tendency of tilting when being mounted onto the pole. The smaller the piece, the more easily it tilts. Tilting has a positive and a negative aspect: It makes the tent more flexible in the case of sudden wind impacts or irregular pitching on uneven ground, but may also provide too much instability for a long lasting installation. Therefore, the size of the ridge piece must be considerably adaptable to the tent's size. In this case it fits to tents of 2,5 x 4,5m up to 3,2 x 5,5m base area.

The Durabay ridge piece (b) offers a larger bearing area, being crafted for larger tents of about 3 x 5 m up to 3,4 x 6,5 m in base area. The socket hole is as deep as that of the original Şimşek ridge piece. The ridge piece bears less weight compared to the one of the Torbalı tent which may be a result of its greater age. I assume that it has lost oils and resins over the decades it has been installed and its density has deteriorated. Alternatively, it may be that it was stored inadequately in recent years, and maybe exposed to sunlight and rain so that its consistency changed. A third option would be that it was made of a different kind of timber. The thick layer of oily carbon black resulted from the fire fumes carrying molecules of resin and oil with them. It impregnated the piece against moisture, vermin and heat.

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2 Wooden parts of the tents rarely rot. Firstly, they get impregnated by fire fumes making them resistant against moisture and vermin and secondly, the Turkish climate renders itself to be optimal for the duration of wood constructions.

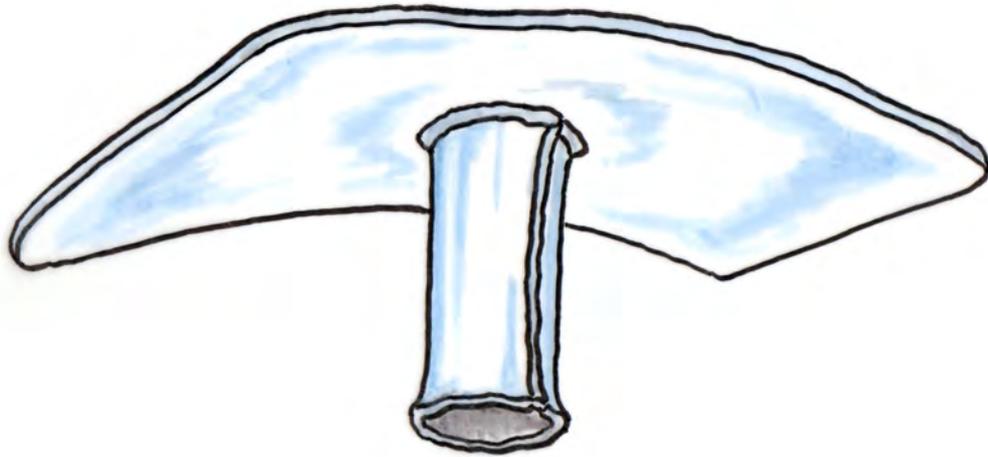
3 Though the photographs in image 5.001 contain scales, the visual size differences are not consistent with the true dimension of the pieces due to lens distortions.

The ridge piece of the Torbalı tent (c) appears to be a more traditional design. It shows more traditional decorations and technical advantages. Its bearing area is again large, and is suitable for tents from 3 x 5m up to 4 x 7m base area. The socket hole is a strongly elevated cubic design with a deep conical section. Deep socket holes improve the handling of the tent. Firstly, it is easier to pitch them alone, as the loose standing poles rest securely in the socket with no risk of slipping out. Secondly, they help to balance the tent while it is being erected. Deep conical sockets tend to tilt less while providing flexibility in the joint.

Apart from these three examples of ridge pieces, another technical detail of wooden design needs to be mentioned: The reconstructed ridge piece made of soft wood was crafted by sawing, but the traditional ridge pieces were all carved. Sawing cuts the tiny funnels in the wood open, while carving closes torn funnel openings due to the pressure in the work process and due to the design of the woodcarving knives. Therefore, the wood gets a rather closed surface, making it more resistant to moisture and loss of resin and oil. Additionally, it can be said that craftsmen who carve wood always take care to work with the wooden structure of the piece, paying attention to irregularities and changes in funnel direction. The process of sawing does not allow for that much detail and attention to the wooden structure.

The Karatekeli families explained to me that they wanted to carve the ridge pieces for the black tents for the field research themselves instead of asking a carpenter, but were unable to do so as they had so little time left after their daily chores. They offered to do the carving next time but it would cost at least 300 Euro for all three pieces. This is quite a substantial amount of money, indicating that the carving requires many working hours.

In the early years of my research, I was able to take a glimpse into a black tent showing an extraordinary version of ridge pieces that I did not find again later on. That was in 2002, and I was not able to photograph that particular tent, as my camera was not suitable to the dim light inside. Therefore, I have provided a sketch of these special ridge pieces, that were made of metal:



*image 5.002: Sketch of a metal ridge piece*

Years later, I have asked the members of the Karatekeli families about the location of the family with the metal ridge pieces and whether this kind of construction was used more widely. They told me that some families had switched over to metal pieces as they are quicker and easier to construct and proved to be almost indestructible. Metal pieces simply do not break, while wooden pieces may break if badly crafted, or if the wood contains unseen flaws. They told me that these metal ridge pieces are used in several tents and added that there are more alternatives to the wooden ridge pieces, but did not explain how the other solutions looked like. However, they pointed out that each family readily changes traditional parts for alternative solutions when necessary. This indicates that the connection to the traditional design is loosened when more practical variations are at hand.

### **Stay-Fasteners**

As with the stay-fasteners, three designs can be provided:

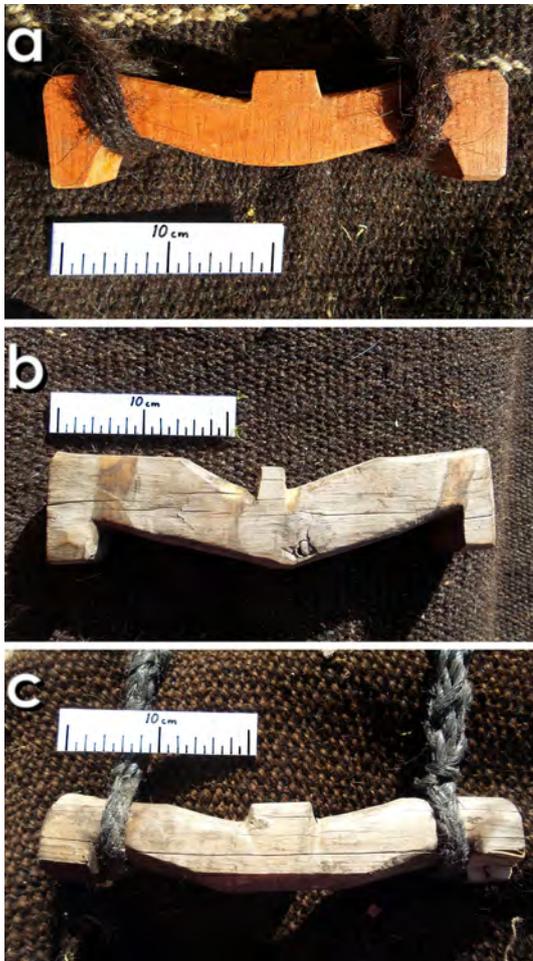


image 5.003: a) reconstructed stay-fastener, Şimşek family b) original stay-fastener, Durabay family c) original stay-fastener, Torbalı tent

The three stay-fasteners show similarities and differences. The reconstructed stay-fastener of the Şimşek family (a) is probably a geometrically idealized design of the original carved one. The stay-fastener of the Durabay family (b) shows how the original one of the Şimşek family might have looked. The same is true for the piece of the Torbalı tent (c). All pieces provide notches at the sides and in the middle that help dividing the areas where the loops of the ropes are guided through. With these, tilting sideways can be avoided. The stay-fasteners are slightly v-shaped, a technical detail that keeps them in place without turning<sup>4</sup>.

<sup>4</sup> see as well image 3.007 in chapter 3.1.1. The stay-fastener keeps its position in the plane between belt and ropes without turning.

In contrast to the pieces described above, the stay-fasteners of the first tents I ordered for construction back in 2005 are of a different design:



*image 5.004: Belevi tent with cylindrical stay-fasteners. The image shows Austrian students attaching the walls to the roof with pins.*

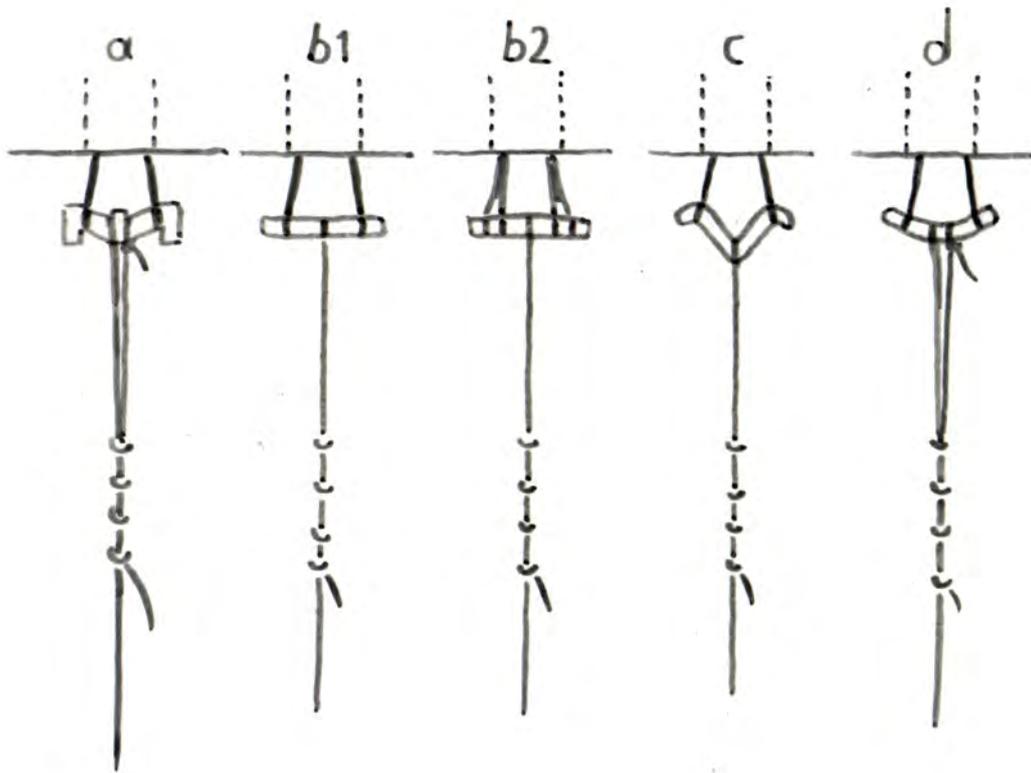
These stay-fasteners were simply cylinders with 3 carvings, one at each end and one in the middle. Due to the nature of the organisation for the reconstruction of these tents I had reason to doubt that this design derived from Yörük tradition. I thought it might have been the result of a quick carving due to shortness of time. Surprisingly, I later found similar stay-fasteners in photographs in literature (see below).

I had a second reason to doubt these stay-fasteners because their carvings did not really support the two-loop-connection of the guy-ropes that I have observed so far. Indeed, in Austria, we had trouble pitching the tents as the stay-fasteners tended to tilt sideways. The two loops of the guy-ropes wandered onto one end of the stay-fastener, making the belt fixer slip out of its socket and the whole construction tore open.

Regarding these particular tents of the year 2005, even the same tilting happened with rope connections that only needed one loop on the stay fastener, as the carving in the middle was not deep enough to keep the rope in place. However, generally a one-loop connection would have fitted better for this design if carved properly.

Through research of literature, I finally learned that one-loop-connections really do exist. The following passage will show that the type of stay-fastener is strongly connected to the choice of rope connection

### Stay-Fastener's Connection to the Guy-Rope



*image 5.005: Overview of 5 types of stay-fasteners with ropes and knots. V-shaped with notches type a, cylindrical type b1, cylindrical type b2, steep v-shaped type c, shallow v-shaped type d*

The sketch above shows several types of stay-fasteners with variations found in literature or observed in field research. Probably more types exist. Having depicted the stay-fasteners with particular ways of connecting the guy-rope, there is the proposition that the choice of connection system is bound to the stay-fastener's design. This derives from photographs found in literature which were detailed enough to make an assessment. Altogether, only two books presented the necessary high quality pictures for the discussed subject. Below, the images which were available for the research are listed:

Source: BÖHMER, Harald, *Nomaden in Anatolien: Begegnungen mit einer ausklingenden Kultur*, Ganderkesee Germany (REMHÖB-Verlag), 2004

Image 1:

Stay-fastener: steep v-shaped type c

Guy-rope connection: one loop<sup>5</sup>

Guy-rope material: herbal material

Knot: unknown

Tribal affiliation: Sarıkeçili (using 5-pole-tents)

Region: unknown

Date: 1991

Source: Böhmer 2004, p.34

Image 2:

Stay-fastener: steep v-shaped type c

Guy-rope connection: one loop

Guy-rope material: black goat hair

Knot: 2 half-hitches; counterbalanced

Tribal affiliation: Sarıkeçili (using 5-pole-tents)

Region: Taurus mountains south/south-western Anatolia

Date: unknown

Source: Böhmer 2004, p.60-61

Image 3:

Stay-fastener: steep v-shaped type c

Guy-rope connection: one loop

Guy-rope material: herbal material

Knot: 4 half-hitches

Tribal affiliation: Karatekeli

Region: South-West Anatolia

Date: 1984

Source: Böhmer 2004, p.112

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<sup>5</sup> At the one loop connection, the guy-rope starts at the stake, runs up to the stay-fastener where it is looped around again with the loose end being knotted to the stretched rope part with half-hitched knots.

Image 4:

Stay-fastener: steep v-shaped type c

Guy-rope connection: one loop

Guy-rope material: black goat hair

Knot: 3 half-hitches

Tribal affiliation: unknown

Region: Fethiye

Date: 1988

Source: Böhmer 2004, p.115

Image 5:

Stay-fastener: cylindrical type b1

Guy-rope connection: one loop

Guy-rope material: black goat hair

Knot: unknown

Tribal affiliation: unknown

Region: Fethiye

Date: 1988

Source: Böhmer 2004, p.116

Image 6:

Stay-fastener: cylindrical type b2

Guy-rope connection: one loop

Guy-rope material: black goat hair

Knot: 2 half-hitches; counterbalanced half-hitches?

Tribal affiliation: Kara-Hacı

Region: near Beyşehir lake

Date: 1987

Source: Böhmer 2004, p.191; tent reconstruction for Josephine Powell

Image 7:

Stay-fastener: cylindrical type b2

Guy-rope connection: one loop

Guy-rope material: herbal material and synthetics

Knot: unknown

Tribal affiliation: Karakoyunlu (using 3 or 5-pole-tents)

Region: unknown

Date: 1994

Source: Böhmer 2004, p.195

Image 8:

Stay-fastener: cylindrical type b1

Guy-rope connection: two loops<sup>6</sup>

Guy-rope material: herbal material and black goat hair (two loops)

Knot: unknown

Tribal affiliation: Karakoyunlu (using 3 or 5-pole-tents)

Region: unknown

Date: 1994

Source: Böhmer 2004, p.200

Image 9:

Stay-fastener: v-shaped with notches type a

Guy-rope connection: two loops

Guy-rope material: herbal material

Knot: unknown

Tribal affiliation: Sarıkeçili

Region: Mäandertal

Date: 1984

Source: Böhmer 2004, p.210

Source: KUNZE Albert (Editor), Yörük: Nomadenleben in der Türkei, Hechingen (Kultur publik Gesellschaft), 1994

Image 1:

Stay-fastener: v-shaped with notches type a

Guy-rope connection: two loops

Guy-rope material: herbal material

Knot: probably 4 half-hitches?

Tribal affiliation: Karaevli

Region: Adana

Date: 1957

Source: Kunze 1994, p.31; photograph provided by Ulla Johansen

<sup>6</sup> see chapter 3.1.1 concerning the two loop connection. The guy-rope starts at the stay-fastener, runs down to the stake and back to the stay-fastener where it is looped around again with the loose end being knotted to the two stretched rope parts with half-hitched knots.

Image 2:

Stay-fastener: shallow v-shaped type d

Guy-rope connection: two loops

Guy-rope material: herbal material

Knot: unknown

Tribal affiliation: Güzelbeyli

Region: Aydın

Date: 1985

Source: Kunze 1994, pp.128-129

I detected 2 “v-shaped with notches type a” with two loop rope connection, 4 “cylindrical type b1 or b2” with mostly one loop rope connection except for one, 4 “steep v-shaped type c” with one loop rope connection and 1 “shallow v-shaped type d” with two loop connection. For the types a, b1, b2, c I draw a correlation between the stay-fastener’s design and the choice of rope connection:

v-shaped with notches type a → two loop rope connection

cylindrical type b1 or b2 → one loop rope connection

steep v-shaped type c → one loop rope connection

Regarding the technical aspect in practical life, the stay-fastener’s design needs to keep the loops of the guy-rope within its centre so that tilting can be avoided. In case of the two loop connection, a dividing notch is provided in the middle which protects the rope from rubbing against itself when being pulled or released.

For the type b1 and the type d, two loop rope connections exist, showing that there are exceptions, and that the stay-fastener’s design does not always necessarily indicate which kind of connection is preferred. Type d is a shallow v-shaped with no dividing notch or carvings. It runs the risk of the two loops being pressed together. As I haven’t found further sources for rope connections with type d, I cannot state which rope connection is generally preferred.

### **Stay-Fastener’s Connection to the Tent**

As for the connection of the stay-fastener to the tent, there seem to be various solutions used. In chapter 6.1.2, I list literature references that describe some of the methods of fastening. In case of the tents of the Karatekeli families, it was most common to con-

nect the stay-fastener with two thick bundles of goat hair strings to the belts at the long sides of the tents. The bundles are simply sewn to the belt. Regarding the stay-fastener's connection at the short sides, this was just always done with braided or bundled ropes of goat hair sewn to the area of the central panel above the ridge piece. In some cases, the rope is installed underneath the hanging end flag of the central panel. In some other cases, it is run through a hole pierced through that hanging flag.

However, variations in the stay-fastener's connection are mostly found on the long sides. For example, the stay-fasteners of the tents constructed in 2005, which were of the cylindrical type b1, were directly sewn onto the tent's eaves. The belts of these tents ended exactly at the eaves where they were sewn together with the stay-fastener in one go.

The tents built in 2007 showed a different solution by having the belts run further than just to the eaves and being divided in half at their ends, which were looped around the left and right end of the stay-fastener (type a).

### **Tribal Affiliation and the Design of Stay-Fasteners**

In the course of several public lectures and discussions about black tents, I noticed that there is a keen interest in establishing whether the design of the stay-fastener is associated with the tribal affiliation, and therefore a sign of identity embedded within the architectural structure of the tent. In case of the Yörük, it is rather shown that the choice of stay-fastener design is not necessarily bound to the tribe.

Based on the 11 images listed previously in this chapter, and from experiences in field research, a list showing which stay-fasteners are used by which tribe is established:

v-shaped with notches type a → Sarıkeçili, Karatekeli, Karaevli  
cylindrical type b1 → Karakoyunlu  
cylindrical type b2 → Karakoyunlu, Kara-Hacılı  
narrow v-shaped type c → Sarıkeçili, Karatekeli  
open v-shaped type d → Güzelbeyli

It may be that there is a pattern to be detected within the list e.g. the Karakoyunlu tend to use cylindrical straight stay-fasteners with carvings while the Sarıkeçili and Karatekeli use either the ones with the notches or the narrow v-shaped types, but the data is not sufficient in number of cases to support that.

Taking the idea of correlation between design and tribal affiliation once more into account, it may be that the contemporary mix of designs is more likely to be the result of recent historic events, as the 20<sup>th</sup> century proved to be an era of big changes for the Yörük, making them travel to new territories, become acquainted with new surroundings and tasks and making contact with other tribes in the regions (see chapter 2.2.1). There is the possibility that, before the big changes in the 20<sup>th</sup> century, there might have been a tradition that certain stay-fastener-designs were connected with particular tribes. It may be that this tradition slightly lost its consistency due to historical events but still tendencies can be depicted.

In regard of the choice of wood of the stay-fasteners, it can be mentioned that the original ones from the Karatekeli families are definitely oak (type a). In regard of “forked” stay-fasteners, the weaver family Peker states on its homepage that branches of the cedar tree are used<sup>7</sup>. This would refer to types like the steeper v-shaped type c or shallower v-shaped type d.

### **Guy-Ropes**

After analysing the stay-fasteners in detail, it is interesting to turn to the guy-ropes of the tent regarding the spectrum of types of ropes or chains used. Firstly, it is important to mention that the guy-ropes can be made of black goat hair, which may be one of the original materials for this accessory.

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<sup>7</sup> Peker 2013, *Hakkımızda - Peker Dokumacılık - Kıl çadır, Kıl çadırı, Keçi Kılı*, <http://peker-dokumacilik.net/index.php/features.html>, 28<sup>th</sup> Jan 2013; quote: “10 metre uzunluğunda yine kıldan yapılmış adına örme denilen saç örüğü şeklinde örülmüş iplerle(iplerin elçeklere bağlanma şeklide çok özeldir gevşetmek ve sıkıştırmak için özel bir yöntem uygulanmaktadır) tutturulan çadır, adına bastırık denilen pıynar meşesi yada ardıc dallarının çatallı bölgesinden bağlanarak üzerlerinin de ağırca bir taşla sabitlenmektedir.”



*image 5.006: Rope made of goat's hair manufactured in the weavers' villages. The freshly twisted rope is fixed to the ground with a small stake.*

The photographs of Böhmer and Kunze show a common use of black goat hair ropes. Apart from one exception, these ropes are mostly found in a one loop connection. There is also the tendency for these to be knotted with less than 4 half-hitch knots. In the following passage, the use of ropes made from herbal material (in most cases probably hemp or flax), goat hair and synthetics is discussed.

The ropes made of hemp or flax which were used by the Karatekeli provide much more tensile strength than the hair products. Indeed, apart from literature, I did not find any Yörük tents using hair ropes in real life. Based on the field research and practical experiences, the following information about the use of ropes made of herbal materials is gathered:

- 1) For the smallest tent sizes (2,7 x 4 m until 3,2 x 5m) ropes of 0,6-0,8 cm diameter are preferred.
- 2) Larger tents get anchored with ropes of 0,8 - 1 cm diameter.

- 3) Hemp or flax ropes are largely preferred. Ropes of other materials like sisal, jute or synthetics are used occasionally, too. Chains are a preferred alternative for high tensions.

It is interesting that hemp or flax ropes are largely preferred, as I assume them to be the standard herbal material in the photographs in literature in most cases<sup>8</sup>. Experimentally, I tried other rope types on black tents and noticed that there are important attributes to be considered when choosing between different materials. Sisal and jute are difficult to handle due to their stiffness. The grade of stiffness is an important factor for the quality of the knots. Ropes of a stiff character may not allow tight loops that grab well at the rope parts put under tension, as e.g. given in the half-hitch system of the Yörük<sup>9</sup>. The character of the surface of ropes is another important factor. Jute has a rough surface that can make knots difficult to be opened again because of the strong friction, and the possibility to open knots again and again plays an important role in a mobile dwelling system. Most synthetic ropes have a smooth surface, leading to slippery knots that give no hold within the connection system. Even synthetic hemp ropes (which imitate the nature of hemp) have a slightly lower friction than the natural ones, giving less hold overall.

All these comparisons show how hemp and flax fit well to the four half-hitches, making them practical and secure. Therefore, the supposition is that the half-hitch system is strongly connected to the choice of rope material, as in this case of hemp or flax.

Unfortunately, I have no experiences with hair ropes to test the knot systems.

Therefore, I can only provide a theory drawn from my impressions. Due to the nature of the black goat hair yarn, I believe that goat hair ropes are softer and more flexible than hemp or flax ropes. If this is the case, they would not need that many half-hitch knots because the grip of knot loops would wind more firmly around the rope parts under tension. (The greater the stiffness of the rope, the less the ability of the knot loops to embrace the rope parts under tension, and vice versa.) This would be consistent with the literature, which indicates a slight tendency to use fewer half-hitch knots for hair ropes.

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8 My approach on identifying hemp or flax ropes on photographs is built on the following aspects: 1) colour of the rope 2) surface texture of the rope 3) twist of the rope. If these 3 aspects fit clearly to the characteristics of the hemp or flax ropes of the field research, I assume them to be of the same material. While hemp and flax ropes are not so easy to distinguish from each other, sisal or jute ropes show more differentiated characteristics.

9 see chapter 3.1.1

Apart from any rope material, chains prove a preferable alternative on positions where normal ropes break. It is not that rare for guy ropes to break. On three occasions I asked Yörük owners of tents why they chose to use a chain here or there and they answered that the rope had previously broken under the high tension. They made sure it won't happen again by installing a chain.



*image 5.007: Chain attached to an iron stake. The rock prevents the stake of tilting.*

### **Stakes and Anchoring Systems**

Leaving stay-fasteners behind, I would like to add a few lines on the choice and use of stakes and alternative anchoring systems.

The Karatekeli told me that a good metal stake needs to be not less than 1 meter or even longer. Due to the seasonal rain-showers and the intensive grazing, the eroded and trampled topsoil is a mixture of clay and stones pressed hard together. It provides a strong basis for anchoring during the hot season but becomes very soft during the rainy season making anchors drift or slip. Stakes are mostly iron bars of about 2-4 cm

diameter deriving from clippings at construction sites. In some cases, strong iron pipes are used as well.

The stakes the Yörük bought for the newly constructed black tents are of a completely different nature: They are 40 cm long with a grommet and a flexible ring on top. The Karatekeli explained that they chose these particular stakes for our new tents because they can be transported more easily and adapted to various different grounds. These are not suitable for a long term pitch, but rather for camps of 2-3 weeks duration. For this reason, these stakes suited our purpose exactly. The rings supported the flexibility of the guy-ropes bound to the stakes with the two-loop-system and therefore provided easier handling.

To my surprise I saw the same design of stake being used by the Tuareg in the Sahara desert for anchoring black tents on sand (see chapter 3.3).

The old iron stakes used by the Karatekeli have no rings. The guy-ropes just run around the iron bar which sticks 40-50cm out of the ground. If the stakes are beaten deeper into the ground, a stone is put onto the rope or chain in front of the stake to prevent it from slipping off (see the image above).

As already discussed in chapter 3.1.1, stones and crutches may replace the stakes on solid rocks<sup>10</sup>. (see image 3.009 in chapter 3.1.1)

In literature, I found evidence that the use of wooden stakes of about 5-8 cm thickness is more common. Their total length is unclear but the images show that these stakes stick out of the ground at least 40-50 cm as well<sup>11</sup>. In chapter 6.1.2 example tents with wooden stakes are listed and described in detail.

## Poles

The three poles of the old Karatekeli tents are decorticated stems of young broad-leaf trees (e.g. poplar). Quite contrary to my field research experiences there, the weaver family Peker explains on its homepage that the poles are made of cedar wood, which belongs to the category of conifers<sup>12</sup>. Poles feature conically narrowed or rounded top ends to fit into the ridge pieces. The lower ends are flat or slightly rounded. Old poles are dyed black by bonfire fumes which impregnate the wood against moisture and vermin.

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10 see as well: Böhmer 2004, p.35

11 see as well: Böhmer 2004, p.67, p.121, p.191; Kunze 1994 p.8,

12 Peker 2013, *Hakkımızda - Peker Dokumacılık - Kıl çadırı, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/features.html>, 28<sup>th</sup> Jan 2013; quote: "Direkler olarak ta; söğen denilen ardıç dalarından yapılmış yaklaşık 2,5 metre uzunluğunda ağaçlarla, [...]"

*The framework of the tent comprises three tent poles. In the middle of the tent there is the 'main pole' - approx. 2m high - which is decorated with carvings. Above that lies the slightly vaulted ridge piece with a carved hole in the middle in which the top end of the pole is inserted. This main pole with its ridge piece forms the characteristic design of the black tent which is slightly elevated in the middle.*<sup>13</sup>

Zimmermann mentions the centre pole is about 2 m high. The old tents of the Karatekeli families had poles measuring up to 2,3-3,2 m. The height of the poles is related to the tent's overall size. The centre poles and ridge pieces did not show any special carved decorations that may have distinguished them from the poles at the sides. Diameters of poles are about 6-10 cm and only rarely more than that because they would be difficult to hold and would be too heavy. Unfortunately, I have not seen any decorated poles so far, nor have I found any images in literature showing such carved decorations.

The Karatekeli families took care to set slightly shorter poles into the sides but it did not matter if there was no single longest pole available for the centre. The old Torbalı tent that I had purchased does not show any special long pole either. It features two poles of the same length and one slightly shorter. I was instructed to put the short pole to one of the sides and the two longer ones into the remaining slots.

So there is a rule not to put a short pole into the middle, but extra elevation at the middle is not strictly necessary in case of the Karatekeli.

### **Exterior Poles**

In some cases, the guy-ropes of the tents are anchored far away, being bent over forked branches that help change the angle of the rope. I refer to them as "exterior poles" which is terminologically not completely correct as that would indicate them to be an integral construction part of the tent which is not actually true. They rather belong to the category of extra help-outs spontaneously taken from the surroundings similar to stones in front of stakes to keep the guy-rope in place. Nonetheless, I want to discuss these "exterior poles" here, as they influence the tent's shape and need a certain know-how to be installed properly. Additionally it is important to mention that some exterior poles get carried from camp to camp in regions of poor bush and tree vegetation, and

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13 Zimmermann 1994, p.121-122; quote: "*Zum Gerüst des zelttes gehören meistens drei Zeltstangen. In der Mitte des Zelttes steht die 'Hauptstange', circa 2 m hoch, manchmal durch Schnitzereien verziert. Über ihr liegt ein leicht gekrümmtes Firstholz mit einem geschnitzten Loch in der Mitte, in das die Spitze der stange eingelassen wird. Diese Hauptstange mit dem Firstholz gibt dem schwarzen Zelt seine charakteristische, in der Mitte überhöhte Form.*"

thus become an integral part of the tent.<sup>14</sup>

The Karatekeli prefer to use forked branches of various sizes (appr. 1-2 m). Tents in the Selçuk region and photographs in literature<sup>15</sup> show that the poles are at least 1,5 metres away from the tent's walls while the rope is secured far away, having a length of about 8-10 m. But there are exceptions. In particular, I have seen a number of tents in the Selçuk region that feature poles 1m high being put closer to the stake than to the tent, and a photograph in the publication of Böhmer 2004 (p.112) shows exterior poles only 0,5 m away from the walls.

Other photographs of Böhmer show how some tribes do not use forked branches but instead use straight poles about 2 m high, fixed with a loop or knot to the guy-rope<sup>16</sup>. In most cases they are set at the entrance side of the tent only. A detail photograph in Kunze's publication shows how a branch is fixed with the loose end of the guy-rope<sup>17</sup>. In Austria, I tried various ways of installing exterior poles with forked tops. Poles set too close to the tent tend to fall as the vertical pressure of the rope is too low. Poles set too close to the stake tend to tilt sideways. They tilt sideways as well when the stake is set too close to the tent, changing the angle of the rope over the pole too much.

### Wooden Pins

Wooden pins connect the tent's roof to the tent's walls. They are the last tent accessory discussed in this chapter. In chapter 3.1.1, I explained how they need to be installed properly. Wooden pins are about 20-25 cm long and about 0,4 – 0,8 cm thick. The pins on old tents feature a smooth surface with a rounded tip, similar to a knitting needle. Thick needles with rounded tips avoid damaging the yarn when being pushed through a rough weave. Sharp tips would run the risk of piercing the yarn and therefore damaging the weave compound in its quality.

The new needles for the reconstructed tents in the field research have sharply carved tips with a rough surface showing tiny edges. Indeed, they do damage the textile when being pushed through. Compared to the pins of the old tents of the Karatekeli, they do not show the same quality. Therefore, the conclusion that the reconstructed pins do not completely fit into the traditional scheme is reasonable.

14 Photographs of Böhmer shows exterior poles which were neatly decorticated and obviously planed. If the making of certain tent parts needs considerable attention and time, it may be that these parts get included into the tent equipment for longer periods. See Böhmer 2004, p.93, p.99, p.103, p.107, ; Nonetheless, I did not find any written remarks regarding the handling of exterior poles in this aspect.

15 Kunze 1994, p.8, p.16

16 Böhmer 2004, p.93, p.99, p.103

17 Kunze 1994, p.16

I was not able to discuss this matter with the Karatekeli families as they were eager to assure me that these pins are as suitable as the old ones.

Talking with craftsmen and women in Austria about the design of wooden pins for textiles in general, I found out how a smooth surface as seen on old tents can also be achieved without using sandpaper: Certain kinds of bushes bear a bark that can be easily loosened from the branches by being laid in water for a few hours. The decorticated branch shows a perfectly smooth and rounded surface.

As I do not have information on practical Yörük handicraft, and as the literature sources provide no data on this subject, I must leave the question of how traditional pins were made unanswered, and provide just the little information collected in Austria.

Zimmermann mentions that some pins are made of metal, and that the roof and the walls are connected with each other over grommets<sup>18</sup>. Regarding grommets, I am not able to depict how this would have looked technically. Regarding metal pins, in my experience, large metal nails (length: 15cm, thickness: 0,4 cm) work as well as wooden pins when installed in the exactly same way at the fringes of wall and roof. The Karatekeli families used them for the new tents as an interim solution when the wooden pins were not yet finished.

### Chapter 5.1.2 Tent Roof and Walls

How were tents sewn in the old days? There are two photograph documentations of tent constructions in literature by Zimmermann / Johansen, and Böhmer / Powell. Additionally, remarks about tent making in some sources (e.g. Borchhardt) give essential clues. Furthermore, a tent construction I had ordered two years before I had asked the Karatekeli families for help, reveals possible variations of tent construction between the tribes.

*When one of the sons started a family, the panels woven by the women of his family were sewn together by all the men of the neighbourhood. Together, the men pitched the tent while the women prepared a feast.*<sup>19</sup>

18 Zimmermann 1994, p.12

19 Borchhardt 1998, p.79, quote: "Gründete einer der Söhne einen eigenen Haushalt, so wurden die von den Frauen seiner Familie gewebten Zeltplanen von allen Männern der Nachbarschaftsgruppe gemeinsam zusammengenäht. Gemeinsam errichteten die Männer das Zelt, während die Frauen ein Festessen zubereiteten."

Borchhardt's report about the tradition of tent sewing resembles the process of tent making in the field research which was also accompanied with a feast prepared by the women.

Zimmermann describes the making of a tent with a photograph by Johansen showing how four men sew the tent.<sup>20</sup> This particular photograph shows interesting details that need further analysis. This is how the photograph evolved:

Ulla Johansen lived among the Yörük of the Karaevli Aşiret in the province of Adana for several months in 1957. At the end of her stay she collected various items belonging to the interior equipment of the black tent and representing the daily chores of a family in order to create a small collection for a museum exhibition. She asked to buy a small tent but as there was not one available for sale, her host-family kindly organized the construction of such.



*image 5.008: Sketch of the Johansen Photograph*

Although the sketch is not able to show the details of the original photograph it may help to understand the following passages describing significant details:

The five panels are fixed to the ground by wooden stakes forming the layout of the tent roof. The short sides of the tent-to-be are cut in a line. The central panel is not longer than the others, which differs from the tent layout of the field research 2007. The straight stretched character of the panels shows that they were deliberately pre-stretched but it is not known how. Two thick wooden bars lie around, maybe indicat-

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20 Zimmermann 1994, p.124

ing that these panels were beaten with sticks to stretch them, as well. Each panel is stuck into the ground by 3 stakes at each end, one at each corner and one in the middle. The four men sit at the short sides of the layout, sewing. They must have started the sewing only recently, and are holding the needles the exact same way as reported in the field research 2007. They perform an even stitch (there is no bulge visible) with the needles pointing away from their bodies.

The stay-fasteners, belts, ridge pieces, etc. ... are not seen in the photograph. At the right side of the image, the top of a pole can be seen (it is one of the wooden bars mentioned above). It is decorticated and conically narrowed down at the top.

According to the body language of the men and its strong similarity to the report of the field research 2007, it can be assumed that they sewed the tent starting at the sides, and moving inwards, but Zimmermann describes a different procedure:

*The single panels are sewn together by two men at once, starting from the middle and moving to both sides.*<sup>21</sup>

As Zimmermann is speaking of two men only, the supposition is close that his report does not apply to the photograph provided by Johansen but rather to his personal experiences elsewhere. But apart from this, Zimmermann provides valuable new information about the procedure of sewing. It is a variation on the procedures observed in the field research 2007.

Further on, Zimmermann provides a sketch of a roof:

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21 Zimmermann 1994, p.121, quote: "Die einzelnen Bahnen werden von zwei Männern gleichzeitig zusammengenäht, und zwar von der Mitte aus nach beiden Seiten."

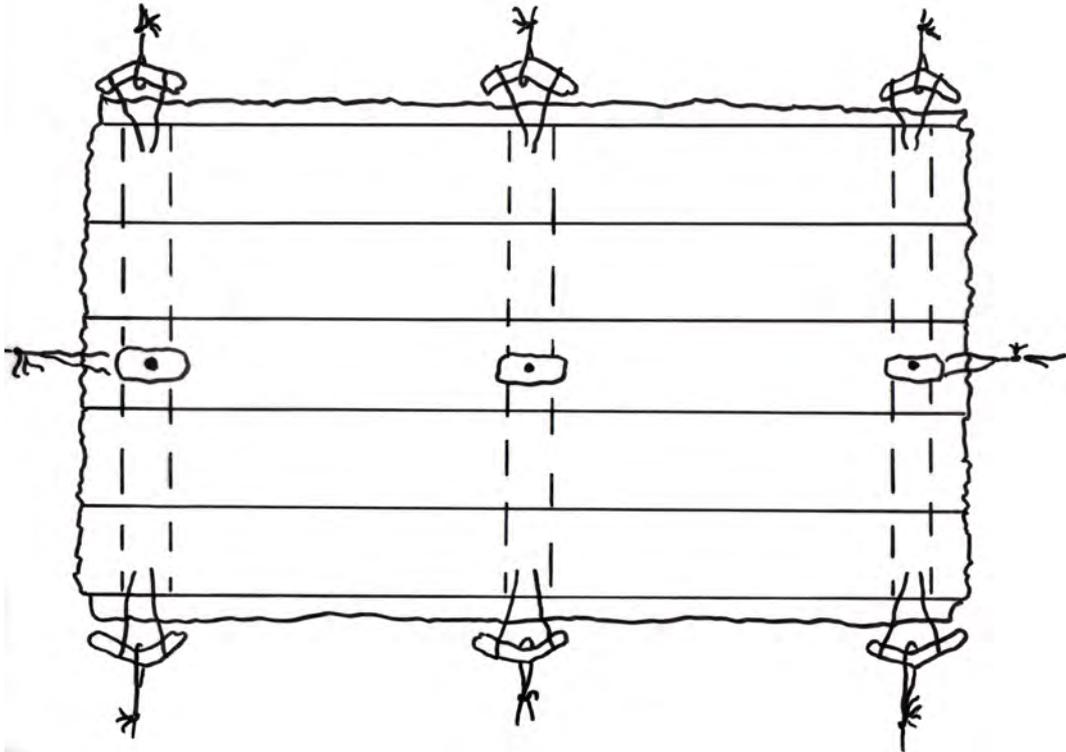


image 5.009: Sketch of sketch of Zimmermann<sup>22</sup>

Further sketches by Zimmermann on the same page in the book strongly indicate that the design of the stay-fasteners belongs to the “shallow v-shaped type d” with a one-loop rope connection. Notable are the ridge pieces with their rounded corners and the narrow eaves bands added to the front and back sides of the tent roof. There are no stay-fasteners installed at the short sides of the tent. It may be that two strips of rope are sewn to the tent and then knotted together with the guy-rope, or that the guy-rope is directly connected to the ridge piece. There is no further example for the latter variant in literature or elsewhere so far.

Apart from photographs and sketches, it is interesting to take a closer look at the remarks of Zimmermann about the construction of a tent<sup>23</sup>:

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22 Zimmermann 1994, p.125

23 Zimmermann 1994, p.121-127

*The over-sewed joining of the panels is done using a twisted yarn of wool made by the women.*<sup>24</sup>

The German expression “überwendlich” (over-sewed) means literally: “sewing such that the thread runs over the edges of the textile laid against each other”<sup>25</sup>

Comparing this expression with various textile lexicons, it turns out to be unclear whether this type of stitching produces a bulge or a smooth connection between the two panels of the textile, as the expression just indicates that the thread runs over the edges. This can be said about the Yörük stitch (see chapter 4.1.1) but as well about the raised seam stitch (see at the end of this chapter).

*A double-laid band at the fringes of the roof supports fixing the side pieces which were held together by wooden pins, or nowadays by metal pins or by the help of grommets.*<sup>26</sup>

As seen in the sketch of the tent roof by Zimmermann, and mentioned in previous passages in this thesis, the front and back fringe of the tent with its five or seven broad panels can be extended by an additional narrow band. However, there are no other references or pictures suggesting that this particular band was double-laid. In practice, it renders the fringe impracticable as piercing with the wooden pins would be quite difficult to handle. On a normal Yörük tent, it would take a lot of strength to pierce the wooden pins through the region of the tension belt, the roof panel and the wall panel at once. In case of a double laid band, this difficulty would extend throughout the whole length.

Keeping the report of Zimmermann in mind, which explains that two men are starting to sew the tent from the middle to the side fringes, it is interesting to take a close look on the second documentation by Böhmer of a Kara-Hacılı tent construction which took place in the year 1987 ordered by Josephine Powell.<sup>27</sup>

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24 Zimmermann 1994, p.121; quote: “Das überwendliche Zusammennähen der Bahnen geschieht mit einem von den Frauen gedrehten Wollfäden.”

25 Source: Duden 2012, Bibliographisches Institut GmbH, Dudenverlag, 68167 Mannheim, <http://www.duden.de/rechtschreibung/ueberwendlich> 24<sup>th</sup> Jan. 2013; quote: “überwendlich nähen (so nähen, dass die Fäden über die aneinandergelegten Stoffkanten hinweggehen); überwendliche Naht”

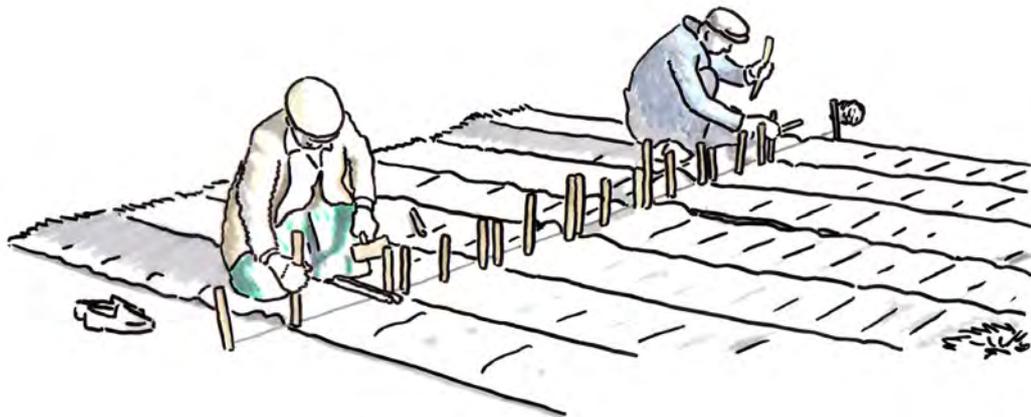
26 Zimmermann 1994, p.12; quote: “Ein doppelt gelegter Randstreifen um die Außenseiten des Daches dient der Befestigung der Seitenstücke, die mit Holzspindeln, heute auch Metallspindeln oder mit Hilfe von Ösen zusammengehalten werden.“

27 Böhmer 2004, p.191

Böhmer shows three images of a tent roof construction. Two images show how 2 men are handling the wooden stakes that pin the tent down to the ground.

In one image, the stakes are situated at the end of the panels, 3 stakes for each panel. The men are about to stretch one panel by hand, pulling it hard and fixing it to the ground with the stakes again. From the photograph it can be estimated that the difference achieved by the stretching is about 10 cm.

The other image shows how these two men are sticking the stakes into the middle of the panels. There are apparently no stakes yet situated at the sides, or maybe they have already been removed. Here is a sketch of this particular image:



*image 5.010: After Böhmer – men, tent, stakes in the middle*

The third image shows in detail how one of the men holds the needle. This time, the needle is held in the opposite direction from observations made so far: It points towards the body and not away. Behind it, the stitching can just be seen, showing an even design with no bulge.

Considering how the two men stick the stakes into the middle of the panels and how they do the stitching in an opposing seating direction, it may be that they were sewing the tent the exact same way Zimmermann was describing: from the middle outwards.

Unfortunately, this assumption rests on a few images only, which show no sequence or no further hints on procedures. Nonetheless, information about another procedure of stitching, apart from the documented one in the field research 2007, is available here.

The weaver family Peker describes on their homepage how a Yörük tent is made. The

description strongly resembles the tent construction of the field research 2007, e.g. the “beating of the panels for stretching” is also mentioned. The panels are pinned onto the ground by wooden stakes, side by side in the desired length and setting for being sewn with a special technique.<sup>28</sup>

Further on, the type of stitch is explained as well, describing it as a “fence” stitch<sup>29</sup>. This refers to a bulge seam as already seen in image 4.102 in chapter 4.2.6, displaying different types of roof cloth presented in the weavers’ villages.

In 2005, I encountered the bulge or “fence” stitch for the first time.

Back then, I already wanted to buy new Yörük tents to run technical tests on them in Austria like sun impact, indoor temperature management, rainwater resistance, etc. .... A Yörük and former colleague in my summer job offered to organize a tent construction for me, which I gratefully accepted.

Unlike the Karatekeli families, he did not want me to see how the construction work is done and it took some persuasion before he finally agreed to it.

My husband and I were allowed a 15 minute visit at the home of the great-aunt of my contact. We met a large friendly family with two old people feverishly sewing the tent roof on the porch. I was able to take pictures there.

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28 Peker 2013, *Hakkımızda - Peker Dokumacılık - Kıl çadır, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/features.html>, 28<sup>th</sup> Jan 2013; quote: “Çul haline gelen ürün bir ucundan yere ağaç kazıklarla tutturulur, diğer ucundan da kuvvetlice asılınarak bir kişi tarafından dövülerek hepsinin uzunluğu bir ayara getirildikten sonra, 20cm uzunluğunda çuvaldız denilen aletlerle, istenilen uzunlukta üretilen çullar, yan yana getirilerek özel bir teknikle dikilmektedirler.”

29 Peker 2013, *Hakkımızda - Peker Dokumacılık - Kıl çadır, Kıl çadırı, Keçi Kılı*, <http://pekerdokumacilik.net/index.php/features.html>, 28<sup>th</sup> Jan 2013; quote: “Burada belirtmekte fayda var çadırın dikiş tekniği, kuşakların dikiş tekniği, siyeçlerin dikiş tekniği ve çulların dikiş tekniği farklı farklıdır ve önem arz etmektedir.”



*image 5.011: Great-aunt of my contact sewing a new tent on her porch.*

They obviously sewed the panels without stretching and staking them to the ground. It appeared a bit chaotic, but altogether the panels were sewn to each other in a straight and correct way. They sewed using a fence stitch which was entirely new to me, as I had so far only encountered Yörük tents with a flat stitch.

Later, I learned through various interviews with Yörük people in the region, that the fence stitch derived from Yörük people who came from a region near Syria, and adopted this stitch from Arab tents.

In Austria we found that the fence stitch renders the tent unsuitable for rain, as the rain water ponds at the bulge seam, sinking into the canvas plane and penetrating the interior. Therefore, I assign the fence stitch to a tent tradition from regions with far fewer rain showers. This may be consistent with the considerably hotter and dryer climate in the southern regions near to the Syrian border, or to the Arabian countries in general.

As the tent was not stretched in advance, it showed a totally different behaviour when being pitched compared to the new tents provided by the Karatekeli Yörük: It swayed due to the flexibility of the textile that was not pre-stretched. After being erected for 1-2 days it needed substantial rearranging and stretching of the guy-ropes as the cloth was elongating slowly under tension and rendered the tent unstable.

I had reason to assume that the two old people who had sewn the tent were under considerable time pressure as they did not stretch the cloth onto the ground. As I overheard a short discussion between my contact and his great-aunt, I understood that she was angry with him as she was doing him a favour and it has been badly organized from his side.

As I found the overall situation uncomfortable and not sufficiently transparent, I was glad to meet the Karatekeli families 2 years later, who handled the whole business in a far more honest and sociable way.

Having presented 5 sources of information about former ways of tent roof construction, I want to add a few sentences on the construction of walls. I have not found enough relevant sources in literature and can mainly provide oral information collected in the field research.

Firstly, the Karatekeli families mentioned that the walls normally derived from former roof panels quickly sewn together for their new purpose. If they ever needed to produce a new weave for the walls, they wove it in a quicker and less precise way to save precious time. Böhmer describes such a distinction in crafting quality as well.<sup>30</sup>

Similar information was given to me by my contact regarding the tents built in 2005. He mentioned that the end seams of wall panels are mostly of a lower quality as they are done more quickly.

Finally, it is interesting to take up the gender issue again, based on a list provided by Borchhardt presenting the chores done within a Yörük family when constructing a tent and its interior goods.

Borchhardt shows in this list which tasks are assigned to which sex, and which tasks are regularly done by both. For example, the preparation of wool (kıl taramak), the weaving (ıstar dokumak), textile making (including tent panels, kilims, clothing, pillows, sheets, etc....), belt making, pitching and taking down of the tent is done by the women. The sewing of the panels is done by the men. Shearing the animals, lumbering of wood, working with the distaff wheel (kirmen), production of ropes and mainte-

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30 Böhmer 2004, p.190

nance of the tent is done by both sexes.<sup>31</sup>

She adds that the assignment of tasks was put aside in times of intensive need of workers.<sup>32</sup>

The overview she provides of the assignment of tasks is quite similar to the experiences in the field research, although exceptions can be reported which as well are mentioned by the Yörük themselves, showing pride in the extraordinary achievements of their people.

For example, they introduced me to two women who knew the sewing of the tents from the old times, and were honoured as extraordinary persons. They also mentioned that Dede Nasuh was an honoured man who could spin as well as the women. In chapter 5.2.2 further sources will be mentioned (e.g. Eröz, Böhmer) that describe how men did the spinning as well as the women.

The pitching of the tent was a job done by men and women together without putting any emphasis on either gender.

## Chapter 5.2 Production of the Black Tent Textile by Yörük Nomads

### Chapter 5.2.1 Raw Wool

Although shearing is already fully discussed in chapter 4.2.1, and the methods do not differ much no matter by whom or in which epoch they were implemented, there is something to add to the issue. Starting with a quote of Tietzel:

*Primarily, there are two different methods: Firstly the collecting of tufts of hair out of the fur of the animals or from bushes and shrubs on which they got caught. Secondly, there is the method of shearing. In both cases, the raw wool needs to be freed from dirt and grease by washing, and then loosened and put into order by scratching, twitching, and combing before it can be spun into yarn.*<sup>33</sup>

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31 Borchhardt 1998, p.122, excerpt of Abb. 17

32 Borchhardt 1998, p.123

33 Tietzel 1988, p.9; quote “Grundsätzlich gibt es hierbei zwei unterschiedliche Methoden: Einmal das Sammeln der Haarbüschel aus dem Fell der Tiere selbst oder aus Büschen und Sträuchern, an denen sie hängenbleiben; dies vor allem im Frühling, wenn der Winterpelz der Tiere auf natürliche Weise abgelegt wird. Die zweite Methode ist das Scheren der Tiere. In beiden Fällen muß die Rohwolle zunächst durch

Before shearing scissors were invented, mankind must have had a different method of retrieving precious wool from goats and sheep. Firstly, there is the possibility of waiting for the natural moult of the animals when the lost hair can be easily collected from shrubs and bushes. Secondly, the loose hair can be directly pulled by hand.<sup>34</sup> Thirdly, preceding shearing scissors, any type of knife may have been used according to Ryder. He explains how knives have existed since the Stone Age, being developed firstly from stone, and later on from copper, bronze or iron. However, with the invention of shearing scissors, the breeding of sheep with no natural moult started to be viable. He claims that this particular change in breeding happened around 1000 BCE in Anatolia. Grömer, explaining the insights of Ryder, shows a picture of shearing scissors dating back to the second half of the 4<sup>th</sup> century BCE, associating them to the Latène-Period in Middle Europe.<sup>35</sup> These shearing scissors closely resemble the Yörük scissors used today.

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*Waschen von Schmutz und Fett gesäubert und dann durch Kratzen, Zupfen und Kämmen aufgelockert und geordnet werden, bevor man das Material durch Spinnen zu Fadengarn verarbeiten kann."*

34 Grömer 2010, p.73; Schlabow 1974, p.173 → K.Schlabow 1974: *Vor- und frühchristliche Textilfunde aus den nördlichen Niederlanden*, *Paleohistoria* XVI, 1974, p.169-221

35 Grömer 2010, p.74



*image 5.012: (right) Sketch of scissors, Latène-Period<sup>36</sup>*

*image 5.013: (left) Sketch of photo depicting scissors shown in stone that were used for shearing sheep. Gibraltar, Roman Iron Age. Avezano, Museo Civico<sup>37</sup>*

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36 Grömer 2010, p.74, abb.24

37 Hägermann / Schneider 1997, p.239



*image 5.014: Yörük shearing scissors, 2010.*

Shown by the images and sketches above, it can be seen that there have been no major changes in the design of shearing scissors over the centuries.

Today, in Western Europe, sheep get mainly sheared with electric clippers. In the year 2005, my husband and I obtained our first two sheep. Starting with a small flock, we were not able to persuade any professional shearer to come to our farm to shear the animals for us. Even offering more money did not help, so we were forced to shear the animals ourselves. Being curious, we bought electric clippers and hand-scissors. The hand-scissors were of the exactly same design as the Yörük scissors. Being rather unfit amateurs, we soon found that we did the job much quicker with the light hand-scissors than with the heavy electric clippers. One year later, when our flock grew to 4 animals, still no shearer was willing to come to us for such a small job. Back then, I got to know a Mongolian woman who immigrated to Austria 10 years ago and whose previous job in Mongolia was shearing sheep. She told me how she had sheared 200 animals a day when the season came around, all with hand-scissors. I asked her to help us out on the farm as we, ourselves, were still not good at shearing. She warned me that she would take quite some time for the job as she was out of practice for years. Despite her self-doubts, she actually needed only 4 minutes per animal. She explained to me that 2 minutes was her standard time back in Mongolia.

Now, as our flock has grown considerably, we are able to invite professional shearers to come with their electrical equipment, and each of them needs 2 minutes per animal.

The Mongolian woman had told me that hand-scissors and electric scissors are equal in accomplishing the job in a certain time. She was quite right, as I discovered years later.

Regarding goats, I had learned from goat breeders in Austria and Turkey that their shearing (or rather, cutting) is better done with the classical shearing hand-scissors and not with any electrical device so far invented. They have different reasons for this. In Austria, goat breeders are not interested in shearing the animals down to their skin, as they have no need for the hair and it would leave the animals unprotected from harmful sun-rays or sudden low temperatures due to weather changes.

In Turkey, breeders claim that shearing with hand-scissors helps achieve a more even cut of the hair while electrical devices easily shred it into tiny pieces.

Observing the cutting and shearing practice of goats and sheep, I see an important point there. The nature of goat hair is very different from that of sheep. The sheep's wool is curly, standing up vertically from skin and embedded in its own downy character. When being sheared electrically, it is easy to catch only the hair roots.

Goats, however, have heavy straight kemp hair resting on the downy undercoat, pressing the soft hairs down. Electrical shearing may not only catch hair roots but also hair ends. With the hand-scissors, the shearer is able to grab a bundle of hair with the left hand, lift it, and cut it off with the scissors in the right hand without harming the hair ends.



*image 5.015: Electrical shearing of sheep in Austria, 2012*



*image 5.016: Shearing of goats by hand in Turkey, 2007.*

Altogether, excluding small variations, I estimate that the principle design of hand shearing scissors, which is also used by the Yörük, has not changed for at least 5000 years. Comparing them with the performance of modern electrical tools, only tiny advantages and disadvantages can be found. Therefore, there is the proposition that hand shearing-scissors are a good example of an early invented tool that reached fairly high optimization right from the beginning.

In the field research, the Çetinkaya family showed how the hair of goats was cut and collected into sacks. They told that these sacks were stored inside the black tent at the back next to the saddle bags, çuval bags and clothes. The women of the household would occasionally take the bags of wool and spin a fine thread, step by step. In the following chapter, it will be explained how this is done.

## Chapter 5.2.2 Spinning

In chapter 4.2.4, the history of spinning gave a short glimpse of the use of drop spindles, which dates back to the Egyptian epoch. In spite of its great age, the drop spindle can still be found all over the world today. In the documentary movie based on the field research there is a sequence about spinning thanks to the friendly demonstration from the Durabay family. Starting there, pictures taken from the movie explain how the spinning is done:



*image 5.017: Ayşe Durabay demonstrates the spinning. The roving is wound around the left arm, being slightly twisted into a thick string. With the right hand she picks strands of hair slowly out of the left hand. These strands are released and twisted into a fine thread due to the rotation of the drop spindle. With thumb and forefinger of the right hand, the strands are kept pressed together while being twisted.*



*image 5.018: The thread runs along the ring finger and little finger into its vertical position. Occasionally, the middle finger helps by replacing the fore finger while the spinner tries to work the hand gently forward to the roving in the left hand.*



*image 5.019: After three or four sequences of picking strands of roving, the spindle needs another twitch. The right hand runs down to the spindle, grabbing it at its arms and giving it another twist. Then, the hand runs back to its previous position keeping on picking the hair.*



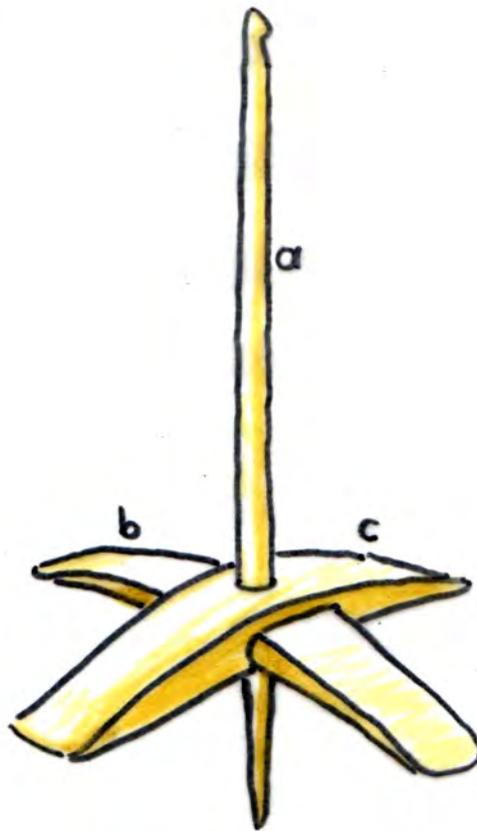
*image 5.020: When the spindle is about to reach the floor, the spinning process has to be stopped and the thread wound around the arms of the spindle. Then spinning can be continued again. From a distance, the spinning process appears to be a slight movement of hands away from each other and together again with a maximum gap of about 10 cm.*



*image 5.021: Nine Ayşe Şimşek shows how the thread needs to be spun into a yarn in another working step with the help of the drop spindle. The twisted bundle of roving for producing the thread can be seen clearly in her left hand.*

This particular type of drop spindle is a common tool in Turkey, and it has caught the attention of many scholars. Nutz did a survey on drop spindles worldwide, distinguishing the Turkish drop spindle by its characteristics:

*With the type of spindle called Turkish spindle (kirmen) the whorl is not made of one piece, but of arms. The cop is not wound above (or below) the whorl but is built by wrapping the yarn crosswise around it.*<sup>38</sup>



*image 5.022: Sketch of Image by Eröz<sup>39</sup> Eröz depicts the single parts of the kirmen, naming their Turkish terms. a) Ok b) Kancığı or kanat c) Erkeği*

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38 [http://www.uibk.ac.at/urgeschichte/projekte\\_forschung/abt/spindeltypologie/-turkey.html](http://www.uibk.ac.at/urgeschichte/projekte_forschung/abt/spindeltypologie/-turkey.html), 27<sup>th</sup> Oct 2012; *A short spindle typology, Türkei / Turkey*, Nutz Beatrix, 2012, Institute for Archaeology, University of Innsbruck

39 Eröz 1991, p.176

As shown in the sketch, the spindle does not offer a proper hook to fix the freshly spun thread at the top end of the stick (*ok*), but only a carving. A loop of the thread is twitched under its own tension, helping to fix the string there without needing a hook.

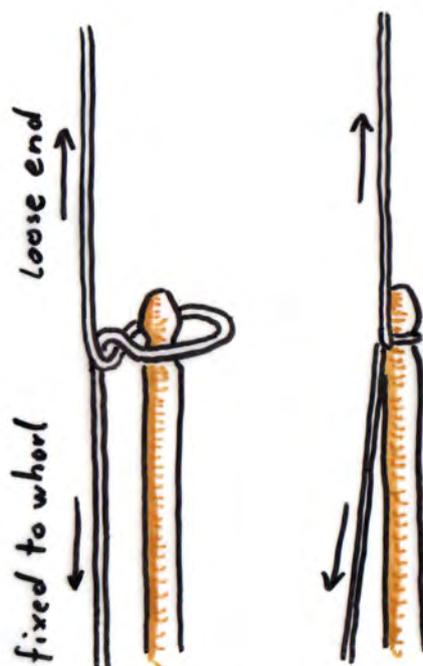


image 5.023: Loop of thread at the top end of the spindle

Eröz describes in detail how the *kirmen* is used traditionally. He explains that the spinning is done by men and women, and that both sexes bind the roving around their left hand, while the thumb and forefinger of their right hand pick the strands of hair out. He also explains how the gap between the left and the right hand can open up to 70-80 cm.<sup>40</sup> Böhmer shows a photograph of a Karakoyunlu woman spinning sheep's wool that way.<sup>41</sup> There is the supposition that a gap of 70-80 cm between roving and twisted thread is possible with sheep wool as it tends to stick together more intensely due to its curly nature. It would not be so easy with goat's kemp hair, which is quite straight and slippery and does not interconnect so strongly.

Remaining briefly on the gender issue, Ayşe Durabay and Nine Ayşe Şimşek told me that Dede Nasuh Şimşek, the oldest man of the four Karatekeli families, can spin with

40 Eröz 1991, p.176

41 Böhmer 2004, p.118

the drop spindle in the same swift way as they do. They announced this with a certain pride that made understood that on one hand it was special for the old man, and on the other hand he bears an honourable skill in the eyes of his people. Here, the information given by Eröz can be supported that it is not too common for men to know how to spin.

Another source sheds light on the issue, particularly photographs done by Böhmer showing a man of the Karakoyunlu Aşiret<sup>42</sup> and a man of the Saçıklaralı Aşiret<sup>43</sup>, both spinning with a drop spindle in front of their tents.

Landreau documents the use of the kirmen among the Yörük as an integral part of preparing the yarn for kilim weaving:

*Naile and Anita spinning with drop spindles with removable whorls. Unlike Kurds, Yörük do not use spindles with fixed, round spindle whorls. Spinning is started by twirling the spindle with the hands and allowing it to hang. Note the roving wrapped around the arm.* <sup>44</sup>

Landreau did not only observe the Yörük spinning and weaving techniques, she also attended several weeks of apprenticeship among them to learn the craft as thoroughly as possible. Her experiences explain why and how the drop spindle has become an optimal tool in the everyday life of the Yörük:

*Spinning is incorporated into all phases of daily life. Wherever we went visiting we carried our spinning, and span as we socialized; after meals we sat around and span; during breaks from chores we span; even when going for walks, we span as we walked.* <sup>45</sup>

Johansen also describes the characteristic winding of the roving around one hand and the social integration of spinning in all phases of life.<sup>46</sup>

On that part, it is worth mentioning that, surprisingly, there are not many remarks on the preparation of raw goat hair for spinning in the Yörük tradition, except for a short report by Böhmer which addresses the beating, combing and carding:

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42 Böhmer 2004, p.96

43 Böhmer 2004, p.122

44 Landreau 1983, p.84, description of an image

45 Landreau 1983, p.84

46 Johansen 1994, p.28

*For weaving, yarn is needed. Yarn derives from spinning. To make the spinning simple and to achieve an evenly spun yarn, a combing process often precedes the spinning. The necessary tool for that is the combing board. The shorn sheep's wool or the shorn goat's hair gets drawn by hand through a system of upright sharp iron nails on a wooden board several times. By this, the hair fibres sort themselves into a parallel form. Skilled women manage just by hand to form a sort of sausage out of the loose bundle of wool, within which the fibres lay mostly parallel to each other.*<sup>47</sup>

I asked the women of the Şimşek and Şurgun family whether they prepared the goat hair in any way before they started spinning. They said they do not, explaining that they simply pick the raw wool out of the sack. The roving is quickly developed by pulling a bundle of hair out of the sack, twisting it lightly and winding it softly around the hand. There, similarities to the “sausage” described by Böhmer can be inferred.

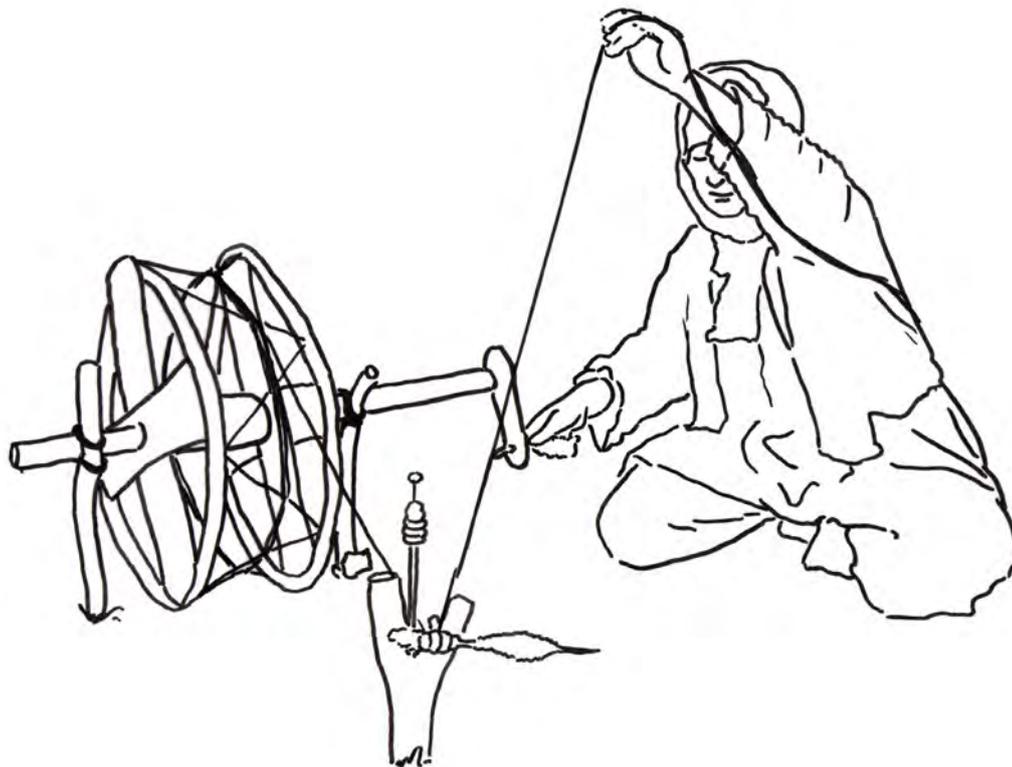
In chapter 5.2.4, it is described how the old tents of the Yörük are made of yarn with remarkably high quality. It shows clearly how particularly long hair strands were chosen to produce it, hairs that are far longer and better in quality than the weavers' villages are able to offer. It may be that the goat's hair is more selectively sorted for quality by the women of the household when they plan to use the hair for themselves. By knowing which goat provides which quality of hair, and by picking the loose hair from the floor, hair strands can be collected in such a way that they do not need any further preparation for the spinning. This is quite contrary to the sheep's wool which sticks together with all its different hair types within a large fleece obtained by the shearing process. Therefore, a sheep's fleece may need beating or carding, while the loose hair strands of a goat can easily be aligned by picking them properly by hand.

As already depicted in chapter 4.2.4. image 4.071, a spinning wheel (*çark*) is used by the Yörük, as well. It is unclear whether it was incorporated in nomadic life or adopted only later when most Yörük families had settled. Both are possible as the *çark* can be constructed of light materials and easily be dismantled for transportation. Landreau points out how it was used for plying warp yarns and winding bobbins.<sup>48</sup> Eröz men-

<sup>47</sup> Böhmer 2004, p.187; quote: *”Für Gewebe sind Garne nötig. Garne entstehen durch Spinnen. Um das Verspinnen zu vereinfachen und gleichmäßig gesponnenes Garn zu bekommen, ist vor dem Spinnen oft ein Kämmprozess eingeschaltet. Das Gerät dazu ist ein Kämbrett. Die geschorene Schafswolle oder das geschorene Ziegenhaar wird von Hand mehrfach durch ein System von auf dem Brett aufrecht stehenden spitzen Nägeln gezogen. Dabei ordnen sich die Fasern parallel. Geschickten Frauen gelingt es auch ohne Kämbrett – allein von Hand – aus einem losen Wollbündel eine Art Wurst zu formen, in der die Fasern schon weitgehend parallel liegen.”*; see as well picture in Böhmer 2004, p.188

<sup>48</sup> Landreau 1983, p.85, description of an image

tions the *çark* to be a traditional part of Anatolian spinning work, also indicating that it belongs to the Yörük tradition. Zimmermann and Böhmer present photographs showing a traditional *çark* for twisting two threads into a yarn or for spinning threads directly out of the roving.<sup>49</sup>



*image 5.024: sketch of image: Traditional spinning wheel (çak) used for plying warp yarns and for winding bobbins. Here, a bobbin is being wound from a çak that has been made from a bicycle tire.<sup>50</sup>*

Returning to the drop spindle, which was the main tool used for preparing the yarn as demonstrated by the women of the Karatekeli families, another technical detail should not be overlooked. Comparing the various drop spindles found around the world, there are different designs of whorls (arms, discs, hemispheres, etc. ...), different materials for the whorls (wood, bone, stone, clay, iron, etc. ....), and different layouts (whorl on

49 Zimmermann 1994, p.122 → image description regarding a photograph by Ulla Johansen. It is unclear, whether the author of the quoted text is Zimmermann or Johansen.

Böhmer 2004, p.188

50 Landreau 1983, p.85, description of an image

top, whorl below, with hook, without hook, etc. ...), and a lot can be linked to the cultural and infrastructural surroundings. Grömer refers to a study where a connection between the weight of the whorl and the design of the thread is drawn<sup>51</sup>. Although it is difficult to outline a relative connection between the thickness of a thread and the weight of the whorl<sup>52</sup> because other influencing factors, such as the design of the whorl defining the rotation speed or the choice of hair material (down hair, kemp hair, short or long lengths of hair, etc. ....), it is quite clear that the design of the spindle is bound to the raw hair material and the desired characteristics of the resulting thread.

The Yörük drop spindle, with its arms, is a well adapted tool for spinning the black goat hair thread and yarn for the black tent. Its weight, proportions, construction design and material are a mirror of its social, cultural and technical use. The light weight and easy to disassemble construction reflects the necessity of mobility and easy storage. Weight and proportions are important factors for the quality of the thread laying out the basis for the optimized yarn of the tent. The choice of material helps provide the desired weight and constructional features of the tool. The construction itself again indicates the importance of mobility, transportation and storage, along with the necessary diameter for rotation speed.

### Chapter 5.2.3 Weaving

Yörük weaving was done on two different main types of loom: The mobile horizontal loom and the vertical loom which is constructed for mobility but also bears more weight and cumbersome parts. In literature, the mobile horizontal loom is assumed to be the predecessor of other loom types found in nomadic lifestyles, but the vertical loom is more strongly linked to the Yörük tradition. This means that horizontal looms were probably used by the Yörük in ancient times, with the vertical looms being more common in recent history and therefore assigned as an integral part of their tradition. As already mentioned in chapter 4.2.5, it is difficult to establish which loom type came first. Nonetheless, in accordance with today's assumptions, I want to start chronologically with the mobile horizontal loom and then switch to the vertical loom:

Broudy presents a photograph of a Bedouin ground loom in Samu'a (Southern Judean Hills) and claims that the modern Middle Eastern ground loom is a direct descendant of the Middle Kingdom Egyptian prototype.<sup>53</sup>

51 Grömer 2010, p.91

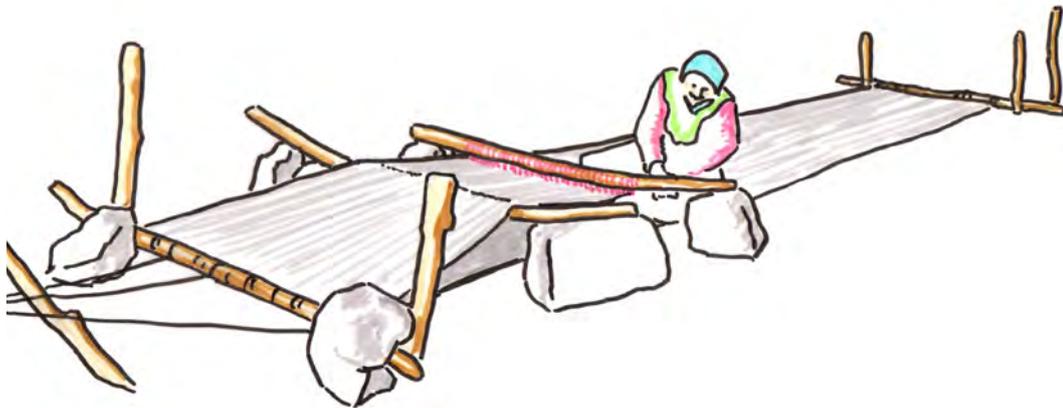
52 Grömer 2010, p.92

53 Broudy 1979, p.41

In chapter 3.2, image 3.050, a photograph by Creyaufmüller with a Mauritanian flat loom in Adrar (1999) shows a wonderful example of the mobile horizontal type. It is constructed only of round sticks and strings, and is stretched and fixed to the ground with wooden pegs. When the family moves on, the loom can be rolled up along the warp around the sticks into an easy-to-carry bundle.

During the field research, no example of the horizontal ground loom in Western Turkey could be found. Therefore, only literature sources help to depict how Yörük horizontal looms are built up. Several subtypes of the horizontal loom were used.

The following sketch shows a ground loom of the most basic design, being mainly constructed of round beams and strings, just like the Mauritanian example by Creyaufmüller:



*image 5.025: Sketch of a photograph showing the weaving of tent cloth on a horizontal loom by a Yörük woman in the Bolkar mountains (1993)<sup>54</sup>*

Introducing another subtype of horizontal loom, a picture by Böhmer illustrates a horizontal loom with a heavy reed beater plank and heddle rod holding up a rectangular construction set up on four strong poles.<sup>55</sup> It is unclear whether this loom works with a pit and treadles, as mentioned in the following example by Drey and Warth.

They describe in detail another loom, with a similar reed beater plank, used by the Yörük in the province of İçel (1988) (translated from German into English):

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54 Böhmer 2004, p.190

55 Böhmer 2004, p.185; loom at the winter camp of the *Karakoyunlu* (1986)

[...] The Yörük woman sits on the ground in front of her flat loom, with her legs resting in a pit. In front of her is the cloth roll, a wooden cylinder on which the ready-made cloth is rolled up. Prior to that, the heavy shelf [comment by the author: reed beater], on which the weft thread can be beaten, rests on two crutches. Even prior to that, the heddles (white) are installed, on which each second warp thread (red and blue) is held up. Both heddles are lifted and lowered over a linkage by two treadles in the pit, forming the so called “loom frame”. [...] <sup>56</sup>

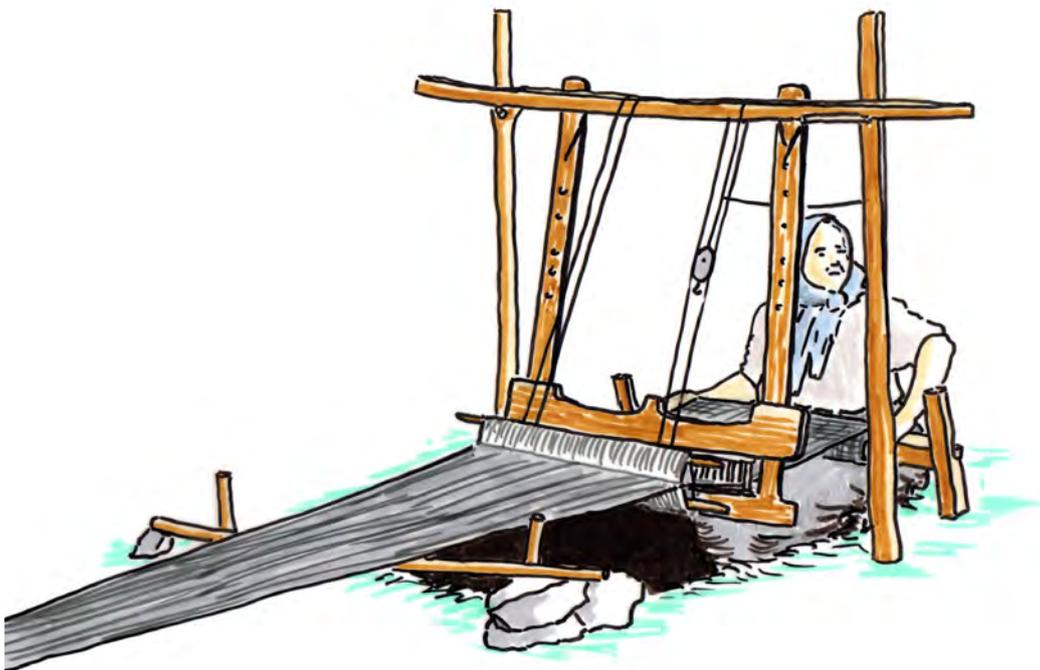


image 5.026: sketch of photograph showing a horizontal loom in the province of İçel (Mersin) 1988<sup>57</sup>

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56 Drey / Warth 1994, p.141 → image description regarding a photography by Mersin. Quote: “[...] Die Yörük-Frau sitzt auf dem Boden vor ihrem Flachwebstuhl mit den Beinen in einer Erdgrube. Vor ihr befindet sich der Warenbaum, eine Holzwalze auf der das fertige Gewebe aufgewickelt wird. Davor hängt in zwei Astgabeln die schwere Lade, mit der sie die querlaufenden Schußfäden anschlagen kann, Noch weiter vorne sind die Schäfte (weiß) angebracht, in denen jeder zweite der Kettfäden (rot und blau) aufgenommen ist. Die beiden Schäfte werden durch zwei Fußpedale in der Grube über einen oben angebrachten Seilzug gehoben und gesenkt, wodurch das sogenannte Fach entsteht. Provinz İçel (Mersin) 1988”

57 Drey / Warth 1994, p.137

Compared with the horizontal looms, it is far easier to find illustrations and photographs of vertical looms used by the Yörük. Böhmer explains how the common type of vertical loom is constructed:

*Vertical looms have two stable side-poles, which are dug into the ground inside or in front of the tent, but some stand on their own foundation. These poles bear notches near the upper end and round holes near the ground to support the two wooden beams [...]. On the upper beam, also called "warping beam", the warping is rolled up. With a simple lever, the warping beam can be put into position for the necessary tension of the warping. The ready-made weft is rolled up on the lower beam. Therefore, it is called the cloth roll [...]. Various devices facilitate the weaving work. The composition of the loom frame for the fast insertion of the weft thread is the most important working improvement. The heddle rod and shed rod are responsible for this. A shed for inserting the weft threads emerges when each second warp thread lies in front and the others behind. This shed formation is taken over by the heddle rod which is connected to each second warp thread by loops. The shed rod divides neighbouring warp threads and supports the shedding.*<sup>58</sup>

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58 Böhmer 2004, p.189: quote: "Vertikale Webstühle haben zwei stabile Seitenpfosten, die meistens im Zelt oder vor dem Zelt in den Boden eingelassen sind, manche stehen aber auch auf eigenen Füßen. Die Seitenpfosten haben oben Einkerbungen und unten runde Öffnungen zur Aufnahme der beiden runden Holzbalken, die als Bäume bezeichnet werden. Auf den oberen Baum, den Kettbaum, ist die Kette aufgewickelt. Mit einem einfachen Hebel kann am Kettbaum durch Drehung die zum Weben nötige Spannung auf die Kette gebracht werden. Das fertige Gewebe nimmt der untere Baum durch Umwickeln auf. Er heißt deshalb Warenbaum oder zeugbaum. Verschiedene Einrichtungen erleichtern das Weben. Die Herstellung des Faches zum schnelle Einführen von Schußfäden ist die wesentlichste Arbeitserleichterung. Dazu dienen Trennstab und Litzenstab. Ein Fach zum Durchführen des Schußfadens entsteht dann, wenn jeder zweite Kettfaden vorne liegt und die anderen hinten. Diese fachbildung übernimmt der Litzenstab, der mit jedem zweiten Kettfaden durch Schlaufen verbunden ist. Der trennstab trennt benachbarte Kettfäden und unterstützt die Fachbildung."



*image 5.027: Sketch of photograph showing a vertical loom.<sup>59</sup>*

In the countless photographs and illustrations of vertical looms used by the Yörük, it is difficult to find clues as to whether they were used for weaving tent panels apart from kilims as well. The far greater interest in kilim designs and weaves than in black tent construction may influence the number of photographs available. However, a picture

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59 Böhmer 2004, p.189

by Ulla Johansen, showing a woman of the Karaevli Aşiret weaving a black tent cloth in the province Adana in the year 1957, answers the question.<sup>60</sup> Until now, there is no distinction between the kilim and the black cloth manual weaving regarding the choice of loom construction. Technically, this may be because of the similarity in weave structure and material choice. As the weavers' villages use the treadle loom, vertical three-bar loom and the automatic loom for both cloth types, and as there is proof that the Yörük made them on the flat and the vertical loom, it is indicated that there has been no distinction so far. Therefore, reports of traditional kilim weaving can be counted as valid sources when describing traditional weaving of black tent cloth technically.

Yörük women preferred weaving inside or in front of the Yörük tent. Weaving was done when new textiles were needed by members of the family and when the daily chores allowed some extra time for this additional task. In most cases, the daily schedule was lighter during summer time when the family had built up camp at the yayla. This was an ideal time for weaving, though it was always interrupted when temporary troubles with the flocks arose.<sup>61</sup>

In addition to Johansen, Böhmer describes the traditional weaving of tent cloths as well, pointing out that the women made a clear distinction between wall and roof panels. The wall cloths had a rather loose weave while the tent panels were put under considerable tension.<sup>62</sup> As already mentioned in chapter 5.1.2, a similar information from the Yörük in the Belevi region is gathered, and in the weavers' villages near Bozdoğan, there is also a difference between panels suitable for roofs and those for walls.<sup>63</sup>

Landreau documented in detail how a new warping is installed into a vertical loom, showing a process that differs profoundly from the three-beam system described in chapter 4.2.5. as the warping must be set up apart from the loom:

*We hammered a stake into the ground and then walked off the length of the warp (which was to be the length of the piece plus 1/3 to allow for waste on the loom) and hammered another stake into place. At the initial stake an old rug was laid down, one of the oldest women of the village took her seat. It was tradition and/or good luck to have an elderly weaver present for the warping and this was never violated. Then Fehtiye sat at the other*

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60 Zimmermann 1994, p.122

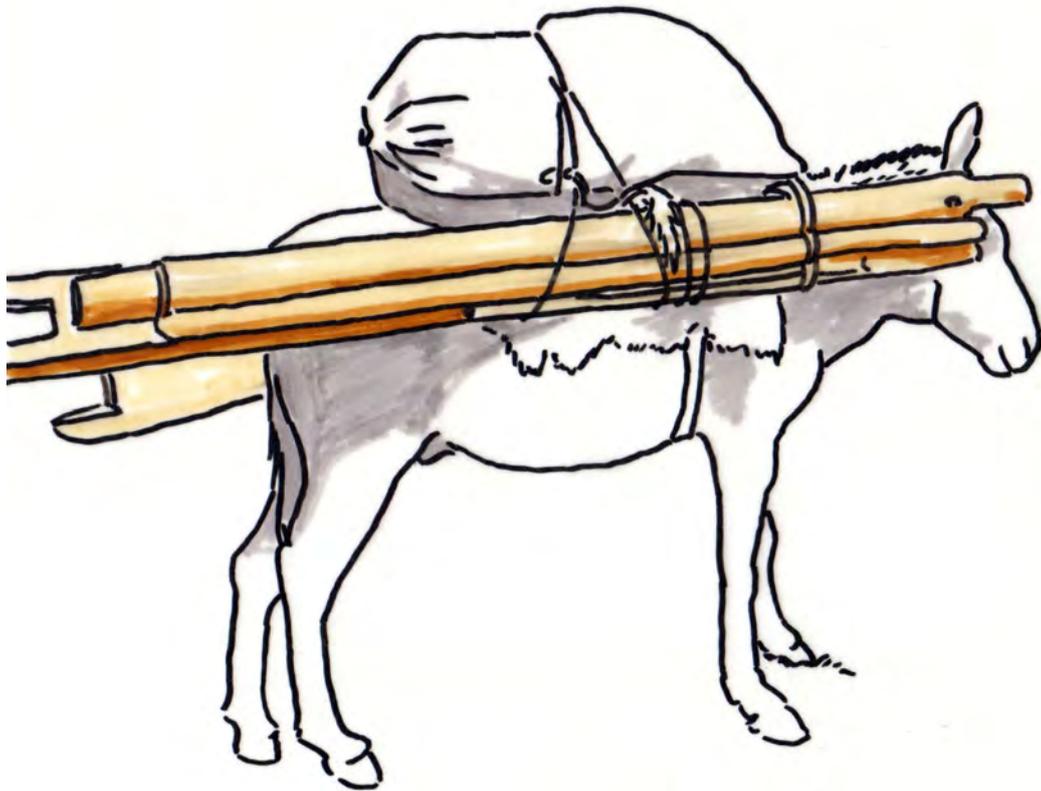
61 Drey / Warth 1994, p.133

62 Böhmer 2004, p.190

63 As already mentioned, the wall panels consist of a yarn of lower quality (short kemp hair) and are woven in a quicker and thus more sloppy way. Therefore, wall panels are a bit cheaper compared to roof panels.

*stake and the rest of us took turns walking the warp back and forth. After this was done the warp was lifted from the stakes and a bamboo rod put through one end. This was then placed in the upper loom beam and the warped threads were rolled. We then carried the rolled warp beam to the loom and put it into place. The warp was lowered and tied to the cloth beam and we stopped for the day.*<sup>64</sup>

Regarding the mobility factor, it is questionable whether the vertical loom, with its rather large dimensions and heavy construction parts, still fits into the lifestyle of a nomadic society. However, Böhmer shows in a photograph how easy it was to dismantle and transport:



*image 5.028: sketch of photograph showing a dismantled vertical loom on a donkey.*<sup>65</sup>

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64 Landreau 1983, p.85-87

65 Böhmer 2004, p.102

Finally, a few words need to be put of how the belts of the tent were done. They do show minor widths of about 30 cm up to 50 cm. These widths are too large for tablet weaving as most wooden tablets range from 6 cm up to 20 cm. Larger designs would break. In the weavers' village these belts were produced on the same looms which were designed for the broad cloths. The literature as well does not show any remarks that would support a distinction in belt and cloth production.

### Chapter 5.2.4 Quality Features of Black Goat Hair Panels

Although the production process for old Yörük tents has been discussed in detail, it does not give an insight into the quality and attributes of the old textile panels. Here, only the textile attributes of the Karatekeli tents and of the acquired Torbalı tent are available. As the wall cloths are a mixed collection of old black tent panels, rugs, kilims and blankets, the focus is rather put on the quality of the roof panels which are of greater importance for the function of the tent.

All old tent roof textiles show a remarkably high quality of black goat hair yarn. It undoubtedly consists of well sorted long goat hairs and is far superior to the modern hand-made yarn from the weavers' villages. The old tents of the Karatekeli were still fully hand-woven by the women of the household and the Torbalı tent shows a particular textile quality that is different from any other experienced. Therefore, it can be assumed that these old tents use textiles that are not deriving from the weavers' villages. Regarding the differing character of the twisted yarn of each tent, individual differences in spinning practice can be propably found. All yarns are double twisted as described in chapter 5.2.2. It is unknown whether only drop spindles or also spinning wheels (çak) were used. The following list details the different yarn attributes found in each camp of the Karatekeli families.

#### **Çetinkaya family; large sized tent:**

Yarn thickness: 0,35 cm, average thickness;

Character of twist<sup>66</sup>: far stretched, deriving from quick spinning<sup>67</sup>;

Remarks: tent tore apart after 10 years of use; This may be due to its exceptionally large size;

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66 The character of twist is just an estimated information without exact numbers there. I was not able to count the rotations of thread within the yarn on site. Nonetheless, I wanted to provide an overall information on that account here.

67 Quick spinning: Meaning that the roving is picked in a quick pace while the drop spindle rotates at its common speed. This produces less twists per 1 cm yarn.

**Durabay family; medium sized tents:**

Yarn thickness: 0,25 cm, narrow yarn;

Character of twist: far stretched, deriving from quick spinning;

Remarks: Tents tore apart after 20 years of use;

**Şurgun family; medium sized tents:**

Yarn thickness: 0,35 cm, average thickness;

Character of twist: average twist, deriving from normal spinning<sup>68</sup>;

Remarks: Tents still serviceable after 30 years of use;

**Şimşek family; small sized tent:**

Yarn thickness: 0,4 cm, thick yarn;

Character of twist: average twist, deriving from normal spinning;

Remarks: Tent lasted for 30 years without tearing; was exchanged for a new tent in 2010 due to sudden wealth of the family;

**Torbalı tent; medium sized tent:**

Yarn thickness: 0,45 cm, thick yarn;

Character of twist: dense twist, deriving from slow spinning<sup>69</sup>;

Remarks: is in remarkably good shape. May be 20-30 years or older.

The list above may indicate that tents with yarns that feature a higher thickness and a denser twist (normal or slow spinning) prove to be more sustainable, and reach a greater age. However, the maintenance and way of handling each tent is a major factor. Bad handling of a tent may severely shorten its usable life. Therefore, I am careful in making assumptions on that account for I know that the four families treat their tents in considerably different ways. As I have seen only a short glimpse of their daily chores regarding their tents, I cannot judge who treats the tents best across the whole year. Nonetheless, based on my personal experiences with the Torbalı tent, I can say that, in comparison with the new tents from the field research 2007, it is far superior in yarn and textile quality, and shows a remarkable resistance against outside influences like weather or tension impacts. I will return to this aspect in detail further on.

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68 Normal spinning: Meaning that the roving is picked in a common pace while the drop spindle rotates at its common speed.

69 Slow spinning: Meaning that the roving is picked in a slow pace while the drop spindle rotates at its common speed. This produces more twists per 1 cm yarn.

Leaving the yarn aside, it is similarly interesting to look at the character of the weave. Firstly, it is important to establish which kinds of loom were used in the old days. In the years 2001 until 2008 I continuously interviewed people in the region to ask whether horizontal looms were used in the past, and whether there is still one to be seen today. They told me that they only wove on vertical looms in this region, and know of no other types. Unfortunately, no contemporary vertical loom was available at a nomads camp. According to the verbal description, the Yörük looms were similar to those depicted in chapter 5.2.3. The following list details the attributes of the weave of each tent:

**Çetinkaya family; large sized tent:**

Warp threads per 10 cm: 25; Density threads-pores ratio<sup>70</sup>: 0,88

Weft threads per 10 cm: 17; Density threads-pores ratio: 0,60

Weaving tension character<sup>71</sup>: average;

**Durabay family; medium sized tents:**

Warp threads per 10 cm: 36; Density threads-pores ratio: 0,90

Weft threads per 10 cm: 22; Density threads-pores ratio: 0,55

Weaving tension character: rather loose;

**Şurgun family; medium sized tents:**

Warp threads per 10 cm: 27; Density threads-pores ratio: 0,95

Weft threads per 10 cm: 19; Density threads-pores ratio: 0,63

Weaving tension character: higher tension;

**Şimşek family; small sized tent:**

Warp threads per 10 cm: 23; Density threads-pores ratio: 0,92

Weft threads per 10 cm: 17; Density threads-pores ratio: 0,68

Weaving tension character: higher tension;

**Torbalı tent; medium sized tent:**

Warp threads per 10 cm: 20; Density threads-pores ratio: 0,90

Weft threads per 10 cm: 14; Density threads-pores ratio: 0,63

Weaving tension character: average;

<sup>70</sup> The density based on the threads-pores ratio derives from the following calculation: thickness of yarn multiplied with number of threads per 10 cm divided through 10 cm.

<sup>71</sup> The weaving tension character derives from the personal impressions when touching the fabric. It only offers an idea of relations.

The widely differing number of threads per 10 cm and the variations in weaving tension indicate how strongly the individual household's way of weaving is anchored within the tent. It renders each tent unique, representing the family's own special design. As already mentioned, it is difficult to draw conclusions on sustainability based on the weave's character as the tents are maintained and handled very differently. Nonetheless, I had the impression that the designs of the Şimşek and the Şurgun family were the most durable ones. In particular, when I touched the fabric, I immediately got the impression of a very strong and durable textile. Contrary to this, the textile of the Durabay family appeared more fragile and flexible to me. When I compare the Torbalı tent with the new tents of the field research 2007 the differences in quality are quite obvious:

<b>Textile attributes</b>	<b>Torbalı tent</b>	<b>New tents 2007</b>
Hair quality of the yarn:	Particularly long goat hair	Mix of long and short goat hair
Yarn thickness:	0,45 cm	0,35 cm
Character of yarn twist:	dense twist, deriving from slow spinning;	far stretched, deriving from quick spinning;
Warp threads per 10 cm / Density threads-pores ratio	20 / 0,90	24 / 0,84
Weft threads per 10 cm / Density threads-pores ratio	14 / 0,63	16 / 0,56
Weaving tension character:	average	rather loose
Remarks:	Is in remarkably good shape. May be 20-30 years or older.	Starts to tear on heavily used spots. 5 years old.

In addition to the attributes described above, I need to add some information from the weavers of Olukbaşı and Dutağac, which seems to be of considerable importance: They emphasised that the weave needs to be homogeneously woven based on firm weaving tension. An inhomogeneous weave or a weave under too much or too few tension would tear more easily.

Looking at the table above, and reconciling the collected impressions listed in this chapter, the conclusion is close that a tent textile of high quality tends to derive from:

- a) particularly long goat hair
- b) thick yarn
- c) dense twisted yarn

- d) high density of warp/weft threads per 10 cm
- e) woven in firm tension
- f) homogeneous weave

The statement about higher quality by “a) particularly long goat hair” can be considered correct. The statements about “b) thick yarn” and “c) dense twisted yarn” need to be considered with care as the thickness alone does not provide any clues about the quality of friction between the single hairs of the thread. Similarly, a dense twisting of the yarn is not a reliable clue for a high tension tolerance, as the hairs may have encountered structural damage by the dense twist during production (this goes along with the warnings given by the weavers of Olukbaşı and Dutağac when they discussed technical details about yarn quality).

“d) high density of warp/weft threads per 10 cm” can be considered to be true regarding tension tolerance, as there are more threads available to withstand the load of tension per given size. Here, it is important to note that a higher density of threads may have a negative impact on the thermal qualities of the tent. The question of rain resistance needs to be considered here as well. This would be an issue for further examination.

“e) woven in firm tension” also needs further investigation in order to verify the statement. From practical experience, a higher tension within the textile does indeed improve the tent’s tension tolerance, but according to the weaver’s warning, the weaving tension should not be overdone as it may damage the yarn at its core<sup>72</sup>.

“f) homogeneous weave” is a logical technical attribute as it can be described by the ability of the textile to spread the tension load evenly on each single yarn within the plane. An inhomogeneous woven textile (meaning that the threads differ from each other in tension) would bear the majority of load on the denser threads in the first instance, and make more use of the looser threads only when the load increases. Here, the denser threads may wear off faster.

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72 see chapter 4.2.5;

## Chapter 6

# Defining Attribute Tables: Tent Types and Production

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### Chapter 6.1 Tent Types

#### Chapter 6.1.1 Definition of New Tents 2007

Chapter 6 provides the overview data for the discussion of the scientific question posed in this doctoral thesis. Primarily, it is the goal to depict the adaption in design in the course of changes in production. For approaching this, it is necessary to outline the architectural differences between the new tents of the field research 2007 and the old ones. Then, the production processes and features need to be listed that preceded to the construction of new designs. The same goes for the old designs. In a third analysing step, the new and old production steps will be compared with each other, providing an overview in that regard as well. The therefore resulting lists and tables form the basis for the scientific discussion in chapter 7. As the sources for old tent attributes provide a multifaceted data, it is important to set priorities in the choice of attributes. Therefore, based on chapter 6.1.2, a summarized definition table for the old tent design will be set up in chapter 6.1.3 for being a “standard” example that helps establishing the comparison tables in chapter 7 and discussing the scientific question in chapter 8.

In order to develop such a “standard” definition table for the old tents, the strategy of forming the definition table for the new tents first, turned out to be most practicable. By this, the choice of top priority attributes for the old tents becomes more transparent and explicable in chapter 6.1.3.

In 2007, two new tents were constructed by the Karatekeli families for the documentary movie. They differ slightly in design. Design variations get depicted in the tables as “alternatives”.

<b>Table 1: 2 New Karatekeli Tents Field Research 2007</b>
Background data: based on field research, latest design (2007), Karatekeli tribe, Region Selçuk-Torbalı
<b>ridge pieces</b>
<u>material</u> : conifer wood
<u>type of workmanship</u> : cut by band-saw; slightly vaulted; angular edges and corners; no decoration; shallow socket (carved), impregnated with mordant;
<b>stay-fasteners</b>
<u>design type</u> : v-shaped with notches type a
<u>material</u> : conifer wood
<u>type of workmanship</u> : cut by band-saw; uncarved; angular edges and corners; impregnated with mordant;
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : connected to ropes made of divided belt ends (long sides); braided ropes made of goat hair yarn (short sides);
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : two-loop-connection
<b>guy-ropes</b>
<u>rope</u> : herbal material
<u>knot</u> : 4 half-hitch knots
<b>stakes and anchoring systems</b>
<u>material</u> : iron bar with loop and loose ring on top
<u>length</u> : 40 cm
<u>diameter</u> : 2 cm
<b>poles</b>
<u>material</u> : broadleaf wood (young poplar trees)
<u>type of workmanship</u> : decorticated; cylindrical narrowed top end with sharp edges;
<u>length</u> : 2,7 m
<u>diameter</u> : 6 - 8 cm
<b>exterior poles</b>
none

<b>wooden pins</b>
<u>material</u> : bush twigs
<u>type of workmanship</u> : decorticated by sharp carving, not decorticated the first 5 cm, sharp tip;
<u>length</u> : appr. 22 cm
<u>diameter</u> : 0,4 - 0,8 cm
<u>setting</u> : installed 80 cm distant to each other
<b>textile attributes roof</b>
<u>yarn quality</u> : mix of long and short goat hair
<u>yarn thickness</u> : 0,35 cm
<u>yarn character of twist</u> : far stretched
<u>warp threads per 10 cm</u> : 24
<u>weft threads per 10 cm</u> : 16
<u>weaving tension characters</u> : rather loose
<u>duration</u> : first signs of material fatigue after 5 years of occasional use
<b>textile attributes walls</b>
<u>material</u> : same material as the roof
<b>design attributes of the roof</b>
<u>stitch</u> : even Yörük stitch
<u>panels</u> : 5 pieces
<u>type of panel end seam</u> : hanging down for appr. 0,2 m, mix of braided cords, hanging loose, not seamedunseated or folded seam;
<u>belts</u> : all 3 belts decorated (2 colours) of the same design, width: 25 cm, machine-made;
<u>alternative</u> : middle belt showing different decoration pattern (3 colours)
<b>design attributes of the walls</b>
<u>stitch</u> : even Yörük stitch
<u>panels</u> : 2 pieces (long and short sides)
<u>type of seam</u> : folded seam
<u>alternative</u> : added with decorated top end band (3 colours), width: 25 cm, machine-made;

## Chapter 6.1.2 Attribute Tables of Old Tents

As there are several sources of information for tent constructions available that are dated back to several decades ago (see in particular chapters 5.1.1 and 5.1.2), historical, cultural and technical differences between these sources will be outlined. The specific features of the tents will be listed. Then, a “standard” old tent type will be chosen (with a number of variations mentioned) which helps gathering an overall image of the old tent types that can be compared to the fairly new tents produced in the field research 2007.

All tents feature 3 poles, 3 ridge pieces, 6-8 stay-fasteners, 8 guy-ropes, a tent roof made of 5 or 7 panels with optional eaves’s band and wall cloths made of 2 panels with optional top band. Tents with more poles, more tent roof panels or other exceptions apart from the specification above are not taken into account due to their larger technical or cultural difference in comparison to the new black tents produced in the field research 2007. The choice of tents depicted in literature is based on the listings in chapter 5.1.2. showing enough tent accessories for making statements.

<b>Overview of tables featuring old tents:</b>		
Table 1: 6 Karatekeli Tents	Field Research	age 20 – 90 years
Table 2: Torbalı Tent	Field Research	age 20 – 60 years
Table 3: Karatekeli Tent	Literature Research	1984
Table 4: Unknown Tribe	Literature Research	1988
Table 5: Unknown Tribe	Literature Research	1988
Table 6: Karaevli Tent	Literature Research	1957
Table 7: Güzelbeyli Tent	Literature Research	1985
Table 8: Kara-Hacılı Tent	Ordered Tent / Literature	1987
Table 9: Karaevli Tent	Ordered Tent / Literature	1957 (1993)
Table 10: Unknown Tribe	Ordered Tent / Field Res.	2005

<b>Table 1: 6 Karatekeli Tents Field Research age 20 – 90 years</b>
background data: based on field research, age 20 – 90 years , Karatekeli tribe, Region Selçuk-Torbalı
Tents of the four Karatekeli families, altogether 6 examples (Çetinkaya: 1 tent, Durabay: 2 tents, Şurgun: 2 tents, Şimşek: 1 tent) - due to their similar character, it is possible to summarize the feature of all old Karatekeli tents in the field research into one table.
<b>ridge pieces</b>
<u>material</u> : broadleaf wood, different grades of sooted surface due to usage;
<u>type of workmanship</u> : decorticated; carved; slightly vaulted; rounded edges; rounded corners; no decoration; deep socket;
<u>alternative</u> : metal ridge pieces
<b>stay-fasteners</b>
<u>design type</u> : v-shaped with notches type a
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : carved; rounded edges;
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : braided or twisted ropes made of goat hair yarn
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : two-loop-connection
<b>guy-ropes</b>
<u>rope</u> : herbal material
<u>knot</u> : 4 half-hitch knots
<u>alternative</u> : metal chains
<b>stakes and anchoring systems</b>
<u>material</u> : iron bars or tubes; length: 1 metre or more; diameter: 2-4 cm;
<u>length</u> : 1 m minimum
<u>diameter</u> : 2 - 4 cm
<u>alternative</u> : stones resting on forked twig;
<b>poles</b>
<u>material</u> : broadleaf wood (e.g. poplar)
<u>type of workmanship</u> : decorticated; carved; conically narrowed or rounded top end;
<u>length</u> : 2,3 - 3,2 m
<u>diameter</u> : 6 - 0 cm

The Yörük Black Tent

<b>exterior poles</b>
<u>design type</u> : forked branch
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : roughly decorticated, uncarved;
<u>length</u> : 1 - 2 m
<u>setting</u> : high poles close to the tent (1,5 m minimum distance); or low poles close to the stakes
<b>wooden pins</b>
<u>material</u> : bush twigs
<u>type of workmanship</u> : decorticated, rounded tip
<u>length</u> : 20 - 25 cm
<u>diameter</u> : 0,4 - 0,8 cm
<u>setting</u> : installed 80 cm distant to each other
<b>textile attributes roof</b>
<u>yarn quality</u> : high quality yarn (long hair)
<u>yarn thickness</u> : 0,25 - 0,4 (narrow - thick)
<u>yarn character of twist</u> : far stretched - average twist
<u>warp threads per 10 cm</u> : 23 - 36
<u>weft threads per 10 cm</u> : 17 - 22
<u>weaving tension characters</u> : rather loose - higher tension
<u>duration</u> : tents tore apart after 10 - 30 years of use, some are still remaining;
<b>textile attributes walls</b>
<u>material</u> : black tent cloth or kilims of mixed sources, remains of older tents;
<u>decoration</u> : none or stripes of 1 - 2 colours
<u>alternatives</u> : modern blankets; reed mats;
<b>design attributes of the roof</b>
<u>stitch</u> : even Yörük stitch
<u>panels</u> : 5 pieces; (tent of Şurgun family is added up with decorated eaves' band);
<u>type of panel end seam</u> : braided cords or hanging loose, not seamed, rarely folded seam;
<u>belts</u> : plain black, width: 30 cm;
<b>design attributes of the walls</b>
<u>stitch</u> : even Yörük stitch
<u>panels</u> : 2 pieces (tent of Şurgun family is added up with decorated top band)
<u>type of seam</u> : roughly seamed ends

<b>Table 2: Torbalı Tent Field Research age 20 – 60 years</b>
background data: based on field research and personal use, age 20 - 60 years, unknown tribe, Region Selçuk-Torbalı
<b>ridge pieces</b>
<u>material</u> : broadleaf wood; slightly sooted surface due to usage;
<u>type of workmanship</u> : carved; slightly vaulted; rounded edges; rounded corners; no decoration; deep socket;
<b>stay-fasteners</b>
<u>design type</u> : v-shaped with notches type a
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : decorticated; carved; rounded edges
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : braided or twisted ropes made of goat hair yarn
<u>alternative</u> : synthetic yarn
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : two-loop-connection
<b>guy-ropes</b>
NA
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : decorticated; carved; conically narrowed or rounded top end;
<u>length</u> : 2,7 - 2,8 m
<u>diameter</u> : 6 - 8 cm
<b>exterior poles</b>
NA
<b>wooden pins</b>
NA

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<b>textile attributes roof</b>
<u>yarn quality</u> : high quality yarn (long hair)
<u>yarn thickness</u> : 0,45 (thick)
<u>yarn character of twist</u> : dense twist
<u>warp threads per 10 cm</u> : 20
<u>weft threads per 10 cm</u> : 14
<u>weaving tension characters</u> : average tension
<u>duration</u> : tent may be 20 - 30 years or older
<b>textile attributes walls</b>
NA
<b>design attributes of the roof</b>
<u>stitch</u> : even Yörük stitch
<u>panels</u> : 5 pieces
<u>type of panel end seam</u> : braided cords
<u>belts</u> : plain black, width: 33 cm;
<b>design attributes of the walls</b>
NA

<b>Table 3: Karatekeli Tent Literature Research 1984</b>
background data: based on literature research, photographed in 1984 by Böhmer 2004 p.112, Karatekeli, Region: South-West Anatolia
<b>ridge pieces</b>
NA
<b>stay-fasteners</b>
<u>design type</u> : strongly v-shaped type c
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : decorticated; carved; rounded;
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : braided or twisted ropes made of goat hair yarn
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : one-loop-connection
<b>guy-ropes</b>
<u>rope</u> : herbal material
<u>knot</u> : 4 half-hitch knots
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
NA
<b>exterior poles</b>
<u>design type</u> : thick straight stems
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : not decorticated
<u>length</u> : appr. 1,5 m
<u>setting</u> : close to the tent (0,5 m distant to walls)
<b>wooden pins</b>
NA
<b>textile attributes roof</b>
NA
<b>textile attributes walls</b>
<u>material</u> : mix of black tent cloth, remains of older tents, fairly old and torn;
<u>alternatives</u> : brown blankets

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<b>design attributes of the roof</b>
<u>stitch</u> : even stitch
<u>panels</u> : 5 pieces
<u>type of panel end seam</u> : hanging down for appr. 0,4 - 0,5 m
<u>belts</u> : plain black
<u>odds</u> : at least one belt is sewn on top of the panels and not underneath
<b>design attributes of the walls</b>
NA

<b>Table 4: Unknown Tribe Literature Research 1988</b>
background data: based on literature research, photographed in 1988 by Böhmer 2004 p. 115, unknown tribe, Region: Fethiye;
<b>ridge pieces</b>
NA
<b>stay-fasteners</b>
<u>design type</u> : strongly v-shaped type c
<u>type of workmanship</u> : decorticated
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : connected to ropes made of divided belt ends (long sides)
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : one-loop-connection
<b>guy-ropes</b>
<u>rope</u> : black goat hair
<u>knot</u> : 3 half-hitch knots
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
NA
<b>exterior poles</b>
NA
<b>wooden pins</b>
NA
<b>textile attributes roof</b>
<u>material</u> : black tent cloth of mixed ages
<b>textile attributes walls</b>
NA
<b>design attributes of the roof</b>
<u>stitch</u> : mix of even stitch and raised seam
<u>panels</u> : 5 pieces, with additional eaves' bands hanging down
<u>belts</u> : plain black
<u>odds</u> : the last panel and the hanging band are slightly narrower than the centre panels and added with a raised seam while the older panels seem to bear an even Yörük stitch

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<b>design attributes of the walls</b>
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NA
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<b>Table 5: Unknown Tribe Literature Research 1988</b>
background data: based on literature research, photographed in 1988 by Böhmer 2004 p. 116, unknown tribe, Region: Fethiye;
<b>ridge pieces</b>
<u>type of workmanship</u> : strongly vaulted
<b>stay-fasteners</b>
<u>design type</u> : cylindrical type b1
<u>type of workmanship</u> : decorticated
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : braided or twisted ropes made of goat hair yarn
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : one-loop-connection
<b>guy-ropes</b>
<u>rope</u> : black goat hair
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
NA
<b>exterior poles</b>
NA
<b>wooden pins</b>
<u>material</u> : thin twigs
<u>type of workmanship</u> : decorticated
<u>setting</u> : installed 40 cm distant to each other
<b>textile attributes roof</b>
NA
<b>textile attributes walls</b>
<u>material</u> : old black tent cloth bleached by the sun
<b>design attributes of the roof</b>
<u>stitch</u> : even stitch
<u>panels</u> : 7 pieces
<u>type of panel end seam</u> : hanging down for appr. 0,2 m with braided cords

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<b>design attributes of the walls</b>
<u>stitch</u> : even stitch
<u>panels</u> : 2 broad pieces; with additional top band
<u>type of seam</u> : folded seam

<b>Table 6: Karaevli Tent Literature Research 1957</b>	
background data: based on literature research, photographed in 1957 by Johansen and published by Kunze 1994 p.31, Karaevli, Region: Adana;	
<b>ridge pieces</b>	
NA	
<b>stay-fasteners</b>	
<u>design type</u> : v-shaped with notches type a	
<u>type of workmanship</u> : decorticated; carved; rounded	
<b>stay-fastener's connection to the tent</b>	
<u>means of fastening</u> : connected to ropes made of divided belt ends (long sides)	
<b>stay-fastener's connection to the guy-rope</b>	
<u>method of fastening</u> : two-loop-connection	
<b>guy-ropes</b>	
<u>rope</u> : herbal material	
<u>knot</u> : 4 half-hitch knots (?)	
<b>stakes and anchoring systems</b>	
NA	
<b>poles</b>	
NA	
<b>exterior poles</b>	
NA	
<b>wooden pins</b>	
<u>material</u> : relatively strong twigs	
<u>type of workmanship</u> : decorticated	
<u>setting</u> : installed 80 cm distant to each other	
<b>textile attributes roof</b>	
NA	
<b>textile attributes walls</b>	
<u>material</u> : same age and character as roof	
<b>design attributes of the roof</b>	
<u>stitch</u> : even stitch	
<u>panels</u> : NA, no additional eaves' band	

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<u>belts</u> : plain black
<b>design attributes of the walls</b>
<u>stitch</u> : even stitch
<u>panels</u> : 2 wall cloths for one long side made of 2 broad panels each, with additional top band
<u>type of seam</u> : folded seam

<b>Table 7: Güzelbeyli Tent Literature Research 1985</b>
background data: based on literature research, photographed in 1985 by Kunze 1994 p.128-129, Güzelbeyli, Region: Aydın;
<b>ridge pieces</b>
NA
<b>stay-fasteners</b>
<u>design type</u> : slightly v-shaped type d
<u>type of workmanship</u> : decorticated
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : connected to ropes made of divided belt ends (long sides); braided ropes made of goat hair yarn (short sides);
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : two-loop-connection
<b>guy-ropes</b>
<u>rope</u> : herbal material
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
NA
<b>exterior poles</b>
NA
<b>wooden pins</b>
<u>material</u> : twigs
<u>type of workmanship</u> : decorticated
<u>setting</u> : installed 80 cm distant to each other
<b>textile attributes roof</b>
NA
<b>textile attributes walls</b>
<u>material</u> : same age and character as roof
<b>design attributes of the roof</b>
<u>stitch</u> : even stitch
<u>panels</u> : 5 broad pieces

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<u>type of panel end seam</u> : hanging down for appr. 0,3 m
<u>belts</u> : plain black
<b>design attributes of the walls</b>
<u>stitch</u> : raised stitch
<u>panels</u> : 2 broad pieces
<u>type of seam</u> : folded seam;

<b>Table 8: Kara-Hacılı Tent Ordered Tent / Literature 1987</b>	
background data: based on literature research, constructed and photographed in 1987 by Josephine Powell, published by Böhrmer 2004 p.191, Kara-Hacılı, Region: near Beyşehir lake;	
<b>ridge pieces</b>	
NA	
<b>stay-fasteners</b>	
<u>design type</u> : cylindrical type b2	
<u>type of workmanship</u> : decorticated	
<b>stay-fastener's connection to the tent</b>	
<u>means of fastening</u> : braided or twisted ropes made of goat hair yarn	
<b>stay-fastener's connection to the guy-rope</b>	
<u>method of fastening</u> : one-loop-connection	
<b>guy-ropes</b>	
<u>rope</u> : black goat hair	
<u>knot</u> : 2 half-hitch knots, counterbalanced	
<b>stakes and anchoring systems</b>	
<u>material</u> : wooden stakes	
<u>type of workmanship</u> : not decorticated	
<u>length</u> : showing 0,4 - 0,5 m above ground	
<u>diameter</u> : appr. 5 - 7 cm	
<b>poles</b>	
NA	
<b>exterior poles</b>	
NA	
<b>wooden pins</b>	
NA	
<b>textile attributes roof</b>	
NA	
<b>textile attributes walls</b>	
NA	

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<b>design attributes of the roof</b>
<u>stitch</u> : even stitch
<u>panels</u> : 7 pieces
<u>type of panel end seam</u> : hanging down for appr. 0,4 - 0,5 m with folded seam
<b>design attributes of the walls</b>
<u>stitch</u> : even stitch
<u>panels</u> : 2 broad pieces for the long sides
<u>type of seam</u> : folded seam

<b>Table 9: Karaevli Tent Ordered Tent / Literature 1957 (1993)</b>
background data: based on literature research, ordered in 1957 by Ulla Johansen, photographed in appr. 1993 in Germany and published by Kunze 1994 p.164, Karaevli, Region: Adana;
<b>ridge pieces</b>
NA
<b>stay-fasteners</b>
<u>design type</u> : cylindrical type b1
<u>type of workmanship</u> : decorticated
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : One stay-fastener is obviously connected to the belt by two braided ropes sticking out between last panel and eaves's band at the long front side
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : one-loop-connection
<b>guy-ropes</b>
NA
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
<u>material</u> : broadleaf wood, slightly crooked;
<u>type of workmanship</u> : decorticated
<b>exterior poles</b>
<u>design type</u> : thick stems, forked, slightly crooked;
<u>material</u> : broadleaf wood (same as poles)
<u>type of workmanship</u> : decorticated
<u>length</u> : appr. 1,5 m
<u>setting</u> : close to the tent (0,5 m distant to walls)
<b>wooden pins</b>
<u>material</u> : twigs
<u>type of workmanship</u> : decorticated
<u>setting</u> : installed appr. 40 cm distant to each other
<b>textile attributes roof</b>
NA

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<b>textile attributes walls</b>
<u>material</u> : black tent cloth slightly older than the roof due to bleached surface
<b>design attributes of the roof</b>
<u>stitch</u> : even stitch
<u>panels</u> : 5 pieces
<u>type of panel end seam</u> : hanging down for appr. 0,1 m with folded seam
<u>belts</u> : plain black
<b>design attributes of the walls</b>
<u>stitch</u> : even stitch
<u>panels</u> : 2 broad pieces for the long sides; 3 broad pieces for the short sides
<u>type of seam</u> : folded seam;

<b>Table 10: Unknown Tribe Ordered Tent / Field Research 2005</b>
background data: based on field research, ordered in 2005, unknown tribe, Region: Belevi - Selçuk;
<b>ridge pieces</b>
NA
<b>stay-fasteners</b>
<u>design type</u> : cylindrical type b1
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : not decorticated; carved; rounded edges
<b>stay-fastener's connection to the tent</b>
<u>means of fastening</u> : directly connected to the eaves with black goat hair yarn
<b>stay-fastener's connection to the guy-rope</b>
<u>method of fastening</u> : one-loop-connection
<b>guy-ropes</b>
NA
<b>stakes and anchoring systems</b>
NA
<b>poles</b>
NA
<b>exterior poles</b>
NA
<b>wooden pins</b>
NA
<b>textile attributes roof</b>
<u>yarn quality</u> : mix of long and short hair
<u>yarn thickness</u> : 0,4
<u>yarn character of twist</u> : far stretched
<u>warp threads per 10 cm</u> : 22
<u>weft threads per 10 cm</u> : 15
<u>weaving tension characters</u> : rather loose
<u>source</u> : deriving from weavers' villages
<b>textile attributes walls</b>
<u>material</u> : same as roof textile

<b>design attributes of the roof</b>
<u>stitch</u> : raised stitch
<u>panels</u> : 5 broad pieces
<u>type of panel end seam</u> : hanging down with folded seam
<u>belts</u> : plain black, width: 40 cm, machine-made;
<b>design attributes of the walls</b>
<u>stitch</u> : raised stitch
<u>panels</u> : 2 broad pieces for the long sides; 3 broad pieces for the short sides
<u>type of seam</u> : folded seam

### Chapter 6.1.3 Definition of Old Tents

The approach of designing a standard definition table representing the design of old tents (aged 20 years or more) is built up on setting priorities in attribute choice and analysing quantities. Variations in design are taken into account by the attribute “alternative”.

Highest priority is assigned to Table 1 in chapter 6.1.2 representing the 4 Karatekeli tents. They are the local and tribal predecessors to the new tents in 2007. There is no closer correlation available. Table 1 is the basis for developing a standardized table. The single attributes will now be discussed step by step:

The **ridge pieces** are made of broadleaf wood in all documented cases (table 1, table 2). They show different grades of slightly sooted surface due to usage (table 1, table 2). The type of workmanship is carved, slightly vaulted, with rounded edges, with rounded corners, no decoration and deep sockets. An alternative design of metal ridge pieces is reported.

The **stay-fasteners** are locally mainly documented as “v-shaped with notches type a” (table 1, table 2). Recent exception poses a reconstructed tent made in 2005 by an unknown tribe (table 10) settled closely to the Karatekeli families in the Selçuk-Torbali region. It features “cylindrical type b1”. This may indicate that other types of ridge pieces were common in the old days there, too. The discussion in chapter 5.1.2 about stay-fasteners shows that the typological design does not need to be associated with the tribe. Taking regard of the type of stay-fasteners for the new tents (as well: v-shaped with notches type a) and for keeping the standardized table simple for overview, I chose

to insert the “alternative: other types of stay-fasteners” at the end of the list representing the unresolved alternatives there.

The material is broadleaf wood in all documented cases (table 1, table 2, table 10); They are decorticated in all cases except in table 10 (ordered tent in field research 2005) where the stay-fasteners were made hastily by the younger generation (aged 30-35 years). Carved and rounded (when necessary) in all cases when investigation allowed a closer look (table 1,2,3,6 and 10); Sizes are chosen according to the field research experiences with the type a adding the note (based on few field research examples).

The **stay-fastener’s connection to the tent** shows “braided or twisted ropes made of goat hair yarn;” in table 1,2,3,5,7,8 and 9 being the majority case. Noteworthy due to its numerous appearance is “connected to ropes made of divided belt ends (long sides);” in table 4,6,and 7. I do not want to skip the alternative “synthetic yarn” in table 2 as it showed to be a way of repairing broken connections of stay-fasteners. Table 9 demonstrates how “one stay-fastener is obviously connected to the belt by two braided ropes sticking out between last panel and eaves’s band at the long front side” which may explain how the eaves’ band may be installed alternatively. Table 10 as well bears the variation “directly connected to the eaves with black goat hair yarn;” which is definitely an interesting installation which I do not want to count as I know that the stay-fasteners were fixed hastily by the younger generation and thus may not demonstrate a traditional technical variation.

As already discussed in chapter 5.1.1, the **stay-fastener’s connection to the guy-rope** is mainly bound to the choice of stay-fastener or vice versa. In case of type a, a two-loop-connection is most common. In case of other stay-fastener’s design, the one-loop-connection is chosen in most of the cases. This correlation and uprising alternative is noted in the table.

The **guy-ropes** offer herbal material (table 1,3,6 and 7) and black goat hair (table 4,5 and 8) with 4 half-hitch knots (table 1,3 and 6) or less (table 4 and 8). The alternative metal chains from table 1 is added up in the table for being an interesting variant. As synthetic ropes appear occasionally in literature and in practice (compare chapter 5.1.1) they need to be noted as well.

The **stakes and anchoring systems** offer an interesting difference between the field research experiences (see table 1) and the outcome of literature research (see table 8 and in particular chapter 5.1.1): While the field research only shows the use of metal stakes

or alternatively stones resting on twigs forming a loop for the guy-rope, the results in literature only depict the use of wooden stakes or as well the use of heavy stones for anchoring down the guy-ropes. The use of wooden stakes and stones is older than the use of metal bars. It may even be that the choice of metal bars is somewhat connected to the fact that all Yörük families of the field research stay within one location for at least 1 year. Metal bars at the length of 1 metre offer considerable weight (2,5-10 kg / 1 piece), while wooden stakes are easier to carry. In modern times of motorisation, the weight of metal stakes would be of few consequences regarding a mobile lifestyle. The total length for wooden stakes is unknown as this information is not available in literature. The length of the stake above ground level does not provide any clues for its total length. The diameter for wooden stakes derives from estimates taken from photographs in literature according to chapter 5.1.1.

The data for the **poles** mainly derives from collected experiences during field research (table 1 and 2) with taking alternatives into account that got mentioned in chapter 5.1.1. Here, it is possible, that, besides to broadleaf wood, the use of conifers may be common, too. I have not taken the data of table 9 (slightly crooked poles) into account as the character of the photograph depicting this somehow indicates that the poles were possibly not the original ones. It shows a black tent set up being displayed in an exhibition taking place in Germany. The poles are handcrafted in a way that seems to be foreign to any Yörük handicraft on wood. As all other pictures in literature indicate that the interior poles are always plain straight, I chose to leave this exception unmentioned in the standardized table.

Regarding the **exterior poles**, the big variation of design type and type of workmanship between spontaneously taken from the surroundings without any further manual adaption and deliberately choosing straight stems with decorticating and carving, it gives way of including all these contradictory attributes equally into their categories (see discussion in chapter 5.1.1). Therefore, the range of lengths and installation settings is depicted similarly equal without taking priorities there.

It is likely that conifer wood is used as well besides to broadleaf wood. But as I have found only one text source supporting that, I chose to set the emphasis on broadleaf only.

Details about **wooden pins** are quite scarce. As already mentioned in chapter 5.1.1, there is the need to rely on observations collected during the field research without getting any access to traditional production processes. Photographs in literature show how pins were installed with differences in the installation distance to each other and their thickness-length relation (table 5,6,7 and 9). The alternative of metal pins mentioned by Zimmermann (see chapters 5.1.1. and 5.1.2) is noted.

With **textile attributes roof** we get into a subject that provides even fewer data from sources apart from the field research at hand as the textile attributes had not been subject to other researches so far. Therefore, the standardized table is based on the results of the discussion presented in chapter 5.1.2 and the data collected in table 1 and 2. Table 10 is not taken into account as it represents the manufactured black tent textile deriving from the weavers' villages. Table 4 provides the important information that the roof may bear cloth panels of different ages.

As the **textile attributes walls** show a visibly stronger variation in the choice of textile, photographs from literature research can be taken into consideration for presenting an overview in the range of possibilities. The colour and visible appearance of the wall as well allows the assumption that it may be made of the same textile as the roof in table 6 and 7.

As already mentioned in chapter 5.1.2 and the preceding chapters, wall cloth panels are made in a swifter and sloppier way if considered, saving effort and workforce there.

The **design attributes of the roof** provide a majority information about the use of even stitches (table 1,2,3,4,5,6,7,8 and 9) with table 4 demonstrating that the raised seam is used as well (in a mix of stitches) apart from table 10. Panels are 5 (occasionally considerably broad) or 7 added up with eaves's band (decorated or undecorated). The type of panel end seam provides a wide range of possibilities summarized in the table. The belts are plain black in all documented cases (table 1,2,3,4,6,7,9 and 10). The width of the belts in table 10 are not taken into account as they derive from a machine-made product sold in the weavers' villages. Odds are collected from the tables showing that roofs may show surprising exceptions.

The **design attributes of the walls** do show as well the popularity of even stitch (table 1,5,6,8 and 9) with one exception (table 7) apart from table 10, thus to be noted as alternative. There is a strong tendency for using 2 broad panels for the long sides (occasionally with top band) and 3 broad panels for the short sides. The divided curtain in table 6 gets noted as alternative. The folded seam is very common. The roughly seamed ends at the Karatekeli tents in the field research are mentioned “occasionally”.

<b>ridge pieces</b>
<u>material</u> : broadleaf wood; sooted surface due to usage
<u>type of workmanship</u> : carved; slightly vaulted; rounded edges; rounded corners; no decoration; deep socket;
<u>alternative</u> : metal ridge pieces
<b>stay-fasteners</b>
<u>design type</u> : v-shaped with notches type a
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : decorticated, carved, rounded edges
<u>alternative</u> : other types of stay-fasteners
<b>stay-fastener’s connection to the tent</b>
<u>means of fastening</u> : braided or twisted ropes made of goat hair yarn; (occasionally : connected to ropes made of divided belt ends (long sides);)
<u>alternative</u> : synthetic yarn (repairing broken connections)
<u>alternative</u> : stay-fastener connected to the belt by two braided ropes sticking out between last panel and eaves’s band at the long front side
<b>stay-fastener’s connection to the guy-rope</b>
<u>method of fastening</u> : two-loop-connection (in case of type a)
<u>alternative</u> : one-loop-connection (in case of most of other stay-fastener types)
<b>guy-ropes</b>
<u>rope</u> : herbal material or black goat hair
<u>knot</u> : 4 half-hitch knots or less
<u>alternatives</u> : metal chains, synthetic ropes
<b>stakes and anchoring systems</b>
<u>material</u> : wooden stakes or more recently: iron bars / tubes; stones resting on forked twigs;
<u>length</u> : 1 m minimum (metal bars)

The Yörük Black Tent

<u>diameter</u> : estimated 5 - 8 cm (wooden stakes); 2 - 4 cm (metal bars)
<b>poles</b>
<u>material</u> : broadleaf wood (e.g. poplar)
<u>type of workmanship</u> : decorticated; carved; conically narrowed or rounded top end;
<u>length</u> : 2,3 - 3,2 m
<u>diameter</u> : 6 - 10 cm
<u>alternative</u> : conifer wood
<b>exterior poles</b>
<u>design type</u> : forked branch or straight stem
<u>material</u> : broadleaf wood
<u>type of workmanship</u> : roughly decorticated or not decorticated, carved or not carved
<u>length</u> : 1 - 2 m
<u>setting</u> : high poles close to the tent (1,5 m minimum distance); or low poles close to the stakes;
<b>wooden pins</b>
<u>material</u> : bush twigs, relatively strong or thin;
<u>type of workmanship</u> : decorticated, rounded tip;
<u>length</u> : appr. 20 - 25 cm
<u>diameter</u> : appr. 0,4 - 0,8 cm
<u>setting</u> : installed appr. 80 cm distant to each other (or shorter intervals: e.g. appr. 40 cm)
<u>alternative</u> : metal pins with grommets
<b>textile attributes roof (data mainly deriving from field research)</b>
<u>yarn quality</u> : high quality yarn (long hair)
<u>yarn thickness</u> : 0,25 - 0,4 (narrow - thick)
<u>yarn character of twist</u> : far stretched - average twist
<u>warp threads per 10 cm</u> : 23 - 36
<u>weft threads per 10 cm</u> : 17 - 22
<u>weaving tension characters</u> : rather loose - higher tension
<u>duration</u> : tents tore apart after 10-30 years of use, some are still remaining;
<u>alternative</u> : roof panels may be of mixed age
<b>textile attributes walls</b>
<u>material</u> : black tent cloth or kilims of mixed sources, remains of older tents;
<u>decoration</u> : none or stripes of 1 - 2 colours
<u>alternative</u> : modern blankets; reed mats;

<u>alternative</u> : may be of the same textile as the roof in some cases; wall panels are manufactured in a swifter and sloppier way if considered;
<b>design attributes of the roof</b>
<u>stitch</u> : even stitch
<u>panels</u> : 5 (occasionally broad) or 7 pieces; occasionally added up with decorated and undecorated eaves' band;
<u>type of panel end seam</u> : hanging down for appr. 0,1 - 0,5 m; braided cords, hanging loose, not seamed or folded seam;
<u>belts</u> : plain black, widths observed: 30 - 33 cm;
<u>odds</u> : in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;
<u>alternative</u> : rare use of raised stitch
<b>design attributes of the walls</b>
<u>stitch</u> : even stitch
<u>panels</u> : 2 broad pieces for the long sides (occasionally with top band); 3 broad pieces for the short sides;
<u>type of seam</u> : folded seam, occasionally roughly seamed ends;
<u>alternative</u> : rare use of raised stitch
<u>alternative</u> : wall curtain divided in two for the long side

## Chapter 6.2 Production

### Chapter 6.2.1 Definition of New Production Methods and Processes 2007

Analogue to the definition tables for tent attributes, it is the goal of this section of chapters to construct definition tables of production methods and processes that can be set into correlation to the tent attributes. In this chapter, the definition table for the new productions methods and processes the precede to the tent production in 2007 is developed. Therefore, the insights of chapter 4 create the basis for this endeavour.

The ridge pieces were sawn on the band-saw by a carpenter who made quite exact copies of an original one. Their edges got slightly planed in order to avoid damage to the textile. One ridge piece bore a carved socket (for the tip of the pole to rest in), 4 drilled holes for fixation on the tent and got impregnated with wood stain later by the Yörük.

<b>production of ridge pieces</b>
<u>material</u> : conifer wood
<u>acquisition</u> : carpenter
<u>processing</u> : cutting, planing edges, carving (hole), drilling, impregnating with wood stain;
<u>used tools</u> : band-saw, planer, gouge, electric drill, brush;
<u>result</u> : 3 ridge pieces

The same went for the stay-fasteners, belonging to the design type 4 (see chapter 4.1.1), being copied from an original one by the carpenter. Edges were only slightly planed, blunting them for only 2-3 mm.

<b>production of stay-fasteners</b>
<u>material</u> : conifer wood
<u>acquisition</u> : carpenter
<u>processing</u> : cutting, planing edges, impregnating with wood stain;
<u>used tools</u> : band-saw, planer, brush;
<u>result</u> : 8 stay-fasteners

The guy-ropes were bought from a ropemaker. The production of these was not visible to me. Hemp or flax ropes are produced in the manufactures of the city Tire.

<b>production of guy-ropes</b>
<u>material</u> : hemp or flax ropes
<u>acquisition</u> : ropemaker
<u>processing</u> : professional rope-production, details unknown;
<u>used tools</u> : NA
<u>result</u> : 40 - 60m of hemp or flax rope

The Yörük bought ready-made iron stakes with grommets and rings from the blacksmith. There again, the production of these was not visible to me which was possibly done right at the blacksmith's workshop.

<b>production of stakes</b>
<u>material</u> : iron
<u>acquisition</u> : blacksmith
<u>processing</u> : NA
<u>used tools</u> : NA
<u>result</u> : 8 iron stakes with grommets and rings

The poles were acquired from relatives of the Yörük who had good trading connections to a young poplar tree plantation. The tips of the decorticated stems were narrowed down cylindrically to fit into the socket hole of the ridge pieces with the use of a chop sickle only.

<b>production of poles</b>
<u>material</u> : broadleaf wood (e.g. young poplar stems)
<u>acquisition</u> : trade, from the surroundings (traded within the family, gathered from poplar plantation);
<u>processing</u> : removing branches, decortivating, narrowing tip;
<u>used tools</u> : saw, chop sickle ( <i>orak</i> );
<u>result</u> : 3 poles

There were no exterior poles produced or used.

<b>production of exterior poles</b>
NA

The wooden pins got carved by the grandfather of the family using a whittle knife and lots of patience.

<b>production of wooden pins</b>
<u>material</u> : twigs of bushes
<u>acquisition</u> : from the surrounding, shrubs and bushes;
<u>processing</u> : carving
<u>used tools</u> : whittle knife
<u>result</u> : 30 - 40 wooden pins

The goats get cut with shearing scissors. The raw hair is put into sacks and delivered from the Yörük families to the weavers' villages near Bozdoğan (see chapters 4.2.1 and 4.2.2).

<b>raw wool</b>
<u>material</u> : cut hair from black cashmere goats
<u>acquisition</u> : cutting
<u>processing</u> : cutting, collecting in bags;
<u>used tools</u> : shearing scissors
<u>result</u> : mixed goat hair

As depicted in chapter 4.3.2, the raw hair gets sorted into colours, dried and tumbled in a fan machine, then combed and carded automatically and finally packed into sacks for further use.

<b>combing, carding</b>
<u>material</u> : mixed goat hair
<u>acquisition</u> : delivery from goat breeders
<u>processing</u> : sorting into colours, drying, automated combing (division of foam and kemp hair), automated carding (fanning out into a fleece), backing into sacks;
<u>used tools</u> : drying and tumbling machine or road (drying wool on the road), combing and carding machine;
<u>result</u> : carded kemp hair in sacks

The desired yarn for traditional Yörük tents is preferably hand-made. The Yörük try to avoid using textiles for their tents that were produced by machines. As shown in chapter 4.2.4, the weavers' villages make use of a certain kind of spinning wheel which is labelled as "spinning wheel with the walking-path method" in this table. The hair gets spun into a thread. In a second step, two such threads get spun into a yarn in counterdirection to the rotation of the single threads. Finally, the yarn gets rolled up into balls of wool.

<b>spinning</b>
<u>material</u> : carded kemp hair
<u>acquisition</u> : product of automated combing manufacture
<u>processing</u> : spinning into thread and counterspinning into yarn
<u>used tools</u> : spinning wheel with the walking-path method
<u>result</u> : black goat hair yarn in round bundles

The Yörük derived the panels from a treadle loom production as demonstrated by the weaver Adnan Yazar in chapter 4.2.5.

<b>weaving</b>
<u>material</u> : black goat hair yarn
<u>acquisition</u> : from hand-spinning manufacture (mostly within family ties)
<u>processing</u> : setting up the warp, weaving, rolling weave into rolls;
<u>used tools</u> : treadle loom
<u>result</u> : black goat hair panels (width: appr. 80cm; length: appr. 27 m)

The next production step is done at the camp of the Yörük family (see chapter 4.1.2), starting the traditional sewing of the tent roof done within the group. The layout of the tent roof gets laid out onto the levelled ground. Therefore, the roll of panel cloth needs to be rolled up, the panels cut into the right length and set side by side onto the ground. Then, they need to be beaten by two large sticks (e.g. poles) for efficient pre-stretching and nailed down to the ground again with iron nails. After stretching, the panels have been cut again in order to gain a straight end seam.

<b>layouting the tent</b>
<u>material</u> : black goat hair panels
<u>acquisition</u> : product of the weavers' villages
<u>processing</u> : preparing the ground; layouting, cutting and beating the panels; pinning panels onto ground (with iron nails);
<u>used tools</u> : shearing scissors (for cutting), poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<u>result</u> : tent layout pinned and stretched on ground

The tent gets sewn together with the even Yörük stitch (also known as baseball stitch) done with large bent needles (also known as “bent narrow twist”).

<b>sewing panels</b>
<u>material</u> : panels side by side according to tent layout
<u>acquisition</u> : see previous production step
<u>processing</u> : sewing with the even Yörük stitch method
<u>used tools</u> : black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result</u> : sewn raw tent roof

The belts get levelled with measuring tapes and levelling yarn. Then, they are sewn onto the panels with a simple overcast stitch. Belt bands derive from the weavers' villages, being produced on the automated weaving machines only as a hand-woven product does not pay off for the weavers there anymore. The Yörük preferred to choose decorated bands with 2 or 3 undyed natural colours.

<b>sewing belts</b>
<u>material</u> : machine-made decorated woven bands (colours: black, natural white, occasionally: natural brown)
<u>acquisition</u> : product of the weavers' villages
<u>processing</u> : measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;

<u>used tools:</u> levelling yarn, measuring tape, iron nails, iron hammer, black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u> sewn belts on tent roof

The ridge pieces need to be levelled in as well and are then fixed onto the central panel and belts with a black goat hair yarn being stitched through the textile and the drilled holes of the ridge piece.

<b>installing ridge pieces</b>
<u>material:</u> wooden ridge pieces with drilled holes
<u>acquisition:</u> product of carpenter
<u>processing:</u> measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u> measuring tape, black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u> sewn ridge pieces on tent roof

By dividing the belts in half at their ends and forming loops out of the new ends, the stay-fasteners get inserted into these loops and then sewn tightly in.

<b>installing stay-fasteners on belts</b>
<u>material:</u> wooden stay-fasteners
<u>acquisition:</u> product of carpenter
<u>processing:</u> dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u> black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u> stay-fasteners on belts

For the short sides of the tent, the stay-fasteners need to be fixed on braided ropes that are sewn onto the central panel and the cross-running belt with a loop around the ridge piece. The braided rope gets pierced through the flag end of the central panel so that it can hang down when the tent is pitched up.

<b>installing stay-fasteners on central panel</b>
<u>material:</u> wooden stay-fasteners
<u>acquisition:</u> product of carpenter
<u>processing:</u> braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u> black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u> stay-fasteners connected to the central panel

The Yörük created a mix of end seams for the roof panels showing different methods of design for the tent.

<b>end seam of panels</b>
<u>material</u> : sewn tent roof
<u>acquisition</u> : see previous working steps
<u>processing</u> : sewing folded seam OR fraying and braiding
<u>used tools</u> : large needle (bent narrow twist), shearing scissors OR none;
<u>result</u> : folded end seam OR braided frazzled seam

The first tent pitch-up needs to be included into the description of working steps as there are some important modifications taking place that influence the tent's construction. The guy-ropes' lengths are adjusted, the roof cloth needs to be cleaned, the ridge pieces get tested in their balance and the correct fit of poles and ridge piece sockets controlled.

<b>first tent pitch-up</b>
<u>material</u> : finished tent roof
<u>acquisition</u> : result of many manufacturing steps
<u>processing</u> : pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools</u> : knives, iron stakes, iron hammers, bush twigs;
<u>result</u> : pitched-up tent roof

After the tent roof is erected, the necessary size of the wall cloths can be calibrated. Then, the cloths need to be sewn and seamed which is done in a far more quicker and rougher way than with the roof cloth.

<b>sewing walls</b>
<u>material</u> : black goat hair panels
<u>acquisition</u> : product of the weavers' villages
<u>processing</u> : measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretching; seaming wall cloth with folded seam;
<u>used tools</u> : shearing scissors, black goat hair yarn, large needle (bent narrow twist);
<u>result</u> : 4 wall cloths for tent

It is obligatory to complete the tent with the minimum equipment in order to test its performance and rest underneath its roof after finished work. Therefore, the wind-breaking walls are installed and a mat and a carpet laid out onto the ground. And, of course, the finished wall cloths get pinned onto the roof.

<b>completing the tent</b>
<u>material</u> : wind-breaking mats (made of synthetic fibre); iron bars (length: 1,2m), wall cloths, wooden pins, floor mat (made of synthetic fibre), carpet;
<u>acquisition</u> : mats and iron bars from the shops of the city Tire, wall cloths and wooden pins from previous working steps;
<u>processing</u> : installing vertical iron bars onto the ground, binding wind-breaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools</u> : iron hammer, yarn, large needle (bent narrow twist), knife;
<u>result</u> : finished tent

## Chapter 6.2.2 Definition of Old Production Methods and Processes

The old production methods and processes are mainly chosen from traditional techniques used by the Yörük that helped them to manufacture the majority of parts for their tents themselves. Additionally, it is taken care to pick the methods that correlate best to the standardized definition table for old tents historically. The basis for the following definition tables derives from the insights given in chapter 5.

In literature, the processes of local handicraft are rarely described in detail. The use of certain tools is only fragmentarily mentioned. On that account the information is based on three main sources: Observations done in several workshops where primary tools still played a main role, interviews with merchants selling traditional handicraft tools on bazaars and interviews with the Karatekeli families on that issue. As well, I was often present at everyday work when certain chores with woodcraft needed to be done. There, I have got to know the tools each Yörük owned as a basic equipment. For the following tables, it is necessary to name at least a few of the tools that made the production possible. As these lists are built on research made in the present combined with technical correlation to the desired woodwork, they need to be stated as assumptions because historical documentation is missing there. Therefore, listed tools with no historical evidence are put into round brackets, being officially described as “NA” (→ not available).



image 6.001: Tools at the bazaar

The ridge pieces were carved from chosen broadleaf wood. If needed be, pieces of wood were decorticated before being carved in order to get a good impression of the overall condition of the wood. For the subject “processing” a particular exception needs to be mentioned: I added the sooting of the surface with fire fumes although this process happens only after the tent is finished in the course of its daily use.

<b>production of ridge pieces</b>
<u>material</u> : broadleaf wood (e.g.: oak)
<u>acquisition</u> : from the surroundings (e.g. forests or optionally: trade)
<u>processing</u> : cutting, decortivating, carving, drilling, sooting the surface during usage;
<u>used tools</u> : NA (probably hand-saws, adzes, gouges and whittle knives, hand braces)
<u>result</u> : 3 ridge pieces

At the Karatekeli families, the stay-fasteners of the “type a” consist of the same broad-leaf wood as the ridge pieces in all documented cases. Concerning other types of stay-fasteners, conifer wood may have been an alternative choice as being described in chapter 5.1.1.

<b>production of stay-fasteners</b>
<u>material</u> : broadleaf wood (e.g.: oak) for “type a”, optionally: conifer wood OR broadleaf wood for other types;
<u>acquisition</u> : from the surroundings (e.g. forests or optionally: trade)
<u>processing</u> : cutting, decorticating, carving;
<u>used tools</u> : NA (probably hand-saws, adzes, gouges and whittle knives)
<u>result</u> : 8 stay-fasteners

Guy-ropes may have been made of goat hair yarn or of hemp or flax. In case of the hemp or flax ropes, trades with merchants or directly with ropemakers may have happened. In case of the goat hair ropes, the rope production practices (see chapter 5.1.1) done in the weaver’s villages derived from traditional Yörük handicraft due to the history development of these villages (see chapter 4.2.1). Yörük tools for twisting ropes do exist like e.g. wooden rope spindles.

<b>production of guy-ropes</b>
<u>material</u> : black goat hair ropes OR hemp or flax ropes
<u>acquisition</u> : own production (basic material: black goat hair yarn) OR trade with merchants or ropemakers
<u>processing</u> : NA (probably similar to rope production at the weavers’ villages) OR NA (professional rope-production)
<u>used tools</u> : NA (probably: rope spindles) OR NA
<u>result</u> : 40 - 60m of goat hair rope OR hemp or flax rope

For acquiring wooden stakes, I have learned that a good craftsman only needs an adze. With proper use, an adze replaces the function of saws, any decorticating tools and knives. The trick of using adzes effectively on wood is by chopping diagonally to the funnel’s direction. In that way, branches can be cut off a tree and sharpened at the tip. Decorticating is done by sensible chopping along the surface of the stake.

<b>production of stakes</b>
<u>material</u> : wooden branches
<u>acquisition</u> : from the surroundings (e.g. trees or thick bushes)
<u>processing</u> : cutting, maybe decorticating, sharpening lower tip;

<u>used tools:</u> NA (probably adze, additionally maybe saw and knife)
<u>result:</u> 8 wooden stakes

The poles of old design are narrowed conically at the top (in contrast to the poles of the new tents 2007 which are narrowed cylindrically). The tips of the poles of the Torbali tent are deliberately rounded. They show a sensible carving job. Poles of tents in literature appear to be rounded on top as well but it is unclear if that derived from constant use or deliberate carving.

<b>production of poles</b>
<u>material:</u> broadleaf wood (e.g. young poplar stems); coniferous wood;
<u>acquisition:</u> from the surroundings or trade
<u>processing:</u> removing branches, decorticating, narrowing top conically, rounding tip;
<u>used tools:</u> NA (probably saw, chop sickle ( <i>orak</i> ), adzes, gouges and knives)
<u>result:</u> 3 poles

Although few is known about the production of exterior poles, the simple design offers a rather close assumption of the tools and processes needed for acquiring them. Analogies can be drawn from the production of stakes and poles.

<b>production of exterior poles</b>
<u>material:</u> wooden branches
<u>acquisition:</u> from the surroundings
<u>processing:</u> cutting, maybe decorticating;
<u>used tools:</u> NA (probably adze, additionally maybe saw and knife)
<u>result:</u> 3 - 6 exterior poles

As already mentioned in chapter 5.1.1, the production of wooden pins leaves many questions open. Although these tent accessories are tiny and visibly nearly insignificant, their production steps may have given new insights of woodcraft among the Yörük. Only based on interviews with experts in Austria an idea about the traditional processing of wooden pins could be established.

<b>production of wooden pins</b>
<u>material:</u> twigs of bushes
<u>acquisition:</u> from the surroundings, shrubs and bushes
<u>processing:</u> NA (probably decorticating, carving, planing the tip; decorticating may have happened with tools or by putting the twigs into water for several hours and then peeling off the bark)
<u>used tools:</u> NA (whittle knife, water bucket, others...)
<u>result:</u> 30 - 40 wooden pins

As already shown in chapter 5.2.1, there is no major difference between the traditional acquisition of raw wool and the present one among Yörük shepherds. Only, the high yarn quality of the old tents (see chapter 5.2.4) gives space for assumptions that the hair got diligently sorted for the production of durable textile panels.

<b>raw wool</b>
<u>material</u> : cut hair from black cashmere goats
<u>acquisition</u> : cutting
<u>processing</u> : cutting, sorting in quality, collecting in bags;
<u>used tools</u> : shearing scissors
<u>result</u> : well sorted goat hair

In chapter 5.2.2, I mention how wool preparation steps as e.g. beating, combing or carding are obviously rarely done by the Yörük in regard of black goat kemp hair. Only the literature source provided by Böhmer<sup>1</sup> shows that combing of goat hair may have happened.

Therefore, the table “carding, combing” is put into brackets showing that this production process may have been totally left out. .

<b>(combing, carding)</b>
<u>material</u> : well sorted goat hair
<u>acquisition</u> : own goat flocks
<u>processing</u> : combing, backing into sacks;
<u>used tools</u> : iron comb board
<u>result</u> : combed kemp hair in sacks

For spinning, the drop spindle for producing thread and yarn is used. Literature indicates that the çark was used as well for counterspinning the threads into yarn (see chapter 5.2.2).

<b>spinning</b>
<u>material</u> : well sorted goat hair, combed or uncombed;
<u>acquisition</u> : own goats
<u>processing</u> : spinning into thread and counterspinning into yarn
<u>used tools</u> : drop spindle, occasionally çark;
<u>result</u> : black goat hair yarn in round bundles

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1 Böhmer 2004, p.187-188

As described in chapter 5.2.3, most of the sources point to the fact that the weaving was traditionally done on a mobile vertical loom. Nonetheless, the horizontal ground loom or the horizontal treadle loom with pit were used as well in many cases.

<b>weaving</b>
<u>material</u> : black goat hair yarn
<u>acquisition</u> : hand-spinning within the family
<u>processing</u> : setting up the warp and loom, weaving, rolling finished weave into rolls;
<u>used tools</u> : mainly mobile vertical loom, occasionally horizontal ground loom OR horizontal treadle loom with pit;
<u>result</u> : black goat hair panels (width: appr. 80cm; length: NA)

The information for the following tables (layouting the tent, sewing panels) derives from chapter 5.1.2. Although literature sources do not tell much about the single working steps, the table is surprisingly well filled with assured information. For example, the direction of set-up and sewing is not taken into account, here. As it is unclear, how this influences the quality of the tent, there is no correlation between the direction of sewing and the outcome. Therefore, I chose to keep it unmentioned in the tables. This missing aspect points out how certain facts of practical life may get lost by written or photographed information only. In that case, the researcher is able to point onto the amount of missing facts there. In many other cases, missing information may even be unknown to the researcher or to the reader of the researcher's report. This is the gap of unknown dimension between handicraft and the documentation of it.

<b>layouting the tent</b>
<u>material</u> : black goat hair panels
<u>acquisition</u> : weaving within the family
<u>processing</u> : preparing the ground; layouting, cutting the panels, maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);
<u>used tools</u> : shearing scissors (for cutting), maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm deteriorating down to the lower end), wooden hammers;
<u>result</u> : tent layout pinned and stretched on ground

<b>sewing panels</b>
<u>material</u> : panels side by side according to tent layout
<u>acquisition</u> : see previous production step
<u>processing</u> : sewing with an even stitch method

<b>sewing panels</b>
<u>used tools:</u> black goat hair yarn, large needles (bent narrow twist), shearing scissors;
<u>result:</u> sewn raw tent roof

As seen in chapter 6.1.2, there are no literature hints whether decorated belts were used in the past. Quite contrary, the use of belts of simply black colour is well documented. Further information about the production of belts can be derived from chapter 5.2.3.. At the old tents of the Karatekeli and at the old Torbalı tent, the belts are connected to the roof by a simple overcast stitch.

<b>sewing belts</b>
<u>material:</u> hand-made black woven bands
<u>acquisition:</u> band weaving within the family
<u>processing:</u> NA (measuring, levelling and sewing belts onto panels with a simple overcast stitch)
<u>used tools:</u> black goat hair yarn, large needle (bent narrow twist), shearing scissors, NA (levelling and measuring yarn, pins, hammer);
<u>result:</u> sewn belts on tent roof

For the process of installing ridge pieces, no particular information is available. The way they are fixed onto the belts and panels does not differ between old and new which leads to the assumption that there is no big difference in the process either. Therefore, most of the information is available except for installation process and used tools.

<b>installing ridge pieces</b>
<u>material:</u> wooden ridge pieces with drilled holes
<u>acquisition:</u> carving within the family
<u>processing:</u> NA (levelling, sewing)
<u>used tools:</u> black goat hair yarn, large needles (bent narrow twist), shearing scissors, NA (levelling yarn);
<u>result:</u> sewn ridge pieces on tent roof

The process for installing the stay-fasteners can be led back from the information collected in chapter 6.1.2. That information derives again from practical examples of the field research as e.g. the Torbalı tent or the old tents of the Karatekeli families.

<b>installing stay-fasteners on belts</b>
<u>material:</u> wooden stay-fasteners
<u>acquisition:</u> carving within the family

<b>installing stay-fasteners on belts</b>
<u>processing</u> : NA (sewing bundles of goat hair yarn onto ends of belts, sewing and winding yarn bundles around stay-fastener's ends)
<u>used tools</u> : black goat hair yarn, large needle (bent narrow twist), shearing scissors, NA;
<u>result</u> : stay-fasteners on belts

<b>installing stay-fasteners on central panel</b>
<u>material</u> : wooden stay-fasteners
<u>acquisition</u> : carving within the family
<u>processing</u> : NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)
<u>used tools</u> : black goat hair yarn, large needle (bent narrow twist), shearing scissors, NA;
<u>result</u> : stay-fasteners connected to the central panel

The information for the end-seams derives mainly from the insights collected in chapter 6.1.2, making the information dependant on visual documentations only. Processes and tools are based on assumptions deriving from the experiences collected in the field research.

<b>end seam of panels</b>
<u>material</u> : sewn tent roof
<u>acquisition</u> : see previous working steps
<u>processing</u> : NA (sewing folded seam OR fraying and braiding OR none)
<u>used tools</u> : NA (large needles (bent narrow twist), shearing scissors OR none)
<u>result</u> : folded end seam OR braided frazzled seam OR none

It is unknown, whether the tents were pitched-up so that the walls could be levelled in or whether the walls were sewn when the tent roof was still pinned to the ground. The pictures taken by Josephine Powell<sup>2</sup> of a tent construction done in 1984 show that the tent was pitched-up after finalisation in any case. As it is tradition to celebrate a feast after tent completion it is quite obligatory to pitch-up the newly made tent for everybody to see and celebrate the outcome of a hard day's work.

<b>sewing walls</b>
<u>material</u> : black goat hair panels or blankets
<u>acquisition</u> : weaving within the family OR black tent rugs collected within the family OR blankets collected or traded
<u>processing</u> : NA (measuring length and width of tent roof, cutting panels/rugs, sewing panels/rugs on ground, seaming wall cloth with folded seam)

2 Böhmer 2004, p. 191

<b>sewing walls</b>
<u>used tools:</u> shearing scissors, black goat hair yarn, large needles (bent narrow twist), NA;
<u>result:</u> 4 wall cloths for tent
<b>first tent pitch-up</b>
<u>material:</u> finished tent roof, finished walls, wooden pins;
<u>acquisition:</u> result of many manufacturing steps
<u>processing:</u> NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets, pinning walls onto roof)
<u>used tools:</u> NA (knives, wooden stakes, hammers, bush twigs OR brooms)
<u>result:</u> pitched-up tent roof and walls

Further, it is unknown how far a tent was completed for its first pitching-up at the end of the day's work. Nonetheless, I want to present the table "completing the tent" corresponding to the analogue table listed in chapter 6.2.1 for showing how a historical tent was completed in contrast to one done at the present. Most significant is the choice of material for the wind-breaking walls which is discussed in chapter 3.1.2.

<b>completing the tent</b>
<u>material:</u> wind-breaking mats (made of reed mats); maybe wooden stakes for wind-breaking mats, floor reed mat, carpet;
<u>acquisition:</u> NA (reed mats may derive from own production or trade, wooden stakes from surroundings, carpets produced within or traded within the family)
<u>processing:</u> NA (installing wooden stakes, binding wind-breaking mats onto stakes, laying out floor mat and carpet onto the ground)
<u>used tools:</u> NA (hammer, yarn, large needle (bent narrow twist), knife)
<u>result:</u> finished tent
<u>alternative:</u> using metal sheets for wind-breaking mats
<u>alternative:</u> using stone walls instead of wind-breaking mats

## **Chapter 7**

# **Comparison: Table Analysis between Old and New Tents**

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### **Chapter 7.1 Differences in Production and Design**

#### **Chapter 7.1.1 Development of Comparison Tables**

Based on chapter 6, the tables of production and the tables of tent attributes get associated with each other in regard of the old tents and then in regard of the new tents. Then, the tables and lists will be narrowed down in regard of differences between old and new tents. The summarized outcome of this analysing procedure will be shown in chapter 7.1.2. As the analysis in this chapter is built on repeats and new formations of the tables presented previously, I recommend to the universally interested reader to take a look at the summary first and get back to this chapter when particular questions arise, addressing the choice of outcome. This approach may help gaining a better overview.

For the following endeavour, I chose to use a simplified language avoiding a constant repetition of lists of item determinations in order to specify the content on one hand and to enhance the chance of providing a more compact overview upon the described procedures on the other hand. The specification derives from chapter 6, which is the source data.

### ridge pieces

The old way of “production of ridge pieces” (see table in chapter 6.2.2) leads to the old “ridge pieces” (see table in chapter 6.1.3):

The new way of “production of ridge pieces” (see table in chapter 6.2.1) leads to the new “ridge pieces” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood (e.g.: oak)	conifer wood
<u>acquisition:</u>	from the surroundings (e.g. forests or optionally: trade)	carpenter
<u>processing:</u>	cutting, decorticating, carving, drilling, sooting the surface during usage;	cutting, planing edges, carving (hole), drilling, impregnating with wood stain;
<u>used tools:</u>	NA (probably hand-saws, adzes, gouges and whittle knives, hand braces);	band-saw, planer, gouge, electric drill, brush;
<u>result:</u>	3 ridge pieces	3 ridge pieces

<b>comparison of ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood; sooted surface due to usage;	conifer wood
<u>type of workmanship:</u>	carved; slightly vaulted; rounded edges; rounded corners; no decoration; deep socket;	cut by band-saw; slightly vaulted; angular edges and corners; no decoration; shallow socket (carved), impregnated with mordant;
<u>alternative:</u>	metal ridge pieces	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of ridge pieces” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of ridge pieces” loses the subjects “material” and “type of workmanship”. Their content gets included into the new subject “outcome” in a strongly simplified way.

<b>overall comparison ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings (forests or trade)	carpenter
<u>processing:</u>	cutting, decorticating, carving, drilling, sooting the surface during usage;	cutting, planing edges, carving (hole), drilling, impregnating with wood stain;
<u>used tools:</u>	NA (probably hand-saws, adzes, gouges and whittle knives, hand braces);	band-saw, planer, gouge, electric drill, brush;
<u>outcome:</u>	3 ridge pieces of broadleaf wood with sooted surface, mainly carved, vaulted and rounded, deep socket;	3 ridge pieces of conifer wood, impregnated, mainly cut, vaulted but not rounded, shallow socket;
<u>alternative:</u>	metal ridge pieces	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings	carpenter
<u>processing:</u>	mainly carving, sooting the surface;	mainly cutting, impregnating with wood stain;
<u>used tools:</u>	probably manual handicraft tools	mainly automated handicraft tools, new: brush;
<u>outcome:</u>	3 ridge pieces of broadleaf wood, sooted surface, mainly carved, rounded, deep socket;	3 ridge pieces of conifer wood, impregnated, mainly cut, not rounded, shallow socket;
<u>alternative:</u>	metal ridge pieces	

The “NA” information in “used tools” gets summarized in the probable use of manual handicraft tools. It is obvious that no automated machines were used for handicraft in the traditional way. In regard of the new “used tools” the automated band-saw was the main tool for creating the shape of the ridge pieces, unspoken of the automated tools that developed the wooden plank from where it had derived from.

### stay-fasteners

The old way of “production of stay-fasteners” (see table in chapter 6.2.2) leads to the old “stay-fasteners” (see table in chapter 6.1.3).

The new way of “production of stay-fasteners” (see table in chapter 6.2.1) leads to the new “stay-fasteners” (see table in chapter 6.1.1).

The tables “stay-fastener’s connection to the guy-rope” are included by taking aware of their content given in the chapters 6.1.3 and 6.1.1.

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood (e.g.: oak) for “type a”, optionally: conifer wood OR broadleaf wood for other types;	conifer wood
<u>acquisition:</u>	from the surroundings (e.g. forests or optionally: trade);	carpenter
<u>processing:</u>	cutting, decorticating, carving;	cutting, planing edges, impregnating with wood stain;
<u>used tools:</u>	NA (probably hand-saws, adzes, gouges and whittle knives);	band-saw, planer, brush;
<u>result:</u>	8 stay-fasteners	8 stay-fasteners

<b>comparison of stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>design type:</u>	v-shaped with notches type a	v-shaped with notches type a
<u>material:</u>	broadleaf wood	conifer wood
<u>alternative:</u>	other types of stay-fasteners	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of stay-fasteners” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of stay-fasteners” loses the subjects “material” and “type of workmanship”. Their content gets included into the new subject “outcome” in a strongly simplified way.

<b>overall comparison stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood, other design types: conifer wood;	conifer wood;
<u>acquisition:</u>	surroundings (forests or trade)	carpenter
<u>processing:</u>	cutting, decorticating, carving;	cutting, planing edges, impregnating with wood stain;
<u>used tools:</u>	NA (probably hand-saws, adzes, gouges and whittle knives);	band-saw, planer, brush;
<u>outcome:</u>	8 stay-fasteners of “v-shaped with notches type a” of broadleaf wood, mainly carved and rounded;	8 stay-fasteners of “v-shaped with notches type a” of conifer wood, impregnated, mainly cut and not rounded;
<u>alternative:</u>	other types of stay-fasteners	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings	carpenter
<u>processing:</u>	mainly carving	mainly cutting, impregnating with wood stain;
<u>used tools:</u>	probably manual handicraft tools	mainly automated handicraft tools, new: brush;
<u>outcome:</u>	8 stay-fasteners of broadleaf wood, mainly carved and rounded;	8 stay-fasteners of conifer wood, impregnated, mainly cut and not rounded;
<u>alternative:</u>	other types of stay-fasteners; optionally of conifer wood;	

The “NA” information in “used tools” gets summarized in the probable use of manual handicraft tools. It is obvious that no automated machines were used for handicraft in the traditional way. In regard of the new “used tools” the automated band-saw was the main tool for creating the shape of the stay-fasteners, unspoken of the automated tools that developed the wooden plank from where it had derived from.

The type of stay-fastener is left out as there are similarities between old and new within the regionally related ten types. The other types of stay-fasteners get mentioned in the “alternative”.

### **guy-ropes**

The old way of “production of guy-ropes” (see table in chapter 6.2.2) leads to the old “guy-ropes” (see table in chapter 6.1.3):

The new way of “production of guy-ropes” (see table in chapter 6.2.1) leads to the new “guy-ropes” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair ropes OR hemp or flax ropes	hemp or flax ropes
<u>acquisition:</u>	own production (basic material: black goat hair yarn) OR trade with merchants or ropemakers	merchant OR ropemaker
<u>processing:</u>	NA (probably similar to rope production at the weavers' villages) OR NA (professional rope-production)	professional rope-production, details unknown;
<u>used tools:</u>	NA (probably: rope spindles) OR NA	NA
<u>result:</u>	40 - 60 m of goat hair rope OR hemp or flax rope	40 - 60 m of hemp or flax rope

<b>comparison of guy-ropes</b>	<b>old</b>	<b>new</b>
<u>rope:</u>	herbal material OR black goat hair	herbal material
<u>knot:</u>	4 half-hitch knots OR less;	4 half-hitch knots
<u>alternatives:</u>	metal chains, synthetic ropes;	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of guy-ropes” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of guy-ropes” loses the subjects “rope” and “knot”. Their content gets included into the new subject “outcome” in a strongly simplified way.

<b>overall comparison guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair ropes OR hemp or flax ropes	hemp or flax rope
<u>acquisition:</u>	own production (black goat hair) OR merchant or ropemaker	merchant OR ropemaker
<u>processing:</u>	NA (probably similar to rope production at the weavers' villages) OR NA (professional rope-production)	professional rope-production
<u>used tools:</u>	NA (probably: rope spindles) OR NA	NA
<u>outcome:</u>	40 - 60 m goat hair rope OR hemp or flax rope, 4 half-hitch knots or less;	40 - 60 m hemp or flax rope, 4 half-hitch knots;
<u>alternatives:</u>	metal chains, synthetic ropes;	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR black goat hair	hemp or flax
<u>acquisition:</u>	OR own production	merchant OR ropemaker
<u>processing:</u>	NA	NA
<u>used tools:</u>	OR rope spindles, NA;	NA
<u>outcome:</u>	OR 40 - 60 m goat hair rope, OR less knots;	40 - 60 m hemp or flax rope, 4 half-hitch knots;
<u>alternative:</u>	metal chains	
<u>alternative:</u>	synthetic ropes	

Here, similarities are completely removed but the conjunction “OR” leaves evidence that variations do exist. Alternatives are singled out in new lines.

### stakes

The old way of “production of stakes” (see table in chapter 6.2.2) leads to the old “stakes and anchoring systems” (see table in chapter 6.1.3):

The new way of “production of stakes” (see table in chapter 6.2.1) leads to the new “stakes and anchoring systems” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of stakes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wooden branches	iron
<u>acquisition:</u>	from the surroundings (e.g. trees or thick bushes)	blacksmith
<u>processing:</u>	cutting, maybe decorticating, sharpening lower tip;	NA
<u>used tools:</u>	NA (probably adze, additionally maybe saw and knife);	NA
<u>result:</u>	8 wooden stakes	8 iron stakes with grommets and rings

<b>comparison of stakes and anchoring systems</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wooden stakes OR more recently: iron bars / tubes; stones resting on forked twigs;	iron bar with loop and loose ring on top
<u>length:</u>	1 m minimum (metal bars)	40 cm
<u>diameter:</u>	estimated 5-8 cm (wooden stakes); 2-4 cm (metal bars);	2 cm

Now, the tables of production and tent attributes get joined into one. The “comparison of production of stakes” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of stakes and anchoring systems” loses the subjects “material”, “length” and “diameter”. Their content gets included into the new subject “outcome” in a strongly simplified way. Variations are sorted out as “alternatives” listed at the end.

<b>overall comparison stakes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wood	iron
<u>acquisition:</u>	surroundings (trees or bushes)	blacksmith
<u>processing:</u>	cutting, maybe decorticating, sharpening lower tip;	NA
<u>used tools:</u>	NA (probably adze, additionally maybe saw and knife)	NA
<u>outcome:</u>	8 wooden stakes, 1 m length min., 5-8 cm diameter;	8 iron stakes with grommets and rings, 40 cm length, 2 cm diameter;
<u>alternative:</u>	iron bars / tubes, similar dimensions to wooden stakes	
<u>alternative:</u>	stones resting on forked twigs	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences stakes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wood	iron
<u>acquisition:</u>	surroundings	blacksmith
<u>processing:</u>	manual woodcraft	NA
<u>used tools:</u>	manual handicraft tools for woodcraft	NA
<u>outcome:</u>	8 wooden stakes, long and thick	8 iron stakes with grommets and rings, small and handy;
<u>alternative:</u>	iron bars / tubes, similar dimensions to wooden stakes;	
<u>alternative:</u>	stones resting on forked twigs	

I have chosen to reduce the dimensions in “outcome” to interpretationed data correlating with an idea of comparison between old and new and relating it to the manual handling when being used. Similar goal is pursued with the “alternative” of iron bars / tubes, relating them to the wooden stakes in size.

## poles

The old way of “production of poles” (see table in chapter 6.2.2) leads to the old “poles” (see table in chapter 6.1.3):

The new way of “production of poles” (see table in chapter 6.2.1) leads to the new “poles” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood (e.g. young poplar stems); coniferous wood;	broadleaf wood (e.g. young poplar stems);
<u>acquisition:</u>	from the surroundings OR trade;	trade, from the surroundings (traded within the family, gathered from poplar plantation);
<u>processing:</u>	removing branches, decortivating, narrowing top conically, rounding tip, sooted during usage;	removing branches, decortivating, narrowing tip;
<u>used tools:</u>	NA (probably saw, chop sickle ( <i>orak</i> ), adzes, gouges and knives)	saw, chop sickle ( <i>orak</i> );
<u>result:</u>	3 poles	3 poles

<b>comparison of poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood (e.g. poplar)	broadleaf wood (young poplar trees)
<u>type of workmanship:</u>	decortivated; carved; conically narrowed OR rounded top end;	decortivated; cylindrical narrowed top end with sharp edges;
<u>length:</u>	2,3 - 3,2 m	2,7 m
<u>diameter:</u>	6 - 10 cm	6 - 8 cm
<u>alternative:</u>	conifer wood	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of poles” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of poles” loses the subjects “material”, “type of workmanship”, “length” and “diameter”. Their content is already included in the other subjects. The sizes do not get mentioned anymore as they are related to the tent particularly and do not allow a generalized comparison in that case. The new subject “outcome” is added. The conifer wood is put down into “alternative” as the regional findings with their higher priority were made of broadleaf wood.

<b>overall comparison poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	broadleaf wood (young poplar stems)
<u>acquisition:</u>	from the surroundings OR trade;	trade, from the surroundings (traded within the family, gathered from poplar plantation);
<u>processing:</u>	removing branches, decortiating, narrowing top conically, rounding tip, sooted during usage;	removing branches, decortiating, narrowing tip;
<u>used tools:</u>	NA (probably saw, chop sickle ( <i>orak</i> ), adzes, gouges and knives)	saw, chop sickle ( <i>orak</i> );
<u>outcome:</u>	3 poles, size related to tent size	3 poles, size related to tent size
<u>alternative:</u>	conifer wood;	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	AND other broadleaf wood types;	poplar
<u>acquisition:</u>	rather surroundings	rather trade
<u>processing:</u>	tip: narrowed conically and rounded, sooted during usage;	rough woodcraft
<u>used tools:</u>	probably various woodcraft tools	few woodcraft tools

<u>outcome:</u>	3 poles	3 poles
<u>alternative:</u>	conifer wood	

For “acquisition”, I chose to describe tendencies. The “processing” gets reduced showing a slight difference in working details. Similarly, the “used tools” are summarized in a quantitative interpretation data, pointing out the probability in regard of the old tools as this information is not entirely assured.

### exterior poles

The old way of “production of exterior poles” (see table in chapter 6.2.2) leads to the old “exterior poles” (see table in chapter 6.1.3):

The new way of “production of exterior poles” (see table in chapter 6.2.1) leads to the new “exterior poles” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of exterior poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wooden branches	NA
<u>acquisition:</u>	from the surroundings	NA
<u>processing:</u>	cutting, maybe decorticating;	NA
<u>used tools:</u>	NA (probably adze, additionally maybe saw and knife)	NA
<u>result:</u>	3 - 6 exterior poles	NA

<b>comparison of exterior poles</b>	<b>old</b>	<b>new</b>
<u>design type:</u>	forked branch OR straight stem	none
<u>material:</u>	broadleaf wood	none
<u>type of workmanship:</u>	roughly decorticated OR not decorticated, carved OR uncarved;	none
<u>length:</u>	1 - 2 m	none
<u>setting:</u>	high poles close to the tent (1,5 m minimum distance) OR low poles close to the stakes	none

Now, the tables of production and tent attributes get joined into one. Although the non-existing data for the new tents may indicate these tables to be obsolete, I chose to join them in this chapter as they are the basis for chapter 7.1.3 from where they will be referred back to.

The “comparison of production of exterior poles” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of exterior poles” loses the subjects “design type”, “material”, “type of workmanship” and “length”. Their content gets included into the new subject “outcome” in a strongly simplified way or added into a similar subject listed in the production. As an exception to the rule, “setting” is still singled out.

<b>overall comparison exterior poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	mainly broadleaf wood (crooked branches OR straight stems)	NA
<u>acquisition:</u>	surroundings	NA
<u>processing:</u>	cutting, maybe decorticating, maybe carving;	NA
<u>used tools:</u>	NA (probably adze, additionally maybe saw and knife);	NA
<u>outcome:</u>	3 - 6 exterior poles, varying lengths 1 - 2 m;	none
<u>alternative:</u>	high poles close to the tent (1,5 m minimum distance); OR low poles close to the stakes;	NA

The table above now gets strongly simplified and changed in content, getting prepared for the differences depicted in chapter 7.1.2:

<b>differences exterior poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	mainly broadleaf wood (crooked or straight)	NA
<u>acquisition:</u>	surroundings	NA
<u>processing:</u>	rough OR detailed manual woodcraft work	NA
<u>used tools:</u>	manual woodcraft tools	NA

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<u>outcome:</u>	3 - 6 exterior poles in varying lengths	none
<u>alternative:</u>	high poles close to the tent OR low poles close to the stakes	NA

**wooden pins**

The old way of “production of wooden pins” (see table in chapter 6.2.2) leads to the old “wooden pins” (see table in chapter 6.1.3):

The new way of “production of wooden pins” (see table in chapter 6.2.1) leads to the new “wooden pins” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of wooden pins</b>	<b>old</b>	<b>new</b>
<u>material:</u>	twigs of bushes	twigs of bushes
<u>acquisition:</u>	from the surroundings, shrubs and bushes;	from the surroundings, shrubs and bushes;
<u>processing:</u>	NA (probably decorticating, carving, planing the tip; decorticating may have happened with tools OR by putting the twigs into water for several hours and then peeling off the bark)	carving
<u>used tools:</u>	NA (whittle knife, water bucket, others...)	whittle knife
<u>result:</u>	30 - 40 wooden pins	30 - 40 wooden pins

<b>comparison of wooden pins</b>	<b>old</b>	<b>new</b>
<u>material:</u>	bush twigs, relatively strong or thin;	bush twigs
<u>type of workmanship:</u>	decorticated, rounded tip;	decorticated by sharp carving, not decorticated the first 5 cm, sharp tip;
<u>length:</u>	appr. 20 - 25 cm	appr. 22 cm
<u>diameter:</u>	appr. 0,4 - 0,8 cm	appr. 0,4 - 0,8 cm

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<u>setting:</u>	installed appr. 80 cm distant to each other (OR shorter intervals: e.g. appr. 40 cm)	installed 80 cm distant to each other
<u>alternative:</u>	metal pins with grommets	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of wooden pins” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of wooden pins” loses the subjects “material”, “type of workmanship”, “length” and “diameter”. Their content gets included into the new subject “outcome” in a strongly simplified way or added into a similar subject listed in the production. As an exception to the rule, “setting” is still singled out.

<b>overall comparison wooden pins</b>	<b>old</b>	<b>new</b>
<u>material:</u>	twigs of bushes	twigs of bushes
<u>acquisition:</u>	surroundings	surroundings
<u>processing:</u>	NA, processes that allow a smooth decorticated surface;	rough carving
<u>used tools:</u>	NA	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, relatively strong OR thin, decorticated, rounded tip, 20 - 25 cm long, 0,4 - 0,8 cm thick;	30 - 40 wooden pins, only partly decorticated, carved, sharp tip, 22 cm long, 0,4 - 0,8 cm thick;
<u>setting:</u>	installed appr. 80 cm distant to each other (OR shorter intervals: e.g. appr. 40 cm);	installed 80 cm distant to each other
<u>alternative:</u>	metal pins with grommets	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences wooden pins</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	NA, processes that allow a smooth decorticated surface;	rough carving
<u>used tools:</u>	NA	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, relatively strong OR thin, decorticated, rounded tip;	30 - 40 wooden pins, only partly decorticated, carved, sharp tip;
<u>setting:</u>	OR less distance to each other;	installed 80 cm distant to each other;

<u>alternative:</u>	metal pins with grommets;	
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The following two sections set focus onto the tent roof construction. The first section is about the plain textile only. The second section summarizes all details that specify the layout and design of the tent roof.

### roof textile

Regarding the old tents, out of chapter 6.2.2., the tables “raw wool”, “(combing, carding)”, “spinning” and “weaving” form the production line for the roof textile and lead to the attributes of the textile listed in chapter 6.1.3 in the table “textile attributes roof”. Regarding the new tents, out of chapter 6.2.1., the tables “raw wool”, “combing, carding”, “spinning” and “weaving” form the production line for the roof textile and lead to the attributes of the textile listed in chapter 6.1.1 in the table “textile attributes roof”.

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of the roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>material:</u>	cut hair from black cashmere goats	cut hair from black cashmere goats
<u>acquisition:</u>	cutting	cutting
<u>processing:</u>	cutting, sorting in quality, collecting in bags;	cutting, collecting in bags;
<u>used tools:</u>	shearing scissors	shearing scissors
<u>result:</u>	well sorted goat hair	mixed goat hair
<b>combing, carding</b>		
<u>material:</u>	well sorted goat hair	mixed goat hair
<u>acquisition:</u>	own goat flocks	delivery from goat breeders
<u>processing:</u>	combing, backing into sacks;	sorting into colours, drying, automated combing (division of foam and kemp hair), automated carding (fanning out into a fleece), backing into sacks;

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<u>used tools:</u>	iron comb board	drying and tumbling machine OR road (drying wool on the road), combing and carding machine;
<u>result:</u>	combed kemp hair in sacks	carded kemp hair in sacks
<b>spinning</b>		
<u>material:</u>	well sorted goat hair, combed OR uncombed;	carded kemp hair
<u>acquisition:</u>	own goats	product of automated combing manufacture
<u>processing:</u>	spinning into thread and counterspinning into yarn	spinning into thread and counterspinning into yarn
<u>used tools:</u>	drop spindle, occasionally çark;	spinning wheel with the walking-path method
<u>result:</u>	black goat hair yarn in round bundles	black goat hair yarn in round bundles
<b>weaving</b>		
<u>material:</u>	black goat hair yarn	black goat hair yarn
<u>acquisition:</u>	hand-spinning within the family	from hand-spinning manufacture (mostly within family ties)
<u>processing:</u>	setting up the warp and loom, weaving, rolling finished weave into rolls;	setting up the warp, weaving, rolling weave into rolls;
<u>used tools:</u>	mainly mobile vertical loom, occasionally horizontal ground loom OR horizontal treadle loom with pit	treadle loom
<u>result:</u>	black goat hair panels (width: appr. 80cm; length: NA)	black goat hair panels (width: appr. 80cm; length: appr. 27 m)

<b>comparison of textile attributes roof</b>	<b>old</b>	<b>new</b>
<u>yarn quality:</u>	high quality yarn (long hair)	Mix of long and short goat hair
<u>yarn thickness:</u>	0,25 - 0,4 cm (narrow - thick)	0,35 cm
<u>yarn character of twist:</u>	far stretched - average twist	far stretched
<u>warp threads per 10 cm:</u>	23 - 36	24

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<u>weft threads per 10 cm:</u>	17 - 22	16
<u>weaving tension characters:</u>	rather loose - higher tension	rather loose
<u>duration:</u>	tents tore apart after 10 - 30 years of use, some are still remaining;	first signs of material fatigue after 5 years of occasional use
<u>alternative:</u>	roof panels may be of mixed age	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of the roof textile” loses the subjects “material” and “acquisition” within the subsections of working steps as this data is evident by the previous step. Words within this table get simplified or reduced.

The “comparison of textile attributes roof” loses most of the subjects concerning the yarn and weave attributes which get summarized in “outcome” with relative expressions. The data of the new tents is set into relation to the data range of the old tent, there. As an exception to the rule, “duration” and “alternative” are still singled out.

<b>overall comparison roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>material:</u>	cut hair from black cashmere goats	cut hair from black cashmere goats
<u>acquisition:</u>	own goat flocks; cutting;	delivery from goat breeders; cutting;
<u>processing:</u>	cutting, sorting in quality, collecting in bags;	cutting, collecting in bags;
<u>used tools:</u>	shearing scissors	shearing scissors
<u>result:</u>	well sorted goat hair	mixed goat hair
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;) OR none	sorting into colours, drying, automated combing and carding, backing into sacks;
<u>used tools:</u>	(iron comb board) OR none	drying - tumbling machine or road, combing - carding machine;
<u>result:</u>	(combed kemp hair in sacks) OR well sorted goat hair	carded kemp hair in sacks
<b>spinning</b>		
<u>processing:</u>	spinning into thread and counterspinning into yarn	spinning into thread and counterspinning into yarn

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<u>used tools:</u>	drop spindle, occasionally çark;	spinning wheel with the walking-path method
<u>result:</u>	black goat hair yarn in round bundles	black goat hair yarn in round bundles
<b>weaving</b>		
<u>processing:</u>	setting up the warp and loom, weaving, rolling weave into rolls;	setting up the warp, weaving, rolling weave into rolls;
<u>used tools:</u>	mainly mobile vertical loom, occasionally horizontal ground loom OR horizontal treadle loom with pit;	treadle loom
<u>outcome:</u>	black goat hair panels (width: appr. 80cm; length: NA); high quality yarn (long hair); various yarn thicknesses, twists warp/weft densities and weaving tensions;	black goat hair panels (width: appr. 80cm; length: appr. 27 m); average quality yarn (mixed hairs); 0,35 cm yarn thickness, far stretched twist, loose weaving tension;
<u>duration:</u>	10 - 30 years of use	material fatigue after 5 years of occasional use
<u>alternative:</u>	roof panels may be of mixed age	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>acquisition:</u>	own goat flocks	delivery from goat breeders
<u>processing:</u>	sorting in quality	
<u>result:</u>	well sorted goat hair	mixed goat hair
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;) OR none	sorting into colours, drying, automated combing and carding, backing into sacks;
<u>used tools:</u>	(iron comb board) OR none	drying - tumbling machine or road, combing - carding machine;
<u>result:</u>	(combed kemp hair in sacks) OR well sorted goat hair	carded kemp hair in sacks

<b>spinning</b>		
<u>used tools:</u>	drop spindle, occasionally çark;	spinning wheel with the walking-path method
<b>weaving</b>		
<u>processing:</u>	setting up the warp and loom, weaving, ... ;	setting up the warp, weaving, ... ;
<u>used tools:</u>	mainly mobile vertical loom, occasionally horizontal ground loom OR horizontal treadle loom with pit;	treadle loom
<u>outcome:</u>	black goat hair panels (length: NA); high quality yarn (long hair); various yarn thicknesses, twists warp/weft densities and weaving tensions;	black goat hair panels (length: appr. 27 m); average quality yarn (mixed hairs); 0,35cm yarn thickness, far stretched twist, loose weaving tension;
<u>duration:</u>	10 - 30 years of use	material fatigue after 5 years of occasional use
<u>alternative:</u>	roof panels may be of mixed age	

### tent roof design

Regarding the old tents, out of chapter 6.2.2, the tables “laying out the tent”, “sewing panels”, “sewing belts”, “installing ridge pieces”, “installing stay-fasteners on belts”, “installing stay-fasteners on central panels” and “end seam of panels” form the production line for the tent roof and lead to the finished design of the tent roof listed in chapter 6.1.3 in the tables “design attributes of the roof” and “stay-fastener’s connection to the tent”.

Regarding the new tents, out of chapter 6.2.1, the tables “laying out the tent”, “sewing panels”, “sewing belts”, “installing ridge pieces”, “installing stay-fasteners on belts”, “installing stay-fasteners on central panels” and “end seam of panels” form the production line for the tent roof and lead to the finished design of the tent roof listed in chapter 6.1.1 in the tables “design attributes of the roof” and “stay-fastener’s connection to the tent”.

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of tent roof</b>	<b>old</b>	<b>new</b>
<b>laying out the tent</b>		

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<u>material:</u>	black goat hair panels	black goat hair panels
<u>acquisition:</u>	weaving within the family	product of the weavers' vil-lages
<u>processing:</u>	preparing the ground; lay-outing, cutting the panels, maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);	preparing the ground; layout-ing, cutting and beating the panels; pinning panels onto ground (with iron nails);
<u>used tools:</u>	shearing scissors (for cutting), maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm deteriorating down to the lower end), wooden ham-mers;	shearing scissors (for cutting), poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<u>result:</u>	tent layout pinned and stretched on ground	tent layout pinned and stretched on ground
<b>sewing panels</b>		
<u>material:</u>	panels side by side according to tent layout	panels side by side according to tent layout
<u>acquisition:</u>	see previous production step	see previous production step
<u>processing:</u>	sewing even stitch method, from one end to the other OR from the middle out-wards;	sewing even Yörük stitch method, from one end to the other;
<u>used tools:</u>	black goat hair yarn, large needles (bent narrow twist), shearing scissors;	black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	hand-made black woven bands	machine-made decorated woven bands (colours: black, natural white, occasionally: natural brown)
<u>acquisition:</u>	band weaving within the family	product of the weavers' vil-lages

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<u>processing:</u>	NA (measuring, levelling and sewing)	measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	black goat hair yarn, large needle (bent narrow twist), shearing scissors, NA (levelling and measuring yarn, pins, hammer);	levelling yarn, measuring tape, iron nails, iron hammer, black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u>	sewn belts on tent roof	sewn belts on tent roof
<b>installing ridge pieces</b>		
<u>material:</u>	wooden ridge pieces with drilled holes	wooden ridge pieces with drilled holes
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (levelling, sewing)	measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u>	black goat hair yarn, large needles (bent narrow twist), shearing scissors, NA (levelling yarn);	measuring tape, black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u>	sewn ridge pieces on tent roof	sewn ridge pieces on tent roof
<b>installing stay-fasteners on belts</b>		
<u>material:</u>	wooden stay-fasteners	wooden stay-fasteners
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (sewing bundles of goat hair yarn onto ends of belts, sewing and winding yarn bundles around stay-fastener's ends)	dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u>	black goat hair yarn, large needle (bent narrow twist), shearing scissors, NA;	black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u>	stay-fasteners on belts	stay-fasteners on belts
<b>installing stay-fasteners on central panels</b>		
<u>material:</u>	wooden stay-fasteners	wooden stay-fasteners
<u>acquisition:</u>	carving within the family	product of carpenter

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<u>processing:</u>	NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	black goat hair yarn, large needle (bent narrow twist), shearing scissors, NA;	black goat hair yarn, large needle (bent narrow twist), shearing scissors;
<u>result:</u>	stay-fasteners connected to the central panel	stay-fasteners connected to the central panel
<b>end seam of panels</b>		
<u>material:</u>	sewn tent roof	sewn tent roof
<u>acquisition:</u>	see previous working steps	see previous working steps
<u>processing:</u>	NA (sewing folded seam OR fraying and braiding OR none)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA (large needles (bent narrow twist), shearing scissors OR none)	large needle (bent narrow twist), shearing scissors OR none;
<u>result:</u>	folded end seam OR braided frazzled seam OR none	folded end seam OR braided frazzled seam

<b>comparison tent roof</b>	<b>old</b>	<b>new</b>
<b>design attributes of the roof</b>		
<u>stitch:</u>	even stitch	even Yörük stitch
<u>panels:</u>	5 (occasionally broad) OR 7 pieces; occasionally added up with decorated and undecorated eaves' band;	5 pieces
<u>type of panel end seam:</u>	hanging down for appr. 0,1 - 0,5 m; braided cords, hanging loose unseamed or folded seam;	hanging down for appr. 0,2 m, mix of braided cords, hanging loose unseamed or folded seam;
<u>belts:</u>	plain black, widths observed: 30 - 33 cm;	all 3 belts decorated (2 colours) of the same design, width: 25 cm, machine-made;

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<u>odds:</u>	in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;	
<u>alternative:</u>	rare use of raised stitch	middle belt showing different decoration pattern (3 colours)
<b>stay-fastener's connection to the tent</b>		
<u>means of fastening:</u>	braided OR twisted ropes made of goat hair yarn; (occasionally : connected to ropes made of divided belt ends (long sides);)	connected to ropes made of divided belt ends (long sides); braided ropes made of goat hair yarn (short sides);
<u>alternative:</u>	synthetic yarn (repairing broken connections)	
<u>alternative:</u>	stay-fastener connected to the belt by two braided ropes sticking out between last panel and eaves's band at the long front side	

Now, the tables of production and tent roof design get joined into one. The “comparison of production of the tent roof” loses some subjects of “material” and “acquisition” within the subsections of working steps as this data is evident in some cases by the previous step. Words within this table get simplified or reduced.

The “comparison tent roof” loses most of the subjects concerning the attributes which get summarized in “outcome” with relative expressions. The table section “stay-fastener's connection to the tent” gets strongly reduced to few remarks in “outcome”. As an exception to the rule, “odds” and “alternative” are still singled out.

<b>overall comparison tent roof</b>	<b>old</b>	<b>new</b>
<b>layouting the tent</b>		
<u>material:</u>	black goat hair panels	black goat hair panels
<u>acquisition:</u>	weaving within the family	product of the weavers' vil-lages

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<u>processing:</u>	preparing the ground; layouting, cutting and maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);	preparing the ground; layouting, cutting and beating the panels; pinning panels onto ground (with iron nails);
<u>used tools:</u>	shearing scissors (for cutting), maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm deteriorating down to the lower end), wooden hammers;	shearing scissors (for cutting), poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<u>result:</u>	tent layout pinned and stretched on ground, panels side by side according to tent layout;	tent layout pinned and stretched on ground, panels side by side according to tent layout;
<b>sewing panels</b>		
<u>processing:</u>	sewing even stitch method, from one end to the other OR from the middle outwards;	sewing even Yörük stitch method, from one end to the other;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	hand-made black woven bands	machine-made decorated woven bands (2 - 3 colours)
<u>acquisition:</u>	band weaving within the family	product of the weavers' villages
<u>processing:</u>	NA (measuring, levelling and sewing belts onto panels with a simple overcast stitch)	measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA (levelling and measuring yarn, pins, hammer);	levelling yarn, measuring tape, iron nails, iron hammer, black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn belts on tent roof	sewn belts on tent roof
<b>installing ridge pieces</b>		

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<u>material:</u>	wooden ridge pieces with drilled holes	wooden ridge pieces with drilled holes
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (levelling, sewing)	measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors, NA (levelling yarn);	measuring tape, black goat hair yarn, large needle , shearing scissors;
<u>result:</u>	sewn ridge pieces on tent roof	sewn ridge pieces on tent roof
<b>installing stay-fasteners on belts</b>		
<u>material:</u>	wooden stay-fasteners	wooden stay-fasteners
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (sewing bundles of goat hair yarn onto ends of belts, sewing and winding yarn bundles around stay-fastener's ends)	dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners on belts	stay-fasteners on belts
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners connected to the central panel	stay-fasteners connected to the central panel
<b>end seam of panels</b>		
<u>material:</u>	sewn tent roof	sewn tent roof
<u>processing:</u>	NA (sewing folded seam OR fraying and braiding OR none)	sewing folded seam OR fraying and braiding;

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<u>used tools:</u>	NA (large needles, shearing scissors OR none)	large needle, shearing scissors OR none;
<u>result:</u>	folded end seam OR braided frazzled seam OR none, different lengths of flag;	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or 7 panels; with decorated or undecorated eaves' band, even stitch, seamed braided/folded/none with 0,1 - 0,5 m flag, black broad belts, numerous kinds of connection for stay-fasteners;	5 panels, even Yörük stitch, seamed braided/folded/none with 0,2 m flag, decorated narrower belts machine-made, stay-fasteners connected divided belt ends (long sides) OR braided ropes made of goat hair yarn (short sides);
<u>odds:</u>	in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;	
<u>alternative:</u>	rare use of raised stitch	middle belt showing different decoration pattern (3 colours)

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences tent roof</b>	<b>old</b>	<b>new</b>
<b>layouting the tent</b>		
<u>acquisition:</u>	weaving within the family	product of the weavers' villages
<u>processing:</u>	maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);	beating the panels; pinning panels onto ground (with iron nails);
<u>used tools:</u>	maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm), wooden hammers;	poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<b>sewing panels</b>		

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<u>processing:</u>	sewing even stitch method, from one end to the other OR from the middle outwards;	sewing even Yörük stitch method, from one end to the other;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	hand-made black woven bands	machine-made decorated woven bands (2 - 3 colours)
<u>acquisition:</u>	band weaving within the family	product of the weavers' villages
<u>processing:</u>	NA	measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	NA (levelling and measuring yarn, pins, hammer)	levelling yarn, measuring tape, iron nails, iron hammer;
<b>installing ridge pieces</b>		
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA	measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u>	partly NA	measuring tape
<b>installing stay-fasteners on belts</b>		
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA, (sewing bundles of goat hair yarn onto ends of belts, sewing and winding yarn bundles around stay-fastener's ends)	dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u>	partly NA	black goat hair yarn, large needle, shearing scissors;
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA OR similar	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;

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<u>used tools:</u>	NA	black goat hair yarn, large needle, shearing scissors;
<b>end seam of panels</b>		
<u>processing:</u>	NA (similar OR none)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA	large needle, shearing scissors OR none
<u>result:</u>	OR none	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or 7 panels; with decorated or undecorated eaves' band, even stitch, with 0,1 - 0,5 m flag, black broad belts, numerous kinds of connection for stay-fasteners;	5 panels, even Yörük stitch, with 0,2 m flag, decorated narrower belts machine-made, stay-fasteners connected divided belt ends (long sides) OR braided ropes made of goat hair yarn (short sides);
<u>odds:</u>	in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;	
<u>alternative:</u>	rare use of raised stitch	middle belt showing different decoration pattern (3 colours)

**tent walls**

The old way of “sewing walls” (see table in chapter 6.2.2) leads to the old “design attributes of the walls” (see table in chapter 6.1.3):

The new way of “sewing walls” (see table in chapter 6.2.1) leads to the new “design attributes of the walls” (see table in chapter 6.1.1):

Joining these tables into a comparison table of old and new tents:

<b>comparison of production of tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair panels (old OR new) OR blankets	black goat hair panels

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<u>acquisition:</u>	weaving within the family OR black tent rugs collected within the family OR blan- kets collected or traded;	product of the weavers' vil- lages
<u>processing:</u>	NA (measuring length and width of tent roof, cutting panels/rugs, sewing panels/ rugs on ground, seaming wall cloth with folded seam);	measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretch- ing; seaming wall cloth with folded seam;
<u>used tools:</u>	shearing scissors, black goat hair yarn, large needles (bent narrow twist), NA;	shearing scissors, black goat hair yarn, large needle (bent narrow twist);
<u>result:</u>	4 wall cloths for tent	4 wall cloths for tent

<b>comparison tent walls</b>	<b>old</b>	<b>new</b>
<u>stitch:</u>	even stitch	even Yörük stitch
<u>panels:</u>	2 broad pieces for the long sides (occasionally with top band); 3 broad pieces for the short sides;	2 pieces (long and short sides)
<u>type of seam:</u>	folded seam, occasionally roughly seamed ends;	folded seam
<u>alternative:</u>	rare use of raised stitch	added with decorated top end band (3 colours), width: 25 cm, machine-made;
<u>alternative:</u>	wall curtain divided in two for the long side	

Now, the tables of production and tent attributes get joined into one. The “comparison of production of tent walls” loses the subject “result”. Words within this table get simplified or reduced. The “comparison of tent walls” loses the subjects “stitch”, “panels” and “type of seam”. Their content gets included into the new subject “outcome”. As an exception to the rule, the “alternative”s are still singled out.

<b>overall comparison tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair panels (old OR new) OR blankets	black goat hair panels

The Yörük Black Tent

<u>acquisition:</u>	weaving within the family OR black tent rugs collected within the family OR blan- kets collected or traded	product of the weavers' vil- lages
<u>processing:</u>	NA	measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretch- ing; seaming wall cloth with folded seam;
<u>used tools:</u>	shearing scissors, black goat hair yarn, large needles, NA;	shearing scissors, black goat hair yarn, large needle;
<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 broad pieces (long sides) (occasionally with top band); 3 broad pieces (short sides); OR roughly seamed;	4 wall cloths for tent, even Yörük stitch; 2 pieces (long and short sides); folded seamed;
<u>alternative:</u>	rare use of raised stitch	added with decorated top end band (3 colours), width: 25 cm, machine-made;
<u>alternative:</u>	wall curtain divided in two for the long side	

The table above now gets strongly simplified and changed in content, taking an empha-  
sis on the differences between old and new features:

<b>differences tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR old goat hair panels OR blankets	black goat hair panels
<u>acquisition:</u>	weaving within the family OR black tent rugs/blankets collected/traded	product of the weavers' vil- lages
<u>processing:</u>	NA	measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretch- ing; seaming wall cloth with folded seam;
<u>used tools:</u>	AND NA	shearing scissors, black goat hair yarn, large needle;

<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 broad pieces (long sides) (occasionally with top band); 3 broad pieces (short sides); OR roughly seamed;	4 wall cloths for tent, even Yörük stitch; 2 pieces (long and short sides); folded seamed;
<u>alternative:</u>	rare use of raised stitch	added with decorated top end band (3 colours), width: 25 cm, machine-made;
<u>alternative:</u>	wall curtain divided in two for the long side	

### tent completion

The tent completion derives its information only from the production line depicted in chapter 6.2. Therefore, the information of production processes and methods collected in the tables “first tent pitch-up” and “completing the tent” are set into comparison into each other between the old tents (chapter 6.2.2) and the new tents (chapter 6.2.1).

<b>comparison tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	finished tent roof, finished walls, wooden pins;	finished tent roof
<u>acquisition:</u>	result of many manufacturing steps	result of many manufacturing steps
<u>processing:</u>	NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole’s tips in ridge piece sockets, pinning walls onto roof)	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole’s tips in ridge piece sockets;
<u>used tools:</u>	NA (knives, wooden stakes, hammers, bush twigs OR brooms)	knives, iron stakes, iron hammers, bush twigs;

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<u>result:</u>	pitched-up tent roof and walls	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats (made of reed mats); maybe wooden stakes for windbreaking mats, floor reed mat, carpet;	windbreaking mats (made of synthetic fibre); iron bars (length: 1,2m), wall cloths, wooden pins, floor mat (made of synthetic fibre), carpet;
<u>acquisition:</u>	NA (reed mats may derive from own production or trade, wooden stakes from surroundings, carpets produced within or traded within the family)	mats and iron bars from the shops of the city Tire, wall cloths and wooden pins from previous working steps;
<u>processing:</u>	NA (installing wooden stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground)	installing vertical iron bars onto the ground, binding windbreaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (hammer, yarn, large needle (bent narrow twist), knife)	iron hammer, yarn, large needle (bent narrow twist), knife;
<u>result:</u>	finished tent	finished tent
<u>alternative:</u>	using metal sheeds for windbreaking mats	
<u>alternative:</u>	using stone walls instead of windbreaking mats	

For the overall comparison, the table does not get reduced as it is already compact enough. In “outcome”, the profile of the tent is roughly summarized. The “alternative”s are still singled out.

<b>overall comparison tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	finished tent roof, finished walls, wooden pins;	finished tent roof

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<u>acquisition:</u>	result of many manufacturing steps	result of many manufacturing steps
<u>processing:</u>	NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets, pinning walls onto roof)	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (knives, wooden stakes, hammers, bush twigs OR brooms)	knives, iron stakes, iron hammers, bush twigs;
<u>result:</u>	pitched-up tent roof and walls	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats (made of reed mats); maybe wooden stakes for windbreaking mats, floor reed mat, carpet;	windbreaking mats (made of synthetic fibre); iron bars (length: 1,2 m), wall cloths, wooden pins, floor mat (made of synthetic fibre), carpet;
<u>acquisition:</u>	NA (reed mats may derive from own production or trade, wooden stakes from surroundings, carpets produced within or traded within the family)	mats and iron bars from the shops of the city Tire, wall cloths and wooden pins from previous working steps;
<u>processing:</u>	NA (installing wooden stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground)	installing vertical iron bars onto the ground, binding windbreaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (hammer, yarn, large needle (bent narrow twist), knife)	iron hammer, yarn, large needle (bent narrow twist), knife;

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<u>outcome:</u>	finished tent; with reed mats and wooden stakes;	finished tent; with synthetic mats and iron stakes;
<u>alternative:</u>	metal sheeds for windbreaking mats	
<u>alternative:</u>	stone walls instead of wind-breaking mats	

The table above now gets strongly simplified and changed in content, taking an emphasis on the differences between old and new features:

<b>differences tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	AND finished walls, wooden pins;	finished tent roof
<u>processing:</u>	NA (AND pinning walls onto roof)	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (OR brooms)	knives, iron stakes, iron hammers, bush twigs;
<u>result:</u>	AND walls	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats made of reed; maybe wooden stakes for windbreaking mats, floor reed mat;	windbreaking mats made of synthetic fibre; iron bars, wall cloths, wooden pins, floor mat (made of synthetic fibre);
<u>acquisition:</u>	NA (mainly own production and surroundings)	from the shops of the city Tire and from previous working steps

<u>processing:</u>	NA (wall cloths already installed)	installing vertical iron bars onto the ground, binding windbreaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (different hammer)	iron hammer, yarn, large needle (bent narrow twist), knife;
<u>outcome:</u>	finished tent; with reed mats and wooden stakes	finished tent; with synthetic mats and iron stakes;
<u>alternative:</u>	metal sheeds for windbreaking mats	
<u>alternative:</u>	stone walls instead of windbreaking mats	

## Chapter 7.1.2 Summary of Differences

Following, the results of chapter 7.1.1 are summarized, creating a set of overview tables that form the basis for discussions in chapter 8.

<b>differences ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings	carpenter
<u>processing:</u>	mainly carving, sooting the surface;	mainly cutting, impregnating with wood stain;
<u>used tools:</u>	probably manual handicraft tools	mainly automated handicraft tools, new: brush;
<u>outcome:</u>	3 ridge pieces of broadleaf wood, sooted surface, mainly carved, rounded, deep socket;	3 ridge pieces of conifer wood, impregnated, mainly cut, not rounded, shallow socket;
<u>alternative:</u>	metal ridge pieces;	

<b>differences stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings	carpenter

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<b>differences stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	mainly carving	mainly cutting, impregnating with wood stain;
<u>used tools:</u>	probably manual handicraft tools	mainly automated handicraft tools, new: brush;
<u>outcome:</u>	8 stay-fasteners of broadleaf wood, mainly carved and rounded;	8 stay-fasteners of conifer wood, impregnated, mainly cut and not rounded;
<u>alternative:</u>	other types of stay-fasteners; optionally of conifer wood;	

<b>differences guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR black goat hair	hemp or flax
<u>acquisition:</u>	OR own production	ropemaker
<u>processing:</u>	NA	NA
<u>used tools:</u>	OR rope spindles, NA;	NA
<u>outcome:</u>	OR 40 - 60m goat hair rope, OR less knots;	40 - 60m hemp or flax rope, 4 half-hitch knots;
<u>alternative:</u>	metal chains	
<u>alternative:</u>	synthetic ropes	

<b>differences stakes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wood	iron
<u>acquisition:</u>	surroundings	blacksmith
<u>processing:</u>	manual woodcraft	NA
<u>used tools:</u>	manual handicraft tools for woodcraft	NA
<u>outcome:</u>	8 wooden stakes, long and thick;	8 iron stakes with grommets and rings, small and handy;
<u>alternative:</u>	iron bars / tubes, similar dimensions to wooden stakes;	
<u>alternative:</u>	stones resting on forked twigs	

<b>differences poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	AND other broadleaf wood types	poplar
<u>acquisition:</u>	rather surroundings	rather trade
<u>processing:</u>	tip: narrowed conically and rounded	rough woodcraft

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<u>used tools:</u>	probably various woodcraft tools	few woodcraft tools
<u>outcome</u>	3 poles	3 poles
<u>alternative:</u>	conifer wood	

<b>differences exterior poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	mainly broadleaf wood (crooked or straight)	NA
<u>acquisition:</u>	surroundings	NA
<u>processing:</u>	rough OR detailed manual woodcraft work	NA
<u>used tools:</u>	manual woodcraft tools;	NA;
<u>outcome:</u>	3-6 exterior poles in varying lengths	none
<u>alternative:</u>	high poles close to the tent OR low poles close to the stakes	NA

<b>differences wooden pins</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	NA, processes that allow a smooth decorticated surface;	rough carving
<u>used tools:</u>	NA	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, relatively strong or thin, decorticated, rounded tip;	30 - 40 wooden pins, only partly decorticated, carved, sharp tip;
<u>setting:</u>	OR less distance to each other	installed 80 cm distant to each other
<u>alternative:</u>	metal pins with grommets	

<b>differences roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>acquisition:</u>	own goat flocks	delivery from goat breeders
<u>processing:</u>	sorting in quality	
<u>result:</u>	well sorted goat hair	mixed goat hair
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;) OR none	sorting into colours, drying, automated combing and carding, backing into sacks;

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<u>used tools:</u>	(iron comb board;) OR none	drying - tumbling machine OR road, combing - carding machine;
<u>result:</u>	(combed kemp hair in sacks;) OR well sorted goat hair	carded kemp hair in sacks
<b>spinning</b>		
<u>used tools:</u>	drop spindle, occasionally çark;	spinning wheel with the walking-path method
<b>weaving</b>		
<u>processing:</u>	setting up the warp and loom, weaving, ... ;	setting up the warp, weaving, ... ;
<u>used tools:</u>	mainly mobile vertical loom, occasionally horizontal ground loom OR horizontal treadle loom with pit;	treadle loom
<u>outcome:</u>	black goat hair panels (length: NA); high quality yarn (long hair); various yarn thicknesses, twists warp/weft densities and weaving tensions;	black goat hair panels (length: appr. 27 m); average quality yarn (mixed hairs); 0,35 cm yarn thickness, far stretched twist, loose weaving tension;
<u>duration:</u>	10 - 30 years of use	material fatigue after 5 years of occasional use
<u>alternative:</u>	roof panels may be of mixed age	

<b>differences tent roof</b>	<b>old</b>	<b>new</b>
<b>layouting the tent</b>		
<u>acquisition:</u>	weaving within the family	product of the weavers' villages
<u>processing:</u>	maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);	beating the panels; pinning panels onto ground (with iron nails);
<u>used tools:</u>	maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm), wooden hammers;	poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<b>sewing panels</b>		

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<u>processing:</u>	sewing even stitch method, from one end to the other or from the middle outwards;	sewing even Yörük stitch method, from one end to the other;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	hand-made black woven bands	machine-made decorated woven bands (2 - 3 colours);
<u>acquisition:</u>	band weaving within the family	product of the weavers' villages
<u>processing:</u>	NA	measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	NA (levelling and measuring yarn, pins, hammer)	levelling yarn, measuring tape, iron nails, iron hammer;
<b>installing ridge pieces</b>		
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA	measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u>	partly NA	measuring tape
<b>installing stay-fasteners on belts</b>		
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (sewing bundles of goat hair yarn onto ends of belts, ...)	dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u>	partly NA	black goat hair yarn, large needle, shearing scissors;
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA or similar	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	NA	black goat hair yarn, large needle, shearing scissors;
<b>end seam of panels</b>		

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<u>processing:</u>	NA (similar OR none)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA	large needle, shearing scissors OR none;
<u>result:</u>	OR none, different lengths of flag;	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or 7 panels; with decorated OR undecorated eaves' band, even stitch, with 0,1 - 0,5 m flag, black broad belts, numerous kinds of connection for stay-fasteners;	5 panels, even Yörük stitch, with 0,2 m flag, decorated narrower belts machine-made, stay-fasteners connected divided belt ends (long sides) OR braided ropes made of goat hair yarn (short sides);
<u>odds:</u>	in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;	
<u>alternative:</u>	rare use of raised stitch	middle belt showing different decoration pattern (3 colours)

<b>differences tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR old goat hair panels OR blankets	black goat hair panels
<u>acquisition:</u>	weaving within the family OR black tent rugs/blankets collected/traded	product of the weavers' villages
<u>processing:</u>	NA	measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretching; seaming wall cloth with folded seam;
<u>used tools:</u>	And NA	shearing scissors, black goat hair yarn, large needle;

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<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 broad pieces (long sides) (occasionally with top band); 3 broad pieces (short sides); OR roughly seamed;	4 wall cloths for tent, even Yörük stitch; 2 pieces (long and short sides); folded seamed;
<u>alternative:</u>	rare use of raised stitch	added with decorated top end band (3 colours), width: 25 cm, machine-made;
<u>alternative:</u>	wall curtain divided in two for the long side	

<b>differences tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	AND finished walls, wooden pins;	finished tent roof
<u>processing:</u>	NA (AND pinning walls onto roof)	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (OR brooms)	knives, iron stakes, iron hammers, bush twigs;
<u>result:</u>	AND walls	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats made of reed; maybe wooden stakes for windbreaking mats, floor reed mat;	windbreaking mats made of synthetic fibre; iron bars, wall cloths, wooden pins, floor mat (made of synthetic fibre);
<u>acquisition:</u>	NA (mainly own production and surroundings)	from the shops of the city Tire and from previous working steps

<u>processing:</u>	NA (wall cloths already installed)	installing vertical iron bars onto the ground, binding windbreaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (different hammer)	iron hammer, yarn, large needle (bent narrow twist), knife;
<u>outcome:</u>	finished tent; with reed mats and wooden stakes	finished tent; with synthetic mats and iron stakes;
<u>alternative:</u>	metal sheeds for windbreaking mats	
<u>alternative:</u>	stone walls instead of windbreaking mats	

## Chapter 7.2 Commons in Production and Design

### Chapter 7.2.1 Development of Comparison Tables

In chapter 7.1.1, overall comparison tables between old and new tents were developed deriving from the data built up in chapter 6, showing the single data reduction steps with comments there. These overall comparison tables are the basis for the development of the tables setting emphasis on commons between old and new tents in this chapter. In each table, the steps of production and the outcome are included.

#### ridge pieces

<b>overall comparison ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings (forests or trade)	carpenter
<u>processing:</u>	cutting, decorticating, carving, drilling, sooting the surface during usage;	cutting, planing edges, carving (hole), drilling, impregnating with wood stain;

<b>overall comparison ridge pieces</b>	<b>old</b>	<b>new</b>
<u>used tools:</u>	NA (probably hand-saws, adzes, gouges and whittle knives, hand braces)	band-saw, planer, gouge, electric drill, brush;
<u>outcome:</u>	3 ridge pieces of broadleaf wood with sooted surface, mainly carved, vaulted and rounded, deep socket;	3 ridge pieces of conifer wood, impregnated, mainly cut, vaulted but not rounded, shallow socket;
<u>alternative:</u>	metal ridge pieces	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons ridge pieces</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	cutting, carving (hole), drilling;	cutting, carving (hole), drilling;
<u>used tools:</u>	NA (AND gouges)	AND gouge
<u>outcome:</u>	3 ridge pieces, vaulted, socket;	3 ridge pieces, vaulted, socket;

### stay-fasteners

<b>overall comparison stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood, other design types: conifer wood;	conifer wood
<u>acquisition:</u>	surroundings (forests OR trade)	carpenter
<u>processing:</u>	cutting, decorticating, carving;	cutting, planing edges, impregnating with wood stain;
<u>used tools:</u>	NA (probably hand-saws, adzes, gouges and whittle knives)	band-saw, planer, brush;
<u>outcome:</u>	8 stay-fasteners of “v-shaped with notches type a” of broadleaf wood, mainly carved and rounded;	8 stay-fasteners of “v-shaped with notches type a” of conifer wood, impregnated, mainly cut and not rounded;

<b>overall comparison stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>alternative:</u>	other types of stay-fasteners	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	AND conifer wood	conifer wood
<u>processing:</u>	cutting	cutting
<u>outcome:</u>	8 stay-fasteners of “v-shaped with notches type a”	8 stay-fasteners of “v-shaped with notches type a”

### **guy-ropes**

<b>overall comparison guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair ropes OR hemp or flax ropes	hemp or flax ropes
<u>acquisition:</u>	own production (black goat hair) OR ropemaker	ropemaker
<u>processing:</u>	NA (probably similar to rope production at the weavers' villages) OR NA (professional rope-production)	professional rope-production
<u>used tools:</u>	NA (probably: rope spindles) OR NA	NA
<u>outcome:</u>	40 - 60m goat hair rope OR hemp or flax rope, 4 half-hitch knots or less;	40 - 60m hemp or flax rope, 4 half-hitch knots;
<u>alternatives:</u>	metal chains, synthetic ropes;	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR hemp or flax ropes	hemp or flax ropes
<u>acquisition:</u>	OR ropemaker	ropemaker

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<b>commons guy-ropes</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	OR similar (professional rope-production)	professional rope-production
<u>used tools:</u>	OR similar	NA
<u>outcome:</u>	OR 40 - 60m hemp or flax rope, 4 half-hitch knots;	40 - 60m hemp or flax rope, 4 half-hitch knots;

**stakes**

<b>overall comparison stakes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wood	iron
<u>acquisition:</u>	surroundings (trees or bushes)	blacksmith
<u>processing:</u>	cutting, maybe decorticating, sharpening lower tip;	NA
<u>used tools:</u>	NA (probably adze, additionally maybe saw and knife)	NA
<u>outcome:</u>	8 wooden stakes, 1 m length min., 5 - 8 cm diameter;	8 iron stakes with grommets and rings, 40 cm length, 2 cm diameter;
<u>alternative:</u>	iron bars / tubes, similar dimensions to wooden stakes;	
<u>alternative:</u>	stones resting on forked twigs	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons stakes</b>	<b>old</b>	<b>new</b>
<u>outcome:</u>		8 iron stakes with grommets and rings
<u>alternative:</u>	iron bars / tubes	

The alternative anchoring system of old tents shows slight similarities to the new anchoring system of new tents.

**poles**

<b>overall comparison poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	broadleaf wood (young poplar stems)
<u>acquisition:</u>	from the surroundings or trade	trade, from the surroundings (traded within the family, gathered from poplar plantation);
<u>processing:</u>	removing branches, decortiating, narrowing top conically, rounding tip;	removing branches, decortiating, narrowing tip;
<u>used tools:</u>	NA (probably saw, chop sickle ( <i>orak</i> ), adzes, gouges and knives)	saw, chop sickle ( <i>orak</i> );
<u>outcome:</u>	3 poles, size related to tent size;	3 poles, size related to tent size;
<u>alternative:</u>	conifer wood	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	broadleaf wood
<u>acquisition:</u>	from the surroundings OR trade	trade, from the surroundings;
<u>processing:</u>	removing branches, decortiating, narrowing top, ... ;	removing branches, decortiating, narrowing tip;
<u>used tools:</u>	NA (probably saw, chop sickle ( <i>orak</i> ), ... )	saw, chop sickle ( <i>orak</i> );
<u>outcome:</u>	3 poles, size related to tent size	3 poles, size related to tent size

### exterior poles

overall comparison exterior poles	old	new
<u>material:</u>	mainly broadleaf wood (crooked branches OR straight stems)	NA
<u>acquisition:</u>	surroundings	NA
<u>processing:</u>	cutting, maybe decorticating, maybe carving;	NA
<u>used tools:</u>	NA (probably adze, additionally maybe saw and knife)	NA
<u>outcome:</u>	3 - 6 exterior poles, varying lengths 1 - 2 m;	none
<u>alternative:</u>	high poles close to the tent (1,5 m minimum distance) OR low poles close to the stakes	NA

The table above cannot be reduced showing any commons between old and new features, as there is not enough data available. Therefore, the exterior poles are missing out.

### wooden pins

overall comparison wooden pins	old	new
<u>material:</u>	twigs of bushes	twigs of bushes
<u>acquisition:</u>	surroundings	surroundings
<u>processing:</u>	NA, processes that allow a smooth decorticated surface;	rough carving
<u>used tools:</u>	NA	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, relatively strong OR thin, decorticated, rounded tip, 20 - 25 cm long, 0,4 - 0,8 cm thick;	30 - 40 wooden pins, only partly decorticated, carved, sharp tip, 22 cm long, 0,4 - 0,8 cm thick;
<u>setting:</u>	installed appr. 80 cm distant to each other (OR shorter intervals: e.g. appr. 40 cm);	installed 80 cm distant to each other

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<u>alternative:</u>	metal pins with grommets	
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The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons wooden pins</b>	<b>old</b>	<b>new</b>
<u>material:</u>	twigs of bushes	twigs of bushes
<u>acquisition:</u>	surroundings	surroundings
<u>used tools:</u>	NA (maybe whittle knife)	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, decorticated, 20 - 25 cm long, 0,4 - 0,8 cm thick;	30 - 40 wooden pins, partly decorticated, 22 cm long, 0,4 - 0,8 cm thick;
<u>setting:</u>	installed appr. 80 cm distant to each other	installed 80 cm distant to each other

**roof textile**

<b>overall comparison roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>material:</u>	cut hair from black cashmere goats	cut hair from black cashmere goats
<u>acquisition:</u>	own goat flocks; cutting;	delivery from goat breeders; cutting;
<u>processing:</u>	cutting, sorting in quality, collecting in bags;	cutting, collecting in bags;
<u>used tools:</u>	shearing scissors	shearing scissors
<u>result:</u>	well sorted goat hair	mixed goat hair
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;) OR none	sorting into colours, drying, automated combing and carding, backing into sacks;
<u>used tools:</u>	(iron comb board) OR none	drying - tumbling machine or road, combing - carding machine;
<u>result:</u>	(combed kemp hair in sacks) OR well sorted goat hair	carded kemp hair in sacks;
<b>spinning</b>		

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<u>processing:</u>	spinning into thread and counterspinning into yarn	spinning into thread and counterspinning into yarn
<u>used tools:</u>	drop spindle, occasionally çark;	spinning wheel with the walking-path method
<u>result:</u>	black goat hair yarn in round bundles	black goat hair yarn in round bundles
<b>weaving</b>		
<u>processing:</u>	setting up the warp and loom, weaving, rolling weave into rolls;	setting up the warp, weaving, rolling weave into rolls;
<u>used tools:</u>	mainly mobile vertical loom, occasionally horizontal ground loom OR horizontal treadle loom with pit;	treadle loom
<u>outcome:</u>	black goat hair panels (width: appr. 80cm; length: NA); high quality yarn (long hair); various yarn thicknesses, twists warp/weft densities and weaving tensions;	black goat hair panels (width: appr. 80 cm; length: appr. 27 m); average quality yarn (mixed hairs); 0,35 cm yarn thickness; far stretched twist, loose weaving tension;
<u>duration:</u>	10 - 30 years of use	material fatigue after 5 years of occasional use
<u>alternative:</u>	roof panels may be of mixed age	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>material:</u>	cut hair from black cashmere goats	cut hair from black cashmere goats
<u>acquisition:</u>	cutting	cutting
<u>processing:</u>	cutting, ..., collecting in bags;	cutting, collecting in bags;
<u>used tools:</u>	shearing scissors	shearing scissors
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;)	..., combing and carding, backing into sacks;
<b>spinning</b>		

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<u>processing:</u>	spinning into thread and counterspinning into yarn	spinning into thread and counterspinning into yarn
<u>result:</u>	black goat hair yarn in round bundles	black goat hair yarn in round bundles
<b>weaving</b>		
<u>processing:</u>	setting up the warp and ..., weaving, rolling weave into rolls;	setting up the warp, weaving, rolling weave into rolls;
<u>outcome:</u>	black goat hair panels (width: appr. 80cm; length: NA);	black goat hair panels (width: appr. 80cm; length: appr. 27 m); 0,35 cm yarn thickness; far stretched twist, loose weaving tension;

## tent roof design

overall comparison tent roof	old	new
<b>layouting the tent</b>		
<u>material:</u>	black goat hair panels	black goat hair panels
<u>acquisition:</u>	weaving within the family	product of the weavers' villages
<u>processing:</u>	preparing the ground; layouting, cutting and maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);	preparing the ground; layouting, cutting and beating the panels; pinning panels onto ground (with iron nails);
<u>used tools:</u>	shearing scissors (for cutting), maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm deteriorating down to the lower end), wooden hammers;	shearing scissors (for cutting), poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<u>result:</u>	tent layout pinned and stretched on ground, panels side by side according to tent layout;	tent layout pinned and stretched on ground, panels side by side according to tent layout;

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<b>sewing panels</b>		
<u>processing:</u>	sewing even stitch method, from one end to the other or from the middle outwards;	sewing even Yörük stitch method, from one end to the other;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	hand-made black woven bands	machine-made decorated woven bands (2 - 3 colours)
<u>acquisition:</u>	band weaving within the family	product of the weavers' villages
<u>processing:</u>	NA (measuring, levelling and sewing belts onto panels with a simple overcast stitch)	measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA (levelling and measuring yarn, pins, hammer);	levelling yarn, measuring tape, iron nails, iron hammer, black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn belts on tent roof	sewn belts on tent roof
<b>installing ridge pieces</b>		
<u>material:</u>	wooden ridge pieces with drilled holes	wooden ridge pieces with drilled holes
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (levelling, sewing)	measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors, NA (levelling yarn);	measuring tape, black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn ridge pieces on tent roof	sewn ridge pieces on tent roof
<b>installing stay-fasteners on belts</b>		
<u>material:</u>	wooden stay-fasteners	wooden stay-fasteners
<u>acquisition:</u>	carving within the family	product of carpenter

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<u>processing:</u>	NA (sewing bundles of goat hair yarn onto ends of belts, sewing and winding yarn bundles around stay-fastener's ends)	dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners on belts	stay-fasteners on belts
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners connected to the central panel	stay-fasteners connected to the central panel
<b>end seam of panels</b>		
<u>material:</u>	sewn tent roof	sewn tent roof
<u>processing:</u>	NA (sewing folded seam OR fraying and braiding OR none)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA (large needles, shearing scissors OR none)	large needle, shearing scissors OR none;
<u>result:</u>	folded end seam OR braided frazzled seam OR none	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or 7 panels; with decorated or undecorated eaves' band, even stitch, seamed braided/ folded/none with 0,1-0,5 m flag, black broad belts, numerous kinds of connection for stay-fasteners;	5 panels, even Yörük stitch, seamed braided/ folded/none with 0,2 m flag, decorated narrower belts machine-made, stay-fasteners connected divided belt ends (long sides)OR braided ropes made of goat hair yarn (short sides);

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<u>odds:</u>	in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;	
<u>alternative:</u>	rare use of raised stitch	middle belt showing different decoration pattern (3 colours)

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons tent roof</b>	<b>old</b>	<b>new</b>
<b>layouting the tent</b>		
<u>material:</u>	black goat hair panels	black goat hair panels
<u>processing:</u>	preparing the ground; lay- outing, cutting and maybe beating the panels OR ... , pinning panels onto ground;	preparing the ground; layout- ing, cutting and beating the panels; pinning panels onto ground;
<u>used tools:</u>	shearing scissors (for cutting), maybe poles (for beating), pinning tools, hammers;	shearing scissors (for cutting), poles (for beating), pinning tools, hammers;
<u>result:</u>	tent layout pinned and stretched on ground, panels side by side according to tent layout;	tent layout pinned and stretched on ground, panels side by side according to tent layout;
<b>sewing panels</b>		
<u>processing:</u>	sewing even stitch method,..., sewing from one end to the other;	sewing even ... stitch method, sewing from one end to the other;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	... woven bands;	... woven bands;
<u>processing:</u>	NA (measuring, levelling and sewing belts onto panels with a simple overcast stitch)	measuring and levelling sew- ing belts onto panels with a simple overcast stitch;

<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA (levelling and measuring yarn, pins, hammer);	black goat hair yarn, large needle, shearing scissors, levelling yarn, ... , ... pins, ... hammer;
<u>result:</u>	sewn belts on tent roof	sewn belts on tent roof
<b>installing ridge pieces</b>		
<u>material:</u>	wooden ridge pieces with drilled holes	wooden ridge pieces with drilled holes
<u>processing:</u>	NA (... , sewing)	sewing onto central panel and belt
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors, NA;	..., black goat hair yarn, large needles, shearing scissors;
<u>result:</u>	sewn ridge pieces on tent roof	sewn ridge pieces on tent roof
<b>installing stay-fasteners on belts</b>		
<u>material:</u>	wooden stay-fasteners	wooden stay-fasteners
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners on belts	stay-fasteners on belts
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners connected to the central panel	stay-fasteners connected to the central panel
<b>end seam of panels</b>		
<u>material:</u>	sewn tent roof	sewn tent roof
<u>processing:</u>	NA (sewing folded seam OR fraying and braiding OR...)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA (large needles, shearing scissors OR none)	large needle, shearing scissors OR none;

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<u>result:</u>	folded end seam OR braided frazzled seam OR ...;	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or ... panels; even stitch, seamed braided/folded/none with 0,1 - 0,5 m flag, belts, numerous kinds of connection for stay-fasteners;	5 panels, even ... stitch, seamed braided/folded/none with 0,2 m flag, belts, ... OR braided ropes made of goat hair yarn (short sides);

**tent walls**

<b>overall comparison tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair panels OR blankets	black goat hair panels
<u>acquisition:</u>	weaving within the family OR black tent rugs collected within the family OR blankets collected or traded	product of the weavers' villages
<u>processing:</u>	NA	measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretching; seaming wall cloth with folded seam;
<u>used tools:</u>	shearing scissors, black goat hair yarn, large needles, NA;	shearing scissors, black goat hair yarn, large needle;
<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 broad pieces (long sides) (occasionally with top band); 3 broad pieces (short sides); OR roughly seamed;	4 wall cloths for tent, even Yörük stitch; 2 pieces (long and short sides); folded seamed;
<u>alternative:</u>	rare use of raised stitch	added with decorated top end band (3 colours), width: 25 cm, machine-made;
<u>alternative:</u>	wall curtain divided in two for the long side	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair panels OR ... ;	black goat hair panels;
<u>used tools:</u>	shearing scissors, black goat hair yarn, large needles, NA;	shearing scissors, black goat hair yarn, large needle;
<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 ... pieces maybe with top band (long sides); folded seam;	4 wall cloths for tent, even ... stitch; 2 pieces (long and ...sides); folded seam;
<u>alternative:</u>		with top end band

The “alternative” shows similarities to “outcome” for the old tents regarding the top band for the long sides.

### **tent completion**

<b>overall comparison tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	finished tent roof, finished walls, wooden pins;	finished tent roof
<u>acquisition:</u>	result of many manufacturing steps	result of many manufacturing steps

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<u>processing:</u>	NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets, pinning walls onto roof)	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (knives, wooden stakes, hammers, bush twigs OR brooms)	knives, iron stakes, iron hammers, bush twigs;
<u>result:</u>	pitched-up tent roof and walls	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats (made of reed mats); maybe wooden stakes for windbreaking mats, floor reed mat, carpet;	windbreaking mats (made of synthetic fibre); iron bars (length: 1,2 m), wall cloths, wooden pins, floor mat (made of synthetic fibre), carpet;
<u>acquisition:</u>	NA (reed mats may derive from own production or trade, wooden stakes from surroundings, carpets produced within OR traded within the family)	mats and iron bars from the shops of the city Tire, wall cloths and wooden pins from previous working steps;
<u>processing:</u>	NA (installing wooden stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground)	installing vertical iron bars onto the ground, binding windbreaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (hammer, yarn, large needle (bent narrow twist), knife)	iron hammer, yarn, large needle (bent narrow twist), knife;
<u>outcome:</u>	finished tent; with reed mats and wooden stakes;	finished tent; with synthetic mats and iron stakes;

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<u>alternative:</u>	metal sheeds for windbreak- ing mats	
<u>alternative:</u>	stone walls instead of wind- breaking mats	

The table above now gets strongly simplified and changed in content, taking an emphasis on the commons between old and new features:

<b>commons tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	finished tent roof, ... ;	finished tent roof
<u>acquisition:</u>	result of many manufacturing steps	result of many manufacturing steps
<u>processing:</u>	NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beat- ing with bush twigs, testing balance of ridge pieces, test- ing correct fit of pole's tips in ridge piece sockets, ... );	pre-cutting guy-ropes; turn- ing over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (knives, stakes, hammers, bush twigs ... )	knives, stakes, hammers, bush twigs;
<u>result:</u>	pitched-up tent roof and ... ;	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats; stakes for windbreaking mats, floor mat, carpet;	windbreaking mats; stakes for windbreaking mats, floor mat, carpet;
<u>processing:</u>	NA (installing stakes, bind- ing windbreaking mats onto stakes, laying out floor mat and carpet onto the ground)	installing stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (hammer, yarn, large needle, knife;	... hammer, yarn, large needle, knife;
<u>outcome:</u>	finished tent; with mats and stakes;	finished tent; with mats and stakes;

## Chapter 7.2.2 Summary of Commons

Following, results of chapter 7.2.1 are summarized, creating a set of overview tables that form the basis for discussions in chapter 8.

<b>commons ridge pieces</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	cutting, carving (hole), drilling;	cutting, carving (hole), drilling;
<u>used tools:</u>	NA (AND gouges)	AND gouge
<u>outcome:</u>	3 ridge pieces, vaulted, socket;	3 ridge pieces, vaulted, socket;

<b>commons stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	AND conifer wood	conifer wood
<u>processing:</u>	cutting	cutting
<u>outcome:</u>	8 stay-fasteners of “v-shaped with notches type a”	8 stay-fasteners of “v-shaped with notches type a”

<b>commons guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR hemp or flax ropes	hemp or flax ropes
<u>acquisition:</u>	OR ropemaker	ropemaker
<u>processing:</u>	OR similar (professional rope-production)	professional rope-production
<u>used tools:</u>	OR similar	NA
<u>outcome:</u>	OR 40 - 60m hemp or flax rope, 4 half-hitch knots;	40 - 60m hemp or flax rope, 4 half-hitch knots;

<b>commons stakes</b>	<b>old</b>	<b>new</b>
<u>outcome:</u>		8 iron stakes with grommets and rings
<u>alternative:</u>	iron bars / tubes	

<b>commons poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	broadleaf wood
<u>acquisition:</u>	from the surroundings OR trade	trade, from the surroundings;
<u>processing:</u>	removing branches, decortiating, narrowing top, ... ;	removing branches, decortiating, narrowing tip;

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<u>used tools:</u>	NA (probably saw, chop sickle ( <i>orak</i> ), ...)	saw, chop sickle ( <i>orak</i> );
<u>outcome:</u>	3 poles, size related to tent size;	3 poles, size related to tent size;

*The table "commons exterior poles" is missing due to lack of data.*

<b>commons wooden pins</b>	<b>old</b>	<b>new</b>
<u>material:</u>	twigs of bushes	twigs of bushes
<u>acquisition:</u>	surroundings	surroundings
<u>used tools:</u>	NA (maybe whittle knife)	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, decorticated, 20 - 25 cm long, 0,4 - 0,8 cm thick;	30 - 40 wooden pins, partly decorticated, 22 cm long, 0,4 - 0,8 cm thick;
<u>setting:</u>	installed appr. 80 cm distant to each other	installed 80 cm distant to each other

<b>commons roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>material:</u>	cut hair from black cashmere goats	cut hair from black cashmere goats
<u>acquisition:</u>	cutting	cutting
<u>processing:</u>	cutting, ..., collecting in bags;	cutting, collecting in bags;
<u>used tools:</u>	shearing scissors	shearing scissors
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;)	..., combing and carding, backing into sacks;
<b>spinning</b>		
<u>processing:</u>	spinning into thread and counterspinning into yarn	spinning into thread and counterspinning into yarn
<u>result:</u>	black goat hair yarn in round bundles	black goat hair yarn in round bundles
<b>weaving</b>		
<u>processing:</u>	setting up the warp and ..., weaving, rolling weave into rolls;	setting up the warp, weaving, rolling weave into rolls;

The Yörük Black Tent

<u>outcome:</u>	black goat hair panels (width: appr. 80cm; length: NA);	black goat hair panels (width: appr. 80 cm; length: appr. 27 m); 0,35 cm yarn thickness; far stretched twist, loose weaving tension;
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<b>commons tent roof</b>	<b>old</b>	<b>new</b>
<b>layouting the tent</b>		
<u>material:</u>	black goat hair panels	black goat hair panels
<u>processing:</u>	preparing the ground; lay- outing, cutting and maybe beating the panels OR ... , pinning panels onto ground;	preparing the ground; layout- ing, cutting and beating the panels; pinning panels onto ground;
<u>used tools:</u>	shearing scissors (for cutting), maybe poles (for beating), pinning tools, hammers;	shearing scissors (for cutting), poles (for beating), pinning tools, hammers;
<u>result:</u>	tent layout pinned and stretched on ground, panels side by side according to tent layout;	tent layout pinned and stretched on ground, panels side by side according to tent layout;
<b>sewing panels</b>		
<u>processing:</u>	sewing even stitch method,..., sewing from one end to the other;	sewing even ... stitch method, sewing from one end to the other;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	... woven bands;	... woven bands;
<u>processing:</u>	NA (measuring, levelling and sewing belts onto panels with a simple overcast stitch)	measuring and levelling sew- ing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA (levelling and measuring yarn, pins, hammer);	black goat hair yarn, large needle, shearing scissors, levelling yarn, ... , ... pins, ... hammer,
<u>result:</u>	sewn belts on tent roof	sewn belts on tent roof
<b>installing ridge pieces</b>		
<u>material:</u>	wooden ridge pieces with drilled holes	wooden ridge pieces with drilled holes

The Yörük Black Tent

<u>processing:</u>	NA (..., sewing)	sewing onto central panel and belt
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors, NA;	..., black goat hair yarn, large needles, shearing scissors;
<u>result:</u>	sewn ridge pieces on tent roof	sewn ridge pieces on tent roof
<b>installing stay-fasteners on belts</b>		
<u>material:</u>	wooden stay-fasteners	wooden stay-fasteners
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners on belts	stay-fasteners on belts
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners connected to the central panel	stay-fasteners connected to the central panel
<b>end seam of panels</b>		
<u>material:</u>	sewn tent roof	sewn tent roof
<u>processing:</u>	NA (sewing folded seam OR fraying and braiding OR...)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA (large needles, shearing scissors OR none)	large needle, shearing scissors OR none;
<u>result:</u>	folded end seam OR braided frazzled seam OR ...;	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or ... panels; even stitch, seamed braided/folded/none with 0,1 - 0,5 m flag, belts, numerous kinds of connection for stay-fasteners;	5 panels, even ... stitch, seamed braided/folded/none with 0,2 m flag, belts, ... OR braided ropes made of goat hair yarn (short sides);

The Yörük Black Tent

<b>commons tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair panels OR ... ;	black goat hair panels;
<u>used tools:</u>	shearing scissors, black goat hair yarn, large needles, NA;	shearing scissors, black goat hair yarn, large needle;
<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 ... pieces maybe with top band (long sides); folded seam;	4 wall cloths for tent, even ... stitch; 2 pieces (long and ...sides); folded seam;
<u>alternative:</u>		with top end band
<b>commons tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	finished tent roof, ... ;	finished tent roof;
<u>acquisition:</u>	result of many manufacturing steps	result of many manufacturing steps
<u>processing:</u>	NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets, ... )	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (knives, stakes, hammers, bush twigs ... )	knives, stakes, hammers, bush twigs;
<u>result:</u>	pitched-up tent roof and ... ;	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats; stakes for windbreaking mats, floor mat, carpet;	windbreaking mats; stakes for windbreaking mats, floor mat, carpet;
<u>processing:</u>	NA (installing stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground)	installing stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (hammer, yarn, large needle, knife)	... hammer, yarn, large needle, knife;

The Yörük Black Tent

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<u>outcome:</u>	finished tent; with mats and stakes;	finished tent; with mats and stakes;
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## Chapter 7.3 Graphic Tables for Categorical Comparisons

The following graphic tables summarize differences and commons between old and new tents on a visual level. The categories provide a filter in form and content that allows to depict various aspects. In 8.1.3, the resulting impressions are put into text for the discussion and resumee following in chapter 8.2.

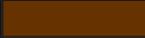
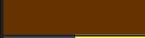
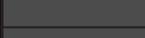
### Chapter 7.3.1 Construction Material

#### choice of raw material

legend:

	broadleaf wood
	conifer wood
	bush twigs
	hemp
	long black goat hair
	mixed black goat hair
	second hand textiles
	iron or steel

table:

	old tent		new tent	
ridge pieces				
stay-fasteners				
guy-ropes				
stakes				
poles				
exterior poles			n.a.	n.a.
wooden pins				
roof textile				
tent roof design				
wall textile				
tent wall design				
tent completion	n.a.	n.a.	n.a.	n.a.

### life span of materials

legend:

	longer
	shorter

table:

	old tent		new tent	
ridge pieces				
stay-fasteners				
guy-ropes				
stakes				
poles				
exterior poles	n.a.	n.a.	n.a.	n.a.
wooden pins				
roof textile				
tent roof design				
wall textile				
tent wall design				
tent completion				

## Chapter 7.3.2 Acquisition Sources

### raw material acquisition

legend:

	own resource
	local natural resource
	local trade
	craftsman
	manufacture

table:

	old tent	new tent
ridge pieces		
stay-fasteners		
guy-ropes		
stakes		
poles		
exterior poles		n.a. n.a.
wooden pins		
roof textile		
tent roof design		
tent walls		
tent completion	<i>mixed</i>	<i>mixed</i>

### finished item acquisition

legend:

	own workforce
	local trade
	craftsman
	manufacture

table:

	old tent	new tent	
ridge pieces			
stay-fasteners			
guy-ropes			
stakes			
poles			
exterior poles		n.a.	n.a.
wooden pins			
roof textile			
tent roof design			
wall textile			
tent wall design			
tent completion			

### Chapter 7.3.3 Processing

#### processing methods and tools

legend:

	traditional manual
	manual with advanced tools
	manual with modern assets
	manual with electr. machines
	automatic processing

table:

	old tent	new tent	
ridge pieces			
stay-fasteners			
guy-ropes			
stakes			
poles			
exterior poles		n.a.	n.a.
wooden pins			
roof textile			
tent roof design			
tent textile			
tent wall design			
tent completion			

### duration of processing methods

legend:

	longer
	shorter
	unchanged

table:

	old tent		new tent	
ridge pieces				
stay-fasteners				
guy-ropes				
stakes				
poles				
exterior poles	n.a.	n.a.	n.a.	n.a.
wooden pins	n.a.	n.a.	n.a.	n.a.
roof textile				
tent roof design				
wall textile				
tent wall design				
tent completion				

**number of people designing items**

legend:

	1 person minimum
	2-3 persons
	group of people

table:

	old tent	new tent
ridge pieces		
stay-fasteners		
guy-ropes		n.a. n.a.
stakes		
poles		
exterior poles		n.a. n.a.
wooden pins		
roof textile		
tent roof design		
tent walls		
tent completion		

**relative amount of tools needed**

legend:

	more
	less
	unchanged

table:

	old tent		new tent	
ridge pieces				
stay-fasteners				
guy-ropes	n.a.	n.a.	n.a.	n.a.
stakes				
poles				
exterior poles	n.a.	n.a.	n.a.	n.a.
wooden pins	n.a.	n.a.	n.a.	n.a.
roof textile				
tent roof design				
tent walls				
tent completion				

## Chapter 8

# Adaption in Design in the Course of Changes in Production

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The structure of chapter 7 already indicates how it is planned to investigate the influences of changes in production and design adaption. The adaption in design in the course of changes in production does not only show how a change in development provokes changes in outcome. Quite the more, it arises how different the relations of changes between development and outcome may be set. For example, a major change in production may show only a minor impact in the design output or vice versa. In order to take grasp of these differing relations, two aspects of approach are chosen: The aspect of differences between old and new and the aspect of commons between the such. This polarity allows to point on various shades of impacts taking place. In the following subchapters, a structure is used that helps taking a close look on the single features of specified aspects. In regard of chapters 2 and 3, which are the information basis for a critical analysis, the aspects of technical, sociocultural, historical, economical and infrastructural changes provide this specified structure. These aspects altogether are part of the comprehensive aspect of “architecture”.

In chapter 8.2, the final discussion and resumee, space for the philosophical aspect in regard of architectural questions is provided. This will round up the analysis at its end.

## Chapter 8.1 Change in Production and Adaption in Design

### Chapter 8.1.1 Based on Differences

Adaption in design in the course of changes in production: According to the structure of chapter 7.1, the issue within the differences is pursued in this chapter. According to the order within chapter 7.1.2, step after step from one design item to the other is taken. Each design item (e.g. ridge pieces, stay-fasteners, etc. ....) will then be analysed in regard of its production and design. The design will be discussed and listed within the various aspects provided (technical, sociocultural and historical, economical and infrastructural). At the end of each item analysis, some comprehensive impressions will be summarized and will be taken into account in chapter 8.2.

<b>differences ridge pieces</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings	carpenter
<u>processing:</u>	mainly carving, sooting the surface;	mainly cutting, impregnating with wood stain;
<u>used tools:</u>	probably manual handicraft tools	mainly automated handicraft tools, new: brush;
<u>outcome:</u>	3 ridge pieces of broadleaf wood, sooted surface, mainly carved, rounded, deep socket;	3 ridge pieces of conifer wood, impregnated, mainly cut, not rounded, shallow socket;
<u>alternative:</u>	metal ridge pieces	

The material for the ridge pieces was gathered from the surroundings by the Yörük themselves. They chose to use broadleaf wood due to its advantageous characteristics as e.g. hardness, optimal carving condition, duration and resistance against environmental impacts. They carved the ridge pieces and did not impregnate them deliberately as they were sooted automatically by the daily traditional use of bonfire which gave the woodpiece a resistant surface against impacts of heat, moist and vermin. Handicraft tools were only manual. The workpiece was deliberately constructed for long sustainable use. Therefore, the socket of the ridge piece was deeply carved in for providing best performance during installation and camping. Its edges were rounded in order to

protect the canvas from injury.

Although the wooden workpiece proved to last for several generations, an alternative design made of iron sheets was developed in more recent times which was expected to last even longer.

The new ridge pieces of the year 2007 were constructed by a carpenter who decided to use conifer wood. He manufactured the work piece mainly with his automated band-saw. The socket gets carved with a manual gouge. The fixation holes drilled with an electrical drill. The character of the whole production process is based on velocity. The 3 workpieces needed to be finished within 1-2 hours together with the stay-fasteners. The socket is carved relatively shallow in order to avoid the danger of breaking of the softwood. The edges of the ridge pieces do not get rounded. Later on, the Yörük deliberately impregnated the ridge pieces with woodstain knowing that the conifer wood would not withstand the moist for long. According to the occasional use of the new black tents in Austria until today (2013), the duration of the new ridge pieces proved to be less in quality so far, as already one piece had broken apart and another one got split edges. As well, the shallow socket provides a bad performance during installation and camping. The impregnation with woodstain does not show any losses of quality in the question of moist resistance but is known to be less compatible with impacts of heat. Therefore, it offers lacks in questions of hardness, duration, performance and resistance against environmental impacts. In that regard, it features less optimal characteristics than the iron ridge pieces which were alternatively developed in recent times in Turkey.

The production changed from indigenous to outsourced (change in ways of production), from slow/diligent/high-quality to fast/efficient/low-quality (change of crafting velocity and quality), from self-sustaining to market-sensitive (change of material resources economic conditions) and from manual to automated (change of tools).

The design output changed technically into a lower life-cycle and performance quality. Visual changes adhere to a more edged, plain appearance with a newly manipulated surface (coloured woodstain).

The design output changed socioculturally and historically into a lower social value as it rendered from an appreciated item of family heritage into a quickly made product that can be replaced in case of breaking.

The design output changed economically and infrastructurally into a lower investment item dependant upon present market supply with its present infrastructural options (in this case: handicraft workshops in a nearby city). The low investment increases the affinity of quick replacement when breaking.

<b>changes of production of ridge pieces</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	outsourced handicraft
<u>velocity and quality:</u>	slow, diligent, high quality	fast, efficient, low quality
<u>material resources:</u>	self-sustaining	market-sensitive
<u>tools:</u>	manual	automated

<b>adaption in design of ridge pieces</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	good life-cycle and performance quality, rounded and individual appearance, natural surface due to usage, higher tension resistance due to organic baggy surfaces and material choice;	lower life-cycle and performance quality, more edged and plain appearance, newly manipulated surface (coloured woodstain), lower tension resistance;
<u>socioculturally and historically:</u>	high social value, appreciated item of family heritage;	lower social value, quickly made product, easy to replace;
<u>economically and infrastructurally:</u>	high investment of personal workforce, independent from financial exchange and market changes, only dependant on family-owned handicraft tools, sustainable item;	low investment item, based on financial exchange, dependant upon present market supply and present infrastructural options, replacement item;

It is necessary to note that the Karatekeli families offered, without being asked, to carve the ridge pieces for future orders in case I wished to retrieve a tent of higher quality. But due to their lack of time based on their regular jobs (at the petrol station, restaurant or on plantation), they preferred to pay a carpenter.

The change in production rendered the ridge pieces into a modernized copy of appearance featuring sharp edges, a homogeneous surface with artificial impregnation. But the shape of the workpiece is technically a complete copy of the traditional original. Just the depth of the socket could not be copied to 100% as the new material, softwood, wouldn't stand the pressure compared to the broadleaf wood.

The shape only slightly follows the material, the working process, tools and outcome in order to uphold the traditional appearance to a best possible degree in spite of all changes given. Even the deterioration of function is accepted, sacrificing it for the overall traditional appearance. Because, if so, it could have been possible to establish a deep socket with a slightly changed shape design. But that was not the case. Here, it would be interesting to see if adaptations in shape would happen when new ridge pieces get ordered, learning from the old errors or if the value of traditional shape slows down this correction process, giving higher priority to shape but to function. However, I, as a foreign investigator, am not able to predict or test the outcome directly as my presence would severely influence the result as it may have already happened. Because, in particular, the ridge pieces kept their original shape because the Yörük knew that I wished to have a quite original tent.

The changes in production and design of the ridge pieces already show how the changes in everyday life, sources of subsistence, mobility, economical surroundings, political changes, changes in estate rights, etc. ... have changed the approach of developing new ridge pieces. Due to the declination of personally planned time available and due to the increase of personal financial resources, the Yörük decided to outsource the production here. This decision came along with the current market situation and infrastructural offers forming a new frame of conditions for the design of ridge pieces.

<b>differences stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	conifer wood
<u>acquisition:</u>	surroundings	carpenter
<u>processing:</u>	mainly carving	mainly cutting, impregnating with wood stain;
<u>used tools:</u>	probably manual handicraft tools	mainly automated handicraft tools, new: brush;
<u>outcome:</u>	8 stay-fasteners of broadleaf wood, mainly carved and rounded;	8 stay-fasteners of conifer wood, impregnated, mainly cut and not rounded;
<u>alternative:</u>	other types of stay-fasteners; optionally of conifer wood;	

There is a strong analogy to the ridge pieces described before. Therefore, I only set focus onto the odds given compared to the example with the ridge pieces: The new stay-fasteners were impregnated with woodstain as well. Regarding the old stay-fasteners, no impregnation of some sort is being documented. Normally, they kept being plain wood

that got slowly sun-stained (which is as well a process of building up a resistant surface). The artificial impregnation for the new pieces happened because modern woodstain helps prolonging the life of low quality wood in regard of moist and sunray impact. Plain softwood being manufactured in such tiny dimensions would deteriorate more severely than broadleaf wood. The risk of breaking would increase there. Indeed, even with being impregnated, some stay-fasteners got split edges during occasional use of the new tents in Austria.

In spite if the above mentioned issue, there is a quite identical situation to the ridge pieces given in the previous tables. Therefore, I will skip the text statements here and skip directly to presenting the information of the tables showing changes and adaption in regard of stay-fasteners.

<b>changes of production of stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	outsourced handicraft,
<u>velocity and quality:</u>	slow, diligent, high quality	fast, efficient, low quality
<u>material resources:</u>	self-sustaining	market-sensitive
<u>tools:</u>	manual	automated

<b>adaption in design of stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	good life-cycle and performance quality, rounded and individual appearance, natural surface due to usage, higher tension resistance due to organic baggy surfaces and material choice;	lower life-cycle and performance quality, more edged and plain appearance, newly manipulated surface (coloured woodstain), lower tension resistance;
<u>socioculturally and historically:</u>	high social value, appreciated item of family heritage;	lower social value, quickly made product, easy to replace;
<u>economically and infrastructurally:</u>	high investment of personal workforce, independent from financial exchange and market changes, only dependant on family-owned handicraft tools, sustainable item;	low investment item, based on financial exchange, dependant upon present market supply and present infrastructural options, replacement item;

For the stay-fasteners, the same thoughts about development changes can be applied to from the issue about ridge pieces.

<b>differences guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR black goat hair	hemp or flax
<u>acquisition:</u>	OR own production	ropemaker
<u>processing:</u>	NA	NA
<u>used tools:</u>	OR rope spindles, NA;	NA
<u>outcome:</u>	OR 40 - 60m goat hair rope, OR less knots;	40 - 60m hemp or flax rope, 4 half-hitch knots;
<u>alternative:</u>	metal chains	
<u>alternative:</u>	synthetic ropes	

The material for the guy-ropes was a product of the black goat flocks of the Yörük. Even when they were keeping flocks of sheep or other kinds of animals, they owned a small number of goats in any case. Goat hair ropes derived from own resources without needing raw material from the economical environment. Traditional tools for making ropes (e.g. rope spindles) are well known among the Yörük. The ropes themselves are known to be suitable for use but feature a much lower tension resistance than hemp or flax ropes. The breaking of ropes was not a rare event. Apart from the low tension resistance in general, goat hair ropes are as well more sensible to friction, wearing off easily when being stressed too much.

The hemp or flax rope is considered to be of younger introduction into Yörük culture but old enough to be well embedded in the traditional awareness. Hemp, flax or occasionally even sisal ropes are mostly retrieved from the economical environment, as e.g. by trade on bazaars or directly at the ropemaker's shop. In case of the field research 2007, the ropes came from a ropemaker's shop in the nearby city Tire.

In some cases, both kinds of ropes get replaced by products that provide an even higher tension resistance as e.g. metal chains or synthetic ropes. Synthetic ropes bear a slight disadvantage due to their slippery surface making the knotting difficult.

Although not listed in the table, the choice of loop-connections accompanied with the number of half-hitch knots needs to be mentioned: The goat hair rope was used in one-loop-connections in most cases, needing less half-hitch knots than the hemp or flax ropes if desired. Hemp or flax ropes are preferred with two-loop-connections and 4 half-hitch knots. The choice of loop-connection dependant on the choice of rope material influences the choice of stay-fastener design to some extent. Here, I cross-refer to chapter 8.2.

In regard of choice of stakes, all rope connection systems and material choices work with all stake and anchoring variations but tendencies for a higher grade of practicability might be existent as being mentioned in regard of stakes (see below).

Considering the differences between goat hair ropes and hemp or flax ropes, the production changed from indigenous to outsourced (change in ways of production), from slow/diligent/low-tension-resistance to fast/efficient/high-tension-resistance (change of crafting velocity and quality), from self-sustaining to market-sensitive (change of material resources and economic conditions), from manual to manual professional routine or automated (supposed change of tools).

The design output changed technically into a higher life-cycle and performance quality. Visual and textural changes adhere to a more homogeneous, plain surface with bright colour (naturally white). Haptic changes adhere to a more even and stern touch on the surface.

The design output changed socioculturally into a considerably equal value. Historically, the roots of the black goat hair design may be older but not much of importance within the traditional emotion.

The design output changed economically and infrastructurally into an investment item of low financial impact but high sustainability dependant upon present market supply with its present infrastructural options (in this case: trade options or handicraft workshops).

<b>changes of production of guy-ropes</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	outsourced handicraft
<u>velocity and quality:</u>	slow, diligent, low tension resistance;	fast, efficient, high tension resistance;
<u>material resources:</u>	self-sustaining	market-sensitive
<u>tools:</u>	manual	probably manual professional or automated

<b>adaption in design of guy-ropes</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	low life-cycle and performance quality, inhomogeneous and rough surface with dark colour, uneven and soft touch;	high life-cycle and performance quality, more homogeneous and plain surface with bright colour, even and stern touch;
<u>socioculturally and historically:</u>	average social value, long history with low traditional emotion;	average social value, shorter history with equally traditional emotion;
<u>economically and infrastructurally:</u>	high investment of personal workforce with low sustainability, independent from financial exchange and market changes, only dependant on family-owned handicraft tools;	investment item of low financial impact but high sustainability, based on financial exchange, dependant upon present market supply and present infrastructural options;

For the discussion in chapter 8.2, the differences in production and design in regard of guy-ropes needs to be connected to the commons in chapter 8.1.2 as hemp or flax ropes are well embedded in the traditional awareness and therefore play a major role in the old aspect as well. Further, it is noteworthy, that the changes in production, in particular dependant on material choice and retrieving source, caused a severe improvement regarding technical quality. This again may explain why hemp or flax ropes were already early embedded into Yörük culture.

The interaction between choice of rope material, loop-connection and stay-fastener's design should not be kept unmentioned in chapter 8.2.

<b>differences stakes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	wood	iron
<u>acquisition:</u>	surroundings	blacksmith
<u>processing:</u>	manual woodcraft	NA
<u>used tools:</u>	manual handicraft tools for woodcraft	NA
<u>outcome:</u>	8 wooden stakes, long and thick	8 iron stakes with grommets and rings, small and handy
<u>alternative:</u>	iron bars / tubes, similar dimensions to wooden stakes;	
<u>alternative:</u>	stones resting on forked twigs	

The material for the wooden stakes derived from the surroundings. With the manual handicraft tools belonging to the standard equipment of each Yörük family, strong straight twigs were crafted into the necessary length and conical lower tip shape. The stakes are relatively long (about 1 m) and thick (4-5 cm and more). They were crafted for several periods of use, considering that they will wear off sooner or later. Then, a replacement was easily made. Driving wooden stakes into the ground can be a difficult endeavour. As wood renders to be too soft for certain grounds, stones resting on forked twigs were the technical amendment in the range of possibilities.

The iron stakes for the new tents were a ready-made product of a blacksmith in the nearby city Tire. For manufacturing them, special installations and tools for blacksmith work are needed, showing there a great dependency on professional handicraft. With grommets and rings they support an easy sliding of the hemp or flax ropes connected in a two-loop-connection. Their length only reaches 40 cm, thickness is less than 2 cm. Here, it is important to mention that the Yörük chose short stakes with grommets for the new tents of the field research as they knew that these tents would not be used as a habitat for an entire year but rather for short-term exhibitions at many different locations. They stated that they fit better to such extraordinary use.

For old tents, iron bars and tubes deriving from construction sites or bazaar sales, are more commonly used in recent times, replacing the wooden stakes completely. In many cases they can be retrieved in the desired length (1,2m, as e.g. left overs of construction sites or iron factories) or they get cut into the desired length with iron saws (e.g.: iron tubes). Here, both ways, the self-sustaining or the market-sensitive acquisition are possible.

The iron stakes, no matter of which design and production, are easier to be driven into the ground, showing a higher tolerance towards hard grounds than wooden stakes. They last long when handled correctly.

The production changed from indigenous to outsourced or modern indigenous (change in ways of production or change of surrounding resources), from fast/easy/low-tension-resistance to slow/industrial/high-tension-resistance (change of crafting velocity, complexity and quality), from self-sustaining to market-sensitive or modern self-sustaining (change of material resources and economic conditions), from manual to automated or professional manual (change of tools).

The design output changed technically into a higher life-cycle and performance quality. Visual changes adhere to a more homogeneous, standardized and plain appearance with a completely different material. Textural changes adhere to a more smooth and hard surface.

The design output changed socioculturally and historically into a higher social value as iron stakes or bars do not get dumped but kept within the family's properties as long as possible.

The design output changed economically and infrastructurally into a higher investment item dependant upon present market supply or nature of surroundings with present infrastructural options (in this case: handicraft workshops, constructions sites or iron factories).

As iron tubes and bars are a well documented recent innovation in the choice of stakes, I decided to take them into account by being added to the iron stakes with grommets and rings.

<b>changes of production of stakes</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	outsourced handicraft or modern indigenous collecting and crafting
<u>velocity and quality:</u>	fast, easy, low-tension-resistance;	slow, industrial, high-tension-resistance;
<u>material resources:</u>	self-sustaining	market-sensitive or modern self-sustaining
<u>tools:</u>	manual	professional manual or automated

<b>adaption in design of stakes</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	low life-cycle and performance quality, inhomogeneous appearance, rough surface, organic material;	high life-cycle and performance quality, standardized and plain appearance, smooth and hard surface, completely new material (iron);
<u>socioculturally and historically:</u>	average social value, long history with low traditional emotion;	higher social value, appreciated item within family, short traditional history;

<b>adaption in design of stakes</b>	<b>old</b>	<b>new</b>
<u>economically and infrastruc-</u> <u>turally:</u>	higher investment of personal workforce with low sustainability, independent from financial exchange and market changes, only dependant on family-owned handicraft tools;	investment item of low financial impact but high sustainability, based on financial exchange, dependant upon present market supply and present infrastructural surroundings;

The change from traditional wooden stakes to iron bars or stakes is an overall improvement regarding the stability and installation duration of the black tents. It goes along with a reduced grade of mobility (the Karatekeli families changed their camp only once a year within their estates) that allows intensifying social connections with the surroundings for acquiring iron bars or tubes from construction sites or from iron factories (left-overs from production) on a cost-free basis. In regard of the tents of the field research the Yörük families again decided to use outsourced handicraft for gaining stakes of easier handling compared to wooden stakes. Here, an financial investment was deliberately made, skipping tradition for gaining a higher quality of utilisation.

<b>differences poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	AND other broadleaf wood types	poplar
<u>acquisition:</u>	rather surroundings	rather trade
<u>processing:</u>	tip: narrowed conically and rounded, sooted during usage;	rough woodcraft
<u>used tools:</u>	probably various woodcraft tools;	few woodcraft tools
<u>outcome:</u>	3 poles	3 poles
<u>alternative:</u>	conifer wood	

Any broadleaf wood, alternatively conifer wood, of high quality would do for the poles when being derived from the surroundings. Maybe it was traded among Yörük families who have connections to loggers in the Taurus mountains. Maybe the poles were simply taken from that region when possible. With woodcraft tools owned by the family the poles were decorticated, narrowed conically and rounded at the top end. The crafting was done diligently as the poles were planned to last long within the family. Poles always needed to fit to the ridge pieces. As each tent is individually carved, it would not be wise to exchange poles among the tents as they do not fit that well in

a different ridge piece socket. During use, the poles got sooted by bonfire fumes that impregnated them against moisture, heat and vermin. Similarities to the ridge pieces and stay-fasteners can be drawn there.

The new poles are made of poplar, a broadleaf wood, deriving from a young poplar plantation that was known via connection of a family branch. Discussions with the Şimşek family about tent constructions that took place after 2007 showed that it was rather difficult for them to trade poles for each new tent. They asked me to retrieve them in Austria as straight trees are more common there.

The new poles were roughly decorticated and cylindrically narrowed at their top end by the use of the chop sickle only. The rounding of edges was skipped in this case. Therefore, only one manual tool was needed for crafting. The poles are expected to stay long with the tent as the material is rare and precious. Artificial impregnation was not done as the wood is known to be of sufficient quality for long duration. The rough decortication is only a slight deterioration in quality compared to old poles as their surface is smooth enough for comfortable handling.

The production changed from diligent/high-quality to fast/sufficient-quality (change of crafting velocity and quality), from self-sustaining to slightly more market-sensitive (slight change of economic conditions).

The design output remained technically in a rather unchanged life-cycle and performance quality. The cylindrical top may have some disadvantages towards the conical one but details are unknown here. Visual changes adhere to a rougher appearance with a faster manipulated surface.

The design output remained socioculturally and historically in the same social value. The design output remained economically and infrastructurally on the level of a higher investment item. The infrastructure may be an important basis for the availability of straight stems (e.g. nearby existence of poplar plantations, existence of forests containing the appropriate wood)

<b>changes of production of poles</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	no changes, see chapter 8.1.2	
<u>velocity and quality:</u>	diligent, high quality;	fast, sufficient quality;
<u>material resources:</u>	self-sustaining	slightly more market-sensitive
<u>tools:</u>	several manual tools	one manual tool

<b>adaption in design of poles</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	technically well adapted top end, smooth surface;	maybe less advantageous top end, slightly rougher surface;
<u>economically and infrastructurally:</u>	dependant on family connections and availability of wood in the surroundings;	more dependant on connections outside the family, dependent on infrastructure and/or surroundings;

The network branches of the Karatekeli families in the field research are far and deeply connected with the surroundings, gaining access to important sources within the infrastructure. It can be assumed that this kind of connection is locally better developed than at mobile families of the old Yörük tradition. In the nomadic case, the focus on social interaction is geographically more widely spread with less depth in the locations. In both ways, it appears that the necessary network is set up for gaining the nearly same goal. While a Yörük family of the old tradition may have more access to suitable forests or connections to loggers, the modern Yörük families may have better access to infrastructural facilities as e.g. plantations. Here, a slight change of lifestyle (from mobile to almost settled) indicates a change of the nature of human connections.

<b>differences exterior poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	mainly broadleaf wood (crooked or straight)	NA
<u>acquisition:</u>	surroundings	NA
<u>processing:</u>	rough or detailed manual woodcraft work	NA
<u>used tools:</u>	manual woodcraft tools	NA
<u>outcome:</u>	3 - 6 exterior poles in varying lengths	none
<u>alternative:</u>	high poles close to the tent or low poles close to the stakes	NA

I have carried the aspect “exterior poles” this far in order to avoid leaving important things out. Indeed, the exterior poles have an important impact on the architectural shape of a black tent as the eaves are pulled up higher, making the interior space better adjusted to human needs. Further, they help extending the guy-ropes by flattening the angle of fixation which again increases horizontal stability against sudden gusts of wind.

The new tents do not need such exterior poles. It is even quite disadvantageous to try to install exterior poles as the wall curtains would be too small for covering the flanks with raised eaves. These tents are of a rather small design that is meant to fit with middle-range length of guy-ropes (4-5 m) with an angle of 40°-45° down to the ground. By that, they withstand strong winds easily. Gusty winds of about 70km/h do tear these tents down. Old tents need to withstand higher velocities of wind (going up into the storm classifications).

As there is no direct comparison for exterior poles between old and new available, I prefer to set focus on the existence and non-existence of exterior poles in this case.

The production of exterior poles changed from indigenous to none (change in ways of production), in regard of the whole tent construction from slow-fast/efficient-diligent/higher-quality to none/lower-quality (change of crafting velocity and quality), in regard of the exterior poles alone, from self-sustaining to none (change of material resources and economic conditions), from manual to none (change of tools).

The design output (in regard of the whole tent) changed technically into a lower performance quality. Visual changes adhere to a tent with lower eaves and therefore steeper roof.

The design output changed socioculturally and historically into a lower sociofunctional value as it rendered from an item of long stability and security into one that is sufficient enough to serve the function under limited conditions.

The design output changed economically and infrastructurally into a lower investment item as a part of the construction is simply left out.

<b>changes of production of exterior poles</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	none
<u>velocity and quality:</u>	slow or fast, efficient or diligent, increases the quality of the dwelling;	none, non-existence deteriorates quality of the dwelling;
<u>material resources:</u>	self-sustaining	none
<u>tools:</u>	manual	none
<b>adaption in design of exterior poles</b>	<b>old</b>	<b>new</b>

## The Yörük Black Tent

<u>technically:</u>	good performance quality of the tent, raised eaves and therefore flatter roof, good resistance against strong wind impacts;	lower performance quality of the tent, lower eaves and therefore steeper roof, more sensible to wind impacts;
<u>socioculturally and historically:</u>	higher sociofunctional value, providing security and optimized interior space;	lower sociofunctional value, demonstrates less necessity of security and offers less comfortable space;
<u>economically and infrastructurally:</u>	investment of personal workforce, dependent from surroundings;	no additional investment

The cancelling of the necessity of exterior poles shows that the new tents are not seriously planned for year-long camping. They are efficiently narrowed down for a demonstrative use of nomadic culture, being able to give shelter for a considerable long amount of time but not for the real hardness that can be expected from a true transhumance lifestyle.

<b>differences wooden pins</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	NA, processes that allow a smooth decorticated surface;	rough carving
<u>used tools:</u>	NA	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, relatively strong or thin, decorticated, rounded tip;	30 - 40 wooden pins, only partly decorticated, carved, sharp tip;
<u>setting:</u>	OR less distance to each other	installed 80 cm distant to each other
<u>alternative:</u>	metal pins with grommets	

The old wooden pins appear to be manufactured in a deliberately diligent way. The quality of these items supports the lifespan of the tent roof's eaves and the wall cloths. If the pins provide a well rounded tip and a smooth surface, the textile will suffer less damage during long term use. Alternatively, metal pins with grommets are used in more recent times which adhere to a smaller width and a smooth surface. As they are probably retrieved from outside sources (e.g. blacksmiths or toolmakers at workshops, or at bazaars, ...) they stand for less family labour and more financial investment.

The pins of the new tents provide a rough surface and a sharp tip. They are manufactured relatively quickly, done by the grandfather who is known to have slightly more free time when the other family members. Still, I assume that there is a deterioration of personal labour investment between old and new to be detected. Indeed, the pins are not even completely decorticated, being adapted in their use in a way of saving handicraft time.

The production remained indigenous (change in ways of production) but changed from slow/diligent/high-quality to fast/efficient/low-quality (change of crafting velocity and quality), it remained self-sustaining but changed into a lower priority (change of material resources and economic conditions), from manual specialized to manual common (change of tools).

The design output changed technically into a lower performance quality. Visual changes adhere to a more edged, sharp appearance. Textural changes adhere to a rougher surface.

The design output changed socioculturally and historically into a lower sociofunctional value as it rendered from a delicately manufactured item into one that merely serves the primary function without any further measure regarding sustainability.

The design output changed economically and infrastructurally into a lower investment item dependent on the availability of personal free time.

<b>changes of production of wooden pins</b>	<b>old</b>	<b>new</b>
<u>velocity and quality:</u>	slow, diligent, high-quality;	fast, efficient, low quality;
<u>material resources:</u>	self-sustaining high priority	self-sustaining low priority
<u>tools:</u>	manual, specialized;	manual, common;
<b>adaption in design of wooden pins</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	new performance quality, even, round appearance, smooth surface;	low performance quality, edged, sharp appearance, rough surface;
<u>socioculturally and historically:</u>	higher sociofunctional value	lower sociofunctional value
<u>economically and infrastructurally:</u>	high investment of personal workforce and time	low investment of personal workforce and time

Similarly to the exterior poles, the change of quality of the wooden pins indicate the deterioration of sustainable usage and reliable performance of the tent. As well, the way of crafting demonstrates how the investment of personal handicraft labour is narrowed down to the mere necessities.

<b>differences roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>acquisition:</u>	own goat flocks	delivery from goat breeders
<u>processing:</u>	sorting in quality	
<u>result:</u>	well sorted goat hair	mixed goat hair
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;) OR none	sorting into colours, drying, automated combing and carding, backing into sacks;
<u>used tools:</u>	(iron comb board;) OR none	drying - tumbling machine or road, combing - carding machine;
<u>result:</u>	(combed kemp hair in sacks) OR well sorted goat hair	carded kemp hair in sacks
<b>spinning</b>		
<u>used tools:</u>	drop spindle, occasionally çark;	spinning wheel with the walking-path method
<b>weaving</b>		
<u>processing:</u>	setting up the warp and loom, weaving, ... ;	setting up the warp, weaving, ... ;
<u>used tools:</u>	mainly mobile vertical loom, occasionally horizontal ground loom or horizontal treadle loom with pit;	treadle loom
<u>outcome:</u>	black goat hair panels (length: NA); high quality yarn (long hair); various yarn thicknesses, twists warp/weft densities and weaving tensions;	black goat hair panels (length: appr. 27 m); average quality yarn (mixed hairs); 0,35 cm yarn thickness; far stretched twist, loose weaving tension;
<u>duration:</u>	10 - 30 years of use	material fatigue after 5 years of occasional use
<u>alternative:</u>	roof panels may be of mixed age	

The Yörük derived the main material for their tents from their own flocks in case they

were specialized on black goats. But even when they had set focus on sheep or other animals, it was still common to keep a number of goats that provided the desired amount of milk and hair. They sheared the animals and kept the well sorted hair in sacks. Some families combed that hair on iron comb boards but in most cases, this process was not needed. Inbetween, during the daily life's routines, they spun the hair into a fine yarn with the help of the drop spindle and the çark. The yarn was rolled up into bundles and collected until enough material was available for setting up the warp for the loom. In most cases they wove on the mobile vertical loom which was preferably set up in front of the tent. But the horizontal loom or a type of treadle pit loom are well known, too. Weaving was again an inbetween chore when additional time was available during the summer months at the yayla. Slowly, maybe year by year, panel after panel would have been woven until enough was gathered for a new tent. For the older tents, new panels were woven that replaced old torn panels step by step.

The modern lifestyle of the members of the Karatekeli families did not allow that much continuous and diligent work on wool and weaves during the year anymore. As both sexes of the household had to invest more time in commercial work or as the women had to compensate the deficit of male workforce on fields and in flocks in favour for their husband's and son's commercial jobs outside, time for weaving became severely short. It rendered to be more efficient to rely on outside sources which provided the desired black weave panels. An efficient workflow under the conditions of professional handicraft reduced the overall investment of personal labour into a new setting of time and labour management with maximum output. The Yörük deliver sacks of mixed goat hair to the weavers' villages where these get sorted into colours and quality, dried, combed and carded and then delivered to the village's households that were specialized on spinning the yarn. Alternatively to the manual handicraft, an automated process is pursued for even cheaper output of large quantities of black goat hair panels. But for the Yörük, a manual process is as well being pursued. The yarn gets spun with weaving wheels of the walking-path method that allow a swift and physiognomy-friendly way of working. These weaving wheels spin the single thread and counterspin the threads into a yarn simultaneously. Finally, on the treadle loom, the the yarn gets woven into the desired panels.

The quality difference between old and new panels is unseen to the ordinary person but very apparent to the expert. Although less technologically managed but more diligently experienced, the hair gets much better sorted right after shearing by the old way. The length of the hairs for the old yarn is considerably longer than for the new yarn. As well, the spinning process with the drop spindle provides a higher output quality than

the fast spinning with the spinning wheels in the weavers' villages. These two factors are the main basis for a high quality panel. In accordance with interviews done in the weavers' villages about differences between loom types in general (see chapter 4.2.5), it can as well be assumed that the vertical loom of the Yörük offers a far more cautious condition of weaving when the faster treadle loom in the weavers' villages. There, a difference in quality for the weave may as well be of relevant importance.

The production changed from indigenous to outsourced (change in ways of production), from slow/diligent/high-quality to fast/efficient/average-quality (change of crafting velocity and quality), from self-sustaining to market-sensitive (change of economic conditions), from manually self-made to manual professional division of labour (change of tools and organisation).

The design output changed technically into a lower life-cycle quality. Visual and Textural changes are unseen to the ordinary user.

The design output changed socioculturally and historically into a lower social value as it rendered from a diligently manufactured item within the family into a quickly made product from professionals outside.

The design output changed economically and infrastructurally into a slightly lower investment item dependant upon present market supply with its present infrastructural options (in this case: handicraft workshops of the weavers' villages). The lower investment increases the affinity of less expectations for long sustainability.

<b>changes of production of roof textile</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	outsourced handicraft
<u>velocity and quality:</u>	slow, diligent, high-quality;	fast, efficient, average-quality;
<u>material resources:</u>	self-sustaining	market-sensitive
<u>tools and organisation:</u>	manually self-made	manual professional division of labour

<b>adaption in design of roof textile</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	lower life-cycle and technical quality, difference not visually apparent;	higher life-cycle and technical quality, difference not visually apparent;
<u>socioculturally and historically:</u>	high social value, diligently manufactured item within family;	average social value, quickly made product from professionals;

<u>economically and infrastructurally:</u>	high investment of personal workforce with high sustainability, independent from financial exchange and market changes;	investment item of considerable financial impact, less expectations for long sustainability, dependant upon present market supply and present infrastructural options;
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The change from indigenus production to professional manufacture additionally creates a homogeneity in the quality and character of roof textiles that did not exist before. The new tents lost a strain of individuality in that case.

The loss of time for textile production within the family created an economic void that got filled with the specialisation of the weavers' villages whose inhabitants are descendants of sedentary Yörük.

The change of type of manual tools for yarn and weave production directly influenced the quality profile of the textile.

The logistical change in gathering the hair of goats (from individual hand-picking to mass transportation to the weavers' villages) strongly influenced the quality of the raw material. Even largely organized sorting methods do not compensate the quality of traditionally hand-picked raw hair.

<b>differences tent roof</b>	<b>old</b>	<b>new</b>
<b>layouting the tent</b>		
<u>acquisition:</u>	weaving within the family	product of the weavers' villages
<u>processing:</u>	maybe beating the panels OR stretching them by hand, pinning panels onto ground (with three wooden stakes for each panel);	beating the panels; pinning panels onto ground (with iron nails);
<u>used tools:</u>	maybe poles (for beating), wooden stakes (length: appr. 40 cm, thickness: appr. 5 cm), wooden hammers;	poles (for beating), iron nails (length: 15 - 20 cm), iron hammers;
<b>sewing panels</b>		
<u>processing:</u>	sewing even stitch method, from one end to the other or from the middle outwards;	sewing even Yörük stitch method, from one end to the other;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof

The Yörük Black Tent

<b>sewing belts</b>		
<u>material:</u>	hand-made black woven bands	machine-made decorated woven bands (2 - 3 colours)
<u>acquisition:</u>	band weaving within the family	product of the weavers' villages
<u>processing:</u>	NA	measuring and levelling (with nails and yarn), sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	NA (levelling and measuring yarn, pins, hammer)	levelling yarn, measuring tape, iron nails, iron hammer;
<b>installing ridge pieces</b>		
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA	measuring (measuring tape), sewing onto central panel and belt;
<u>used tools:</u>	partly NA	measuring tape
<b>installing stay-fasteners on belts</b>		
<u>acquisition:</u>	carving within the family	product of carpenter
<u>processing:</u>	NA (sewing bundles of goat hair yarn onto ends of belts, ...)	dividing belt ends, sewing belts strips around stay-fasteners;
<u>used tools:</u>	partly NA	black goat hair yarn, large needle, shearing scissors;
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA OR similar	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	NA	black goat hair yarn, large needle, shearing scissors;
<b>end seam of panels</b>		
<u>processing:</u>	NA (similar OR none)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA	large needle, shearing scissors OR none;

<u>result:</u>	OR none, different lengths of flag;	folded end seam OR braided frazzled seam;
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or 7 panels; with decorated or undecorated eaves' band, even stitch, with 0,1 - 0,5 m flag, black broad belts, numerous kinds of connection for stay-fasteners;	5 panels, even Yörük stitch, with 0,2 m flag, decorated narrower belts machine-made, stay-fasteners connected divided belt ends (long sides) or braided ropes made of goat hair yarn (short sides);
<u>odds:</u>	in one case one belt is sewn on top of the panels and not underneath; belts can vary in sizes;	
<u>alternative:</u>	rare use of raised stitch	middle belt showing different decoration pattern (3 colours)

It is interesting to see how the old and new way of sewing a tent is quite similar and only minor changes happened there. Unfortunately, the data about the old ways is only fragmentary and does not give clear insight on the details that may be of importance. For the old tents, the panels were laid out on the prepared ground, cut into the desired length and then stretched by hand or beating. Each panel was pinned down at each end with exactly 3 wooden stakes. It is unclear if the lower tips of the stakes influenced the textile negatively by being pierced through. The panels were sewn together with an even stitch method from one end to the other or from the middle outwards. Then, the belts got sewn on the fixed panels and further, the ridge pieces got sewn on the belts and panels by the use of black goat hair yarn being run in the four drill holes and crossed on the top side of the tent. In most cases, the stay-fasteners were connected to the belts with bundles of goat hair yarn sewn on the belt's end and run around the stay-fastener. The stay-fasteners at the central panels were connected to the area above the ridge piece with a black goat hair rope. The end seam of the panels was either folded and sewn, frayed and braided or simply frazzled without further processing. Lengths of the hanging flag differed from tent to tent. Altogether, the old tents bore 5 or 7 panels, in some cases with eaves' band, seamed at their ends in various designs with the end hanging down for 0,1-0,5 m with rather broad black belts and various ways of connecting the stay-fasteners to the belts. Odds happened here and there as e.g. belts sewn on top of a tent, use of various belts' widths within one tent or tents bearing the raised stitch instead of the even stitch.

The new tent building was done in a similar way except that the panels were pinned

down to the ground with iron nails, 2 or 3 for each end. The stretching was done by the beating of the panels with the poles. The sewing with the even Yörük stitch from one end to the other happened with the same tools except for the use of iron hammers instead of wooden ones. A measure tape added up the easy levelling in of belts and ridge pieces with levelling yarn and iron pins. The decorated belts were fixed with a simple overcast stitch, the ridge pieces were threaded similarly to the old tents. The belts' ends were divided and sewn around the stay-fasteners' ends, the stay-fasteners at the central panel were connected with a braided goat hair rope. The end seams of the panels were folded and sewn or frazzled and braided.

Overall, the roof design adhered to 5 broad panels, 3 decorated machine-made belts, stay-fasteners connected to divided belts' ends with alternatively the middle belt showing a different decoration and the panels' end flag hanging down for 0,1 m.

The production did not change much. The tools changed partly from wooden material to iron material and may provide a slight improvement for the gentle handling of the textile (e.g. slim iron pins instead of thick wooden stakes). The design output adheres to slight visual changes as e.g. the use of machine-made decorated belts and neatly divided belts' ends for the stay-fasteners.

<b>changes of production of tent roof</b>	<b>old</b>	<b>new</b>
<u>tools:</u>	wood material, probably with negative influence on textile;	iron material, more textile-sensitive;
<b>adaption in design of tent roof</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	minor visual changes in variants	minor visual changes in variants

Most significant are the changes in tool material that pose to be an improvement.

<b>differences tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR old goat hair panels OR blankets	black goat hair panels
<u>acquisition:</u>	weaving within the family OR black tent rugs/blankets collected/traded	product of the weavers' villages

## The Yörük Black Tent

<u>processing:</u>	NA	measuring length and width on pitched-up tent roof, cutting panels, sewing panels on ground without stretching; seaming wall cloth with folded seam;
<u>used tools:</u>	And NA	shearing scissors, black goat hair yarn, large needle;
<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 broad pieces (long sides) (occasionally with top band); 3 broad pieces (short sides); OR roughly seamed;	4 wall cloths for tent, even Yörük stitch; 2 pieces (long and short sides); folded seamed;
<u>alternative:</u>	rare use of raised stitch	added with decorated top end band (3 colours), width: 25 cm, machine-made;
<u>alternative:</u>	wall curtain divided in two for the long side	

Tent walls for the old tents are a rather wild issue. All sorts of dark textiles served as basis for the design of tent walls in order to reach the longest possible usage of old panels and blankets. This indicates that it was economically reasonable not to waste old cloths as much as possible. Old blankets and tent cloths were even exchanged between families when the need for such arose. In most of the cases, old tent roof panels served as good basis for wall cloths. But, occasionally, wall cloths were woven anew when there was a lack of textiles for a completely new tent. In such cases, these panels were woven in a faster and rougher way than the roof panels in order to save precious time. The wall cloths were stitched with an even or raised stitch and roughly seamed.

For the new tents, the wall cloths contain the same quality of textile as the tent roof. They were levelled in on the erected tent roof and then quickly sewed and seamed for swift finalisation.

The production changed from mainly indigenous second-hand to partly outsourced made-anew (change in ways of production), from low-quality to higher-quality (change of crafting quality), from self-sustaining to partly market-sensitive (change of material resources and economic conditions), from manual to partly manual common (change of tools).

The design output changed technically into a higher life-cycle and performance quality. Visual changes adhere to a more homogeneous appearance.

The design output changed socioculturally and historically into a higher social value as

it rendered from a second-hand item into a product made anew.

The design output changed economically and infrastructurally into a higher investment item dependant upon present market supply with its present infrastructural options (in this case: handicraft workshops in the weavers' villages).

<b>changes of production of wall cloths</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous second-hand	partly outsourced made-anew
<u>velocity and quality:</u>	low quality	higher quality
<u>material resources:</u>	self-sustaining	partly market-sensitive
<u>tools:</u>	manual	partly manual common

<b>adaption in design of wall cloths</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	low life-cycle and performance quality	higher life-cycle and performance quality, more homogeneous appearance;
<u>socioculturally and historically:</u>	low social value, second-hand item;	higher social value, product made anew;
<u>economically and infrastructurally:</u>	low investment of personal workforce, dependent on material available;	Higher investment item, based on financial exchange, dependant upon present market supply and present infrastructural options;

Although wall cloths are of minor priority, the difference between old and new tent design shows a definitive increase in quality and investment. The tent design aspires to a more homogeneous appearance.

<b>differences tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	AND finished walls, wooden pins;	finished tent roof

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<u>processing:</u>	NA (AND pinning walls onto roof)	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (OR brooms)	knives, iron stakes, iron hammers, bush twigs;
<u>result:</u>	AND walls	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats made of reed; maybe wooden stakes for windbreaking mats, floor reed mat;	windbreaking mats made of synthetic fibre; iron bars, wall cloths, wooden pins, floor mat (made of synthetic fibre);
<u>acquisition:</u>	NA (mainly own production and surroundings)	from the shops of the city Tire and from previous working steps
<u>processing:</u>	NA (wall cloths already installed)	installing vertical iron bars onto the ground, binding windbreaking mats onto iron bars, pinning wall cloths onto roof, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (different hammer)	iron hammer, yarn, large needle (bent narrow twist), knife;
<u>outcome:</u>	finished tent; with reed mats and wooden stakes	finished tent; with synthetic mats and iron stakes;
<u>alternative:</u>	metal sheeds for windbreaking mats	
<u>alternative:</u>	stone walls instead of windbreaking mats	

It is unknown whether the walls for the old tents were levelled in at the erected roof or preferably earlier while it was still pinned down on the ground. The walls for the new tents were measured on the already installed tent roof, in any case.

The striking difference between old tents and new tents are the material choices for construction of the windbreaking walls. While wooden stakes and reed mats were the traditional materials, the new tents provided synthetic mats bound on iron stakes. In the end, a mat was laid on the ground with a carpet above for first comfortable seating inside the newly built tent.

Old tents showed various alternatives to the reed mats as windbreaking walls like metal sheeds or stone walls.

The production changed from indigenous to partly outsourced (change in ways of production), from slow/diligent/high-quality to fast/efficient/average-quality (change of crafting velocity and quality), from self-sustaining to partly market-sensitive (change of material resources and economic conditions), from manual to partly manual professional and automated (change of tools).

The design output changed technically into a lower life-cycle and performance quality. Visual changes adhere to a more homogeneous appearance with geometrically plain designs (stay-fasteners and ridge pieces).

The design output changed socioculturally and historically into a slightly lower social value as it rendered from a diligently manufactured item within family tradition into a swiftly made high-cost product that will need to be replaced sooner.

The design output changed economically and infrastructurally into a slightly lower investment item dependant upon present market supply with its present infrastructural options (in this case: handicraft workshops in a nearby city and in the weavers' villages).

<b>changes of production of tent completion</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	partly outsourced handicraft
<u>velocity and quality:</u>	slow, diligent, high quality;	fast, efficient, average quality;
<u>material resources:</u>	self-sustaining	partly market-sensitive
<u>tools:</u>	manual	partly manual professional and automated

<b>adaption in design of tent completion</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	high life-cycle and performance quality, individual appearance;	lower life-cycle and performance quality, homogeneous appearance with geometrically plain designs;

<b>adaption in design of tent completion</b>	<b>old</b>	<b>new</b>
<u>socioculturally and historically:</u>	high social value, appreciated item of family heritage;	slightly lower social value, swiftly made high-cost product, needs to be replaced sooner;
<u>economically and infrastructurally:</u>	high investment of personal workforce, independent from financial exchange and market changes, only dependant on family-owned handicraft tools, sustainable item;	lower investment item, partly based on financial exchange, dependant upon present market supply and present infrastructural options;

The production process and design output of the new tents absorbed the overall economic change that happened in the surroundings. Outsourcing, division of labour among professionals, partly automation, partly high quantity logistics and processing, shifts from home-made products to professionally made items, shifts from self-sustaining jobs to commercial jobs, shifts of personal time management from self-managed to induced, etc. ....

As a result, shifts from high quality to low quality and vice versa can be observed when taking a close look upon the single construction parts of the tent. This issue leads to chapter 8.2.

But first, it is a necessary counter-display to set focus on the commons.

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### Chapter 8.1.2 Based on Commons

Adaption in design in the course of changes in production: According to the structure of chapter 7.2, the issue within the commons will be pursued. According to the order within chapter 7.2.2, step after step from one design item to the other is taken. Each design item (e.g. ridge pieces, stay-fasteners, etc. ....) will then be analysed in regard of its production and design. The design will be discussed and listed within the various aspects provided (technical, sociocultural and historical, economical and infrastructural). At the end of each item analysis, some comprehensive impressions will be summarized and will be taken into account in chapter 8.2.

1 That was my baby daughter Veronika adding comments.

<b>commons ridge pieces</b>	<b>old</b>	<b>new</b>
<u>processing:</u>	cutting, carving (hole), drilling;	cutting, carving (hole), drilling;
<u>used tools:</u>	NA (AND gouges)	AND gouge
<u>outcome:</u>	3 ridge pieces, vaulted, socket;	3 ridge pieces, vaulted, socket;

For the production of the ridge pieces in regard of the old and the new tents, processes of cutting (cutting rough dimensions of the ridge piece), carving (carving the socket hole) and drilling (drilling the 4 holes for fixation on the tent canvas) are similarly needed. Though most of the tools differ between old and new way, manual gouges with hammer-tool are still needed in both ways.

The outcome features 3 ridge pieces, slightly vaulted on top and with a socket below.

The production remained within the context of handicraft (commons in ways of production), within individual production (commons in velocity and quality), within wood design (commons of material resources) and within certain manual tools (commons of tools).

The design output remained technically within the character of detail solution, within the type of construction system and within the desired mechanical performance. Visual commons adhere to a common material identity and a common shape.

The design output remained socioculturally and historically within the common determination.

The design output remained economically and infrastructurally within its relation to the whole tent and within the merits of local production.

<b>commons of production of ridge pieces</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	handicraft	handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	wood design	wood design
<u>tools:</u>	certain manual tools	certain manual tools

<b>commons in design of ridge pieces</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;
<u>socioculturally and historically:</u>	common determination	common determination
<u>economically and infrastructurally:</u>	value within relation to the whole tent, within the merits of local production;	value within relation to the whole tent, within the merits of local production;

Most significant is the effort taken to keep the ridge pieces within their traditional technical role, their material identity (with exception of the metal ridge pieces documented in chapter 8.1.1) and their traditional determination. Regarding the production they stay individually crafted in the local area.

<b>commons stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>material:</u>	AND conifer wood	conifer wood
<u>processing:</u>	cutting	cutting
<u>outcome:</u>	8 stay-fasteners of “v-shaped with notches type a”	8 stay-fasteners of “v-shaped with notches type a”

It can be stated that conifer wood is used for old and new tents when all types of stay-fasteners are taken into consideration. But as the most direct cultural reference for the new tents is to be the old Karatekeli tents with stay-fasteners of type a, (see stay-fasteners of the Karatekeli families in the region, chapter 5.1.1), the statement of using the common material cannot be uphold because the type a was traditionally made of broadleaf wood.

Cutting the wood for further crafting is a common process unchanged. The outcome is quite the same regarding number, type and shape.

The production remained within the context of handicraft (commons in ways of production), within individual production (commons in velocity and quality), within wood design (commons of material resources) but not within certain manual tools (commons of tools).

The design output remained technically within the character of detail solution, within

the type of construction system and within the desired mechanical performance. Visual commons adhere to a common material identity and a common shape.

The design output remained socioculturally and historically within the common determination.

The design output remained economically and infrastructurally within its relation to the whole tent and within the merits of local production.

<b>commons of production of stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	handicraft	handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	wood design	wood design

<b>commons in design of stay-fasteners</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;
<u>socioculturally and historically:</u>	common determination	common determination
<u>economically and infrastructurally:</u>	value within relation to the whole tent, within the merits of local production;	value within relation to the whole tent, within the merits of local production;

Comprehensively summarized, the same statement that was given for the ridge pieces can be done here.

<b>commons guy-ropes</b>	<b>old</b>	<b>new</b>
<u>material:</u>	OR hemp or flax ropes	hemp or flax ropes
<u>acquisition:</u>	OR ropemaker	ropemaker
<u>processing:</u>	OR similar (professional rope-production)	professional rope-production
<u>used tools:</u>	OR similar	NA
<u>outcome:</u>	OR 40 - 60m hemp or flax rope, 4 half-hitch knots;	40 - 60m hemp or flax rope, 4 half-hitch knots;

In tradition and new design, hemp or flax ropes retrieved from a ropemaker are a common feature. In both aspects they are used in the same way with the same knotting system.

The production remained within the context of handicraft (commons in ways of production), but unknown regarding the process (commons in velocity and quality), remaining within particular material choice (commons of material resources) but unknown regarding the use of tools (commons of tools).

The design output remained technically within the character of detail solution, within the type of construction system and within the desired mechanical performance (regarding the moveable half-hitch knots). Visual commons adhere to a common material identity and a common shape.

The design output remained socioculturally and historically within the common determination.

The design output remained economically and infrastructurally within its relation to the whole tent and within the merits of local production.

<b>commons of production of guy-ropes</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	handicraft	handicraft
<u>material resources:</u>	hemp or flax	hemp or flax

<b>commons in design of guy-ropes</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;
<u>socioculturally and historically:</u>	common determination	common determination
<u>economically and infrastructurally:</u>	value within relation to the whole tent, within the merits of local production;	value within relation to the whole tent, within the merits of local production;

Simply taken, the acquisition and use of hemp or flax ropes remained mainly unchanged.

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<b>commons stakes</b>	<b>old</b>	<b>new</b>
<u>outcome:</u>		8 iron stakes with grommets and rings
<u>alternative:</u>	iron bars / tubes	

There are nearly no commons between old and new stakes except in the aspect of the more recently introduced iron bars and tubes used for the old Karatekeli tents. In regard of commons with wooden stakes, it can be stated that simply the construction system remained unchanged in the idea of using stakes stuck into the ground in order to fix the guy-ropes.

The production did not remain within the context of handicraft (commons in ways of production) as it expanded into the benefit of industrial production. It did not remain within other aspects of production processes (commons in velocity and quality), but partly within the use of iron (commons of material resources). It cannot be said whether any tools remained unchanged (commons of tools).

The design output remained technically within, within the type of construction system and within the desired mechanical performance but not within the character of detail solution (use of grommets and rings is new). Visual commons adhere partly to a common material identity and a common idea of the shape.

The design output remained socioculturally and historically within the common determination.

The design output remained economically within its relation to the whole tent.

<b>commons of production of stakes</b>	<b>old</b>	<b>new</b>
<u>material resources:</u>	iron design	iron design

<b>commons in design of stakes</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	type of construction system, desired mechanical performance, common material identity, common shape;	type of construction system, desired mechanical performance, common material identity, common shape;
<u>socioculturally and historically:</u>	common determination	common determination
<u>economically and infrastructurally:</u>	value within relation to the whole tent	value within relation to the whole tent

As already mentioned, the common aspect of old and new stakes remains within the concept of the construction system by using stakes stuck into the ground for fixing the guy-ropes.

<b>commons poles</b>	<b>old</b>	<b>new</b>
<u>material:</u>	broadleaf wood	broadleaf wood
<u>acquisition:</u>	from the surroundings or trade	trade, from the surroundings
<u>processing:</u>	removing branches, decortivating, narrowing top, ... ;	removing branches, decortivating, narrowing tip;
<u>used tools:</u>	NA (probably saw, chop sickle ( <i>orak</i> ), ... )	saw, chop sickle ( <i>orak</i> );
<u>outcome:</u>	3 poles, size related to tent size;	3 poles, size related to tent size;

Poles are still preferably retrieved from broadleaf wood. In order to reach a high level of self-sustainability, the surroundings and options of good trade still play a main priority. The manipulation of the stems is done with traditional tools like the chop sickle which accompanies each Yörük household or Yörük working group (on fields, forests or while tending the goats or sheep) as a standard equipment.

The outcome - the poles themselves - does not contain much differences, especially not when a long term use of the poles is to be awaited. The rough decortivating and the sharply prepared tip of the new poles renders itself close to the old design (smooth surface and rounded tip) after being used constantly for years (the rounding would happen due to friction and abrasion).

The production remained within the context of indigenous handicraft (commons in ways of production), within individual production (commons in velocity and quality), within broadleaf wood design (commons of material resources) and within certain manual tools (commons of tools).

The design output remained technically within the character of detail solution, within the type of construction system and within the desired mechanical performance. Visual commons adhere to a common material identity and a common shape. Constant usage will even reach a common surface character.

The design output remained socioculturally and historically within the common determination and value.

The design output remained economically and infrastructurally self-sustaining or supported by trade with close relations.

<b>commons of production of poles</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	indigenous handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	broadleaf wood design	broadleaf wood design
<u>tools:</u>	certain manual tools	certain manual tools

<b>commons in design of poles</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape;	character of detail solution, type of construction system, desired mechanical performance, common material identity, common shape, common surface character after constant use;
<u>socioculturally and historically:</u>	common determination, common value;	common determination, common value;
<u>economically and infrastructurally:</u>	self-sustaining or supported by trade with close relations	self-sustaining or supported by trade with close relations

The commons of poles feign a nearly unchanged situation. There, a comparison with the differences is liable.

*The tables “commons exterior poles” are left out due to lack of data.*

<b>commons wooden pins</b>	<b>old</b>	<b>new</b>
<u>material:</u>	twigs of bushes	twigs of bushes
<u>acquisition:</u>	surroundings	surroundings
<u>used tools:</u>	NA (maybe whittle knife)	whittle knife
<u>outcome:</u>	30 - 40 wooden pins, decorticated, 20 - 25 cm long, 0,4 - 0,8 cm thick;	30 - 40 wooden pins, partly decorticated, 22 cm long, 0,4 - 0,8 cm thick;
<u>setting:</u>	installed appr. 80 cm distant to each other	installed 80 cm distant to each other

The source for the wooden pins remains unchanged while the process of manipulation already depicts a deviation that provokes a different outcome. Still, process and tools remain within the self-sustaining indigenous context. Old and new pins remain in the same style, setting interval and definition of use.

The production remained within the context of indigenous handicraft (commons in ways of production), within individual production (commons in velocity and quality), within wood design from twigs (commons of material resources) and within tools that are standard equipment of the household (commons of tools).

The design output remained technically within the character of detail solution, within the type of construction system, within the desired mechanical performance and within the setting style. Visual commons adhere to a common material identity and a common shape.

The design output remained socioculturally and historically within the common determination and value.

The design output remained economically and infrastructurally self-sustaining and indigenous.

<b>commons of production of wooden pins</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	indigenous handicraft	indigenous handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	wood design from twigs	wood design from twigs
<u>tools:</u>	standard equipment of the household	standard equipment of the household

<b>commons in design of wooden pins</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	character of detail solution, type of construction system, desired mechanical performance, setting style, common material identity, common shape;	character of detail solution, type of construction system, desired mechanical performance, setting style, common material identity, common shape;
<u>socioculturally and historically:</u>	common determination, common value self-sustaining and indigenous;	common determination, common value;
<u>economically and infrastructurally:</u>	self-sustaining, indigenous;	self-sustaining, indigenous;

Unlike the poles, the commons found in the process of crafting the wooden pins do not support a common outcome, especially in regard of quality. Here again, a comparison to the differences is liable.

<b>commons roof textile</b>	<b>old</b>	<b>new</b>
<b>raw wool</b>		
<u>material:</u>	cut hair from black cashmere goats	cut hair from black cashmere goats
<u>acquisition:</u>	cutting	cutting
<u>processing:</u>	cutting, ..., collecting in bags;	cutting, collecting in bags;
<u>used tools:</u>	shearing scissors	shearing scissors
<b>combing, carding</b>		
<u>processing:</u>	(combing, backing into sacks;)	..., combing and carding, backing into sacks;
<b>spinning</b>		
<u>processing:</u>	spinning into thread and counterspinning into yarn	spinning into thread and counterspinning into yarn
<u>result:</u>	black goat hair yarn in round bundles	black goat hair yarn in round bundles
<b>weaving</b>		
<u>processing:</u>	setting up the warp and ..., weaving, rolling weave into rolls;	setting up the warp, weaving, rolling weave into rolls;
<u>outcome:</u>	black goat hair panels (width: appr. 80cm; length: NA)	black goat hair panels (width: appr. 80cm; length: appr. 27 m); 0,35 cm yarn thickness; far stretched twist, loose weaving tension;

By cutting with traditional shearing scissors, the raw hair is retrieved from black cashmere goats and collected in bags. Occasionally, it may get combed in the old tradition, as well. The process of spinning differs severely but the outcome needs to be quite similar: a yarn that consists of two spun threads that got counter-spun again. The yarn is rolled up in a bundle ready to get implemented for the next working step. The weaving differs again in process and method though the outcome is supposed to be similar: a plain weave of black goat hair yarn with appr. 80 cm width.

The production remained within the context of handicraft (commons in ways of production), but not within individual production as the production at the weavers' villages can be described as "serial" production (commons in velocity and quality), within black goat hair design (commons of material resources) and within handicraft tools (commons of tools).

The design output remained technically within the character of detail solution, within the type of construction system and within the desired mechanical performance with the goal to reach a nearly identical product in spite of the differing production process. Visual commons adhere to a completely common outcome that differs in quality at a closer look.

The design output remained socioculturally and historically within the common determination and an aspect of value that got transferred into the context of modernized production.

The design output remained economically and infrastructurally within the merits of local production.

<b>commons of production of roof textile</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	handicraft	handicraft
<u>velocity and quality:</u>	hand-made	hand-made
<u>material resources:</u>	black goat hair	black goat hair
<u>tools:</u>	handicraft tools	handicraft tools

<b>commons in design of roof textile</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	character of detail solution, type of construction system, desired mechanical performance, nearly identical product, common outcome;	character of detail solution, type of construction system, desired mechanical performance, nearly identical product, common outcome;
<u>socioculturally and historically:</u>	common determination, common aspect of value in relation to economic changes;	common determination, common aspect of value in relation to economic changes;
<u>economically and infrastructurally:</u>	within the merits of local production	within the merits of local production

The production processes and methods show a developing tendency that goes towards higher efficiency, faster production and high quantity output. In this context, it is the goal to provide a product that ought to be identical to the traditional one.

<b>commons tent roof</b>	<b>old</b>	<b>new</b>
<b>laying out the tent</b>		
<u>material:</u>	black goat hair panels	black goat hair panels

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<u>processing:</u>	preparing the ground; layouting, cutting and maybe beating the panels OR ..., pinning panels onto ground;	preparing the ground; layouting, cutting and beating the panels; pinning panels onto ground;
<u>used tools:</u>	shearing scissors (for cutting), maybe poles (for beating), pinning tools, hammers;	shearing scissors (for cutting), poles (for beating), pinning tools, hammers;
<u>result:</u>	tent layout pinned and stretched on ground, panels side by side according to tent layout;	tent layout pinned and stretched on ground, panels side by side according to tent layout;
<b>sewing panels</b>		
<u>processing:</u>	sewing even stitch method, sewing from one end to the other;	sewing even ... stitch method, sewing from one end to the other;
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	sewn raw tent roof	sewn raw tent roof
<b>sewing belts</b>		
<u>material:</u>	... woven bands;	... woven bands;
<u>processing:</u>	NA (measuring, levelling and sewing belts onto panels with a simple overcast stitch)	measuring and levelling sewing belts onto panels with a simple overcast stitch;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA (levelling and measuring yarn, pins, hammer);	black goat hair yarn, large needle, shearing scissors, levelling yarn, ... , ... pins, ... hammer,
<u>result:</u>	sewn belts on tent roof	sewn belts on tent roof
<b>installing ridge pieces</b>		
<u>material:</u>	wooden ridge pieces with drilled holes	wooden ridge pieces with drilled holes
<u>processing:</u>	NA (...., sewing);	sewing onto central panel and belt
<u>used tools:</u>	black goat hair yarn, large needles, shearing scissors, NA;	..., black goat hair yarn, large needles, shearing scissors;
<u>result:</u>	sewn ridge pieces on tent roof	sewn ridge pieces on tent roof
<b>installing stay-fasteners on belts</b>		
<u>material:</u>	wooden stay-fasteners;	wooden stay-fasteners;

<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners on belts;	stay-fasteners on belts;
<b>installing stay-fasteners on central panels</b>		
<u>processing:</u>	NA (braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener)	braiding black goat hair rope, sewing rope onto central panel around ridge piece area, piercing rope through central panel flag, sewing rope ends around stay-fastener;
<u>used tools:</u>	black goat hair yarn, large needle, shearing scissors, NA;	black goat hair yarn, large needle, shearing scissors;
<u>result:</u>	stay-fasteners connected to the central panel	stay-fasteners connected to the central panel
<b>end seam of panels</b>		
<u>material:</u>	sewn tent roof	sewn tent roof
<u>processing:</u>	NA (sewing folded seam OR fraying and braiding OR...)	sewing folded seam OR fraying and braiding
<u>used tools:</u>	NA (large needles, shearing scissors OR none)	large needle, shearing scissors OR none;
<u>result:</u>	folded end seam OR braided frazzled seam OR ...;	folded end seam OR braided frazzled seam
<b>design attributes of the roof</b>		
<u>outcome:</u>	5 or ... panels; even stitch, seamed braided/folded/none with 0,1 - 0,5 m flag, belts, numerous kinds of connection for stay-fasteners;	5 panels, even ... stitch, seamed braided/folded/none with 0,2 m flag, belts, .... <b>or</b> braided ropes made of goat hair yarn (short sides);

In regard of tent roof design, more commons than differences can be found. Taking the focus onto the commons only may be sufficient to get an overall look upon the tent roof layouting which may even work in practice. The panels get laid out onto the prepared ground according to the desired layout. They need to be pre-stretched no matter which method. Then they get pinned onto the ground. The sewing is done diligently, using an even stitch that supports the homogeneous character of the weave. After sewing, the belts and ridge pieces need to be levelled in and fixed. Then, the stay-fasteners can be

fixed as well, using common or differing ways. The end panels may need some kind of end seam that can be done according to a desired design choice. In the end, 5 panels with an even stitch, belts, ridge pieces and stay-fasteners form a tent roof that can be erected directly after finalisation.

The production remained within the context and the process of traditional indigenous handicraft (commons in ways of production), within individual production (commons in velocity and quality), within the traditional choice of material (commons of material resources) and within certain manual tools (commons of tools).

The design output remained technically and visually completely identical.

The design output remained socioculturally and historically within the common determination and value.

The design output remained economically and infrastructurally within its origin.

<b>commons of production of tent roof</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	traditional indigenous handicraft	traditional indigenous handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	traditional choice of material	traditional choice of material
<u>tools:</u>	certain manual tools	certain manual tools

<b>commons in design of tent roof</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	completely identical	completely identical
<u>socioculturally and historically:</u>	common determination, common value;	common determination, common value;
<u>economically and infrastructurally:</u>	within traditional origin	within traditional origin

For the tent roof design, the commons do show a striking majority. The sources for the old procedure as well show that there was a strong tradition lasting throughout the different tribes and regions. It lasted well up to the date of the recent field research. In that regard this shows that the field research does document a vivid tradition that has its roots back before the main economical and political changes of the 20<sup>th</sup> century had happened.

The Yörük Black Tent

<b>commons tent walls</b>	<b>old</b>	<b>new</b>
<u>material:</u>	black goat hair panels OR ... ;	black goat hair panels;
<u>used tools:</u>	shearing scissors, black goat hair yarn, large needles, NA;	shearing scissors, black goat hair yarn, large needle;
<u>outcome:</u>	4 wall cloths for tent; even stitch; 2 ... pieces maybe with top band (long sides); folded seam;	4 wall cloths for tent, even ... stitch; 2 pieces (long and ...sides); folded seam;
<u>alternative:</u>		with top end band

In case no old black goat hair cloths or blankets were available, the production and outcome of the wall cloths show strong similarities between the old and the new way.

The production remained within the context and the process of traditional indigenous handicraft (commons in ways of production), within individual production (commons in velocity and quality), but only partly within the traditional choice of material (commons of material resources) and within certain manual tools (commons of tools).

The design output remained technically and visually completely identical when considered to be done anew. It features a common character of detail solution and pursues a common system of outcome.

The design output remained socioculturally and historically within the common determination.

The design output did not remain economically and infrastructurally within any origin because the old choice of resources derived from recycling and not from new production which I consider to be a completely different category.

<b>commons of production of tent walls</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	traditional indigenous handicraft	traditional indigenous handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	traditional choice of material only when considered to be done anew	traditional choice of material
<u>tools:</u>	certain manual tools	certain manual tools

<b>commons in design of tent walls</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	completely identical when considered to be done anew, common character of detail solution, common system of outcome;	completely identical when considered to be done anew , common character of detail solution, common system of outcome;
<u>socioculturally and historically:</u>	common determination, partly common value when done anew;	common determination
<u>economically and infrastructurally:</u>	only common to some extend when done anew	

The commons between old and new wall cloths can be uphold to a high level when the aspect of recycling is left out. Considering a new production for an old and a new tent allows to draw close relations to each other.

<b>commons tent completion</b>	<b>old</b>	<b>new</b>
<b>first tent pitch-up</b>		
<u>material:</u>	finished tent roof, ... ;	finished tent roof
<u>acquisition:</u>	result of many manufacturing steps	result of many manufacturing steps
<u>processing:</u>	NA (pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets, ... )	pre-cutting guy-ropes; turning over finished tent roof, fixing stakes, pre-fixing roof on ground, lifting roof cloth by installing poles, stretching guy-ropes, beating off dust of roof cloth by beating with bush twigs, testing balance of ridge pieces, testing correct fit of pole's tips in ridge piece sockets;
<u>used tools:</u>	NA (knives, stakes, hammers, bush twigs ... )	knives, stakes, hammers, bush twigs;
<u>result:</u>	pitched-up tent roof and ... ;	pitched-up tent roof
<b>completing the tent</b>		
<u>material:</u>	windbreaking mats; stakes for windbreaking mats, floor mat, carpet;	windbreaking mats; stakes for windbreaking mats, floor mat, carpet;

The Yörük Black Tent

<u>processing:</u>	NA (installing stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground)	installing stakes, binding windbreaking mats onto stakes, laying out floor mat and carpet onto the ground;
<u>used tools:</u>	NA (hammer, yarn, large needle, knife)	... hammer, yarn, large needle, knife;
<u>outcome:</u>	finished tent; with mats and stakes;	finished tent; with mats and stakes;

The completion of the tent remained mainly within the ways of old tradition. The differences in the choice of steps are only minor which may also be dependant on the personal references of each Yörük group working together on the tent.

The production remained within the context and the process of traditional indigenous handicraft (commons in ways of production), within individual production (commons in velocity and quality), partly within the traditional choice of material (commons of material resources) and within certain manual tools (commons of tools).

The design output remained technically and visually completely identical with few exceptions (which are particularly settled in the tent accessories).

The design output remained socioculturally and historically within the common determination and values as the tent is still considered to be a precious cultural item that needs celebration.

The design output remained economically and infrastructurally within the merits of local production and within the indigenous procedure.

<b>commons of process of tent completion</b>	<b>old</b>	<b>new</b>
<u>ways of production:</u>	traditional indigenous handicraft	traditional indigenous handicraft
<u>velocity and quality:</u>	individual production	individual production
<u>material resources:</u>	partly traditional choice of material	partly traditional choice of material
<u>tools:</u>	certain manual tools	certain manual tools

<b>commons in outcome of tent completion</b>	<b>old</b>	<b>new</b>
<u>technically:</u>	mostly identical	mostly identical
<u>socioculturally and historically:</u>	common determination, common value;	common determination, common value;

<b>commons in outcome of tent completion</b>	<b>old</b>	<b>new</b>
<u>economically and infrastructurally:</u>	merits of local production, indigenous procedure;	merits of local production, indigenous procedure;

The process of tent completion remains mainly - as similarly depicted for the process of tent roof and tent walls – in its traditional context. The outcome is partly influenced by the differences given in some material choices, particularly regarding the tent accessories. Apart from that, it can be said that the outcome does as well lie in the main context of tradition unchanged.

### Chapter 8.1.3 Based on Graphic Tables

The graphic tables in chapter 7.3 are arranged in the categories “construction material”, “acquisition sources” and “processing” representing the best developed researching aspects according to the character of the field research. Herein, coherent analogies and contrasts between the old and the new tents can be drawn.

#### **construction material**

The choice of raw material shows that there is a shift in material variety as for e.g. coniferwood is as well accepted for the new tents in addition to broadleaf wood for the smaller hard parts. Wooden pins and poles, though, stay unchanged. With regard to the stakes, iron is newly introduced. The use of black goat hair for the guy-ropes vanishes and gives way to the popular use of hemp or flax. While the type of textile for roof and walls is meticulously differentiated at the old tents, a standard type is used for all textile parts at the new tents. The quality of old and new materials are best depicted in their life span. The smaller wooden parts tend to break earlier in the new constructions while the poles rather remain steady. The material change for the stakes and the guy-ropes is a definite improvement. So, it is interesting to note, that the exterior tension parts and anchoring system got stronger, while the wooden fixation parts like stay-fasteners and ridge pieces show a loss in lasting usability. On that part, there were already critical remarks among the tent builders, indicating that these parts need an improvement in material choice. Contrary to this, the wooden pins may need an improvement in processing as their life span got shorter but the raw material stayed the same. The deterioration of life span with regard to the roof textile lies within the

choice of a lesser material, while the tent roof design suffers from the quality of stitching. The latter is a matter of personal style of manual handicraft. Altogether, looking at the table, a generally shorter life span can be expected from the new tents while their momentary stability improved thanks to the anchoring system.

### **acquisition sources**

The acquisition sources can be divided in the acquisition of the raw material which stands before the start of processing and in the acquisition of the finished item that is to be installed in the tent and pinpoints the end of the item production process. With regard to the raw material acquisition, a strong tendency from own resource or local natural resource to resources organised by craftsmen and manufactures is obvious. Only poles and pins are collected from the close environment. The same goes for the finished item acquisition which shows that resource and processing are strongly connected in questions of foreign or own production. Exceptions pose the designs of walls and roof which changed into an outer source of material but stayed at own processing. Overall, it can be said that the Yörük changed from allround self-sufficiency into specialisation in tent design.

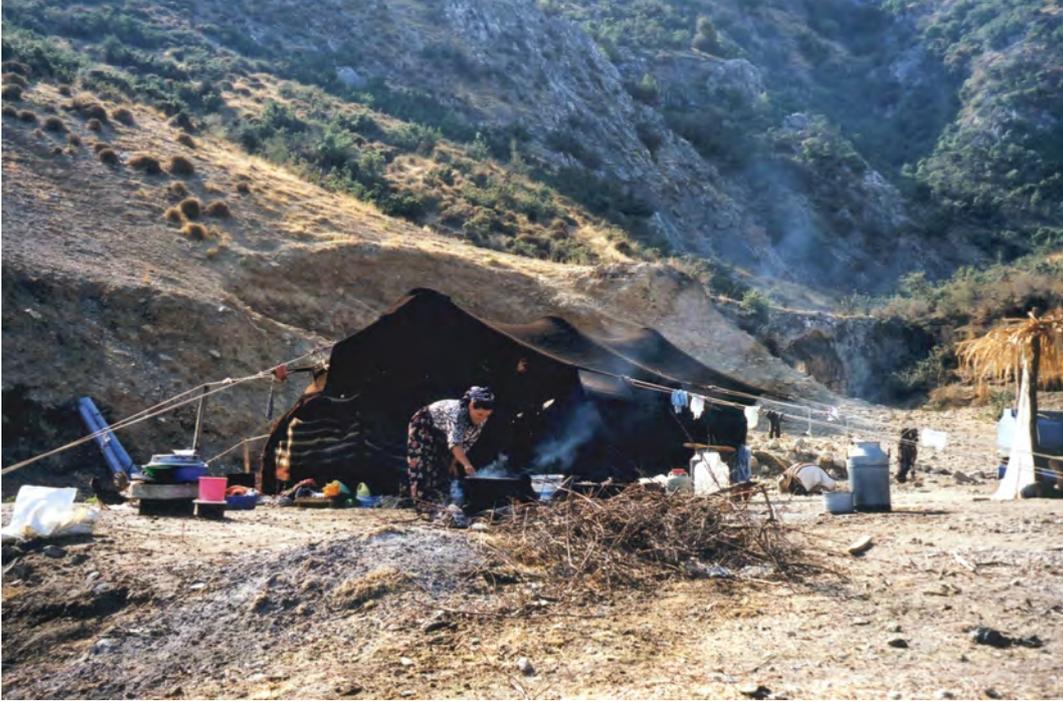
### **processing**

The processing methods and tools can be defined as traditional manual for all production steps at the old tent construction. In contrary, the processing of the new tents shows a vast variety of advanced fabrication like: manual with advanced tools as e.g. a manually driven rope twisting machine or the tools of a blacksmith, manual with modern assets as e.g. ridge pieces and stay-fasteners that were impregnated with wood stain, manual with electrical machines like the carpenter's work or even automated processes like the industrial production of hemp or flax ropes. Unchanged are poles, wooden pins and tent designs. Here, an analogy to the finished item acquisition can be drawn, indicating, that the Yörük mainly stayed on the traditional manual approach with regard to the items that they processed by themselves. The duration of processing methods remained unchanged in this area, as well. Regarding the other items, it can be stated that production became faster with exception to the stakes due to their material change from wood to iron. The number of people involved per designed item definitely increased, allowing an accelerated production. The same goes for the relative amount of tools that increased in all positions except for those crafted by the Yörük.

The processing shows how the Yörük stayed loyal to their processing methods concerning the items that were not outsourced. This happened in compliance to the request of reconstruction by the research team in the first place but may as well show that the production of the tent design itself cannot that easily be modified without a significant loss in the desired outcome. Only a modernisation to the maximum, like industrial automatisisation may replace the handicraft work in this regard. On this point, they specialized while most of the other items got outsourced by them, achieving an accelerated production that includes particular losses or gains in quality.

## **Chapter 8.2 Discussion and Resumee**

A person who does not deal with architecture on a professional or scientific level, may encounter a new building rather unsophisticated in that field, just taking the first impression of it in. This approach is quite refreshing for architects who are deeply involved in the subject. It helps taking one step back and looking at the issue as a whole. This step is not only refreshing, it is indeed quite necessary for the architect in order to get into touch with a rather pristine human notion towards architecture again. And that is one way of starting the discussion: The unadulterated look at the building itself:



*image 8.001: The author's first encounter with a black tent in the year 2001, Selçuk - Torbalı highway.*

A woman caring for a bonfire in front of the tent gives the idea of a calm and cosy home. The black colour, the 3 elegant peaks with curves at the roof and the generously wide spreading white ropes provide a taste of elegance, adventure and peacefulness. The surrounding environment supports these impressions, showing a perfect harmony between tent and surroundings.

Each person has a different first impression of the tent, dependant of his or her origin and individual character. But overall, an objective impression is created by the outer form and colour of the tent, its surface quality and its construction style. Getting deeper into it, the quality of the textile creates the character of form, combined with the type of construction.

When the researcher had asked the Yörük family for reconstruction of a tent, there were two unspoken things in mind for the constructors and for the researcher: First, construction of a similar tent with its optical characteristics based on mostly original material. And second, a process of construction that is close to tradition.

These were the main idealistic criteria for the construction of the new black tents. They ought to help providing the same impression like an old one. They ought to function in the same way. They ought to be constructed in a traditional way so that the observer gets an idea about the past.

Aside to these criteria, other outside influences were present like the predefined price of the venture and the available personal time of each person involved.

So that is the starting point. And what comes next? In this case, it is the question: How is this to be accomplished? Mehmet Şimşek and Mustafa Şurgun laid out a plan that provided the most efficient process to result a functioning tent that resembles the form and character of an old one, including the traditional way of sewing and designing. In short, they wanted to fulfil the task of traditional tent design by the lowest effort. This meant for them that they needed to collect the necessary single items (wooden parts, ropes, stakes, textiles) and assemble them like a modular construction system together with their relatives. So, the first day was shopping for the single parts and the second day was assembling them. One day of modern acquisition, one other day for traditional assembling.

This is one way to view the process. There is another one, too:

There comes a researcher asking for a tent. Mehmet Şimşek and Mustafa Şurgun want to fulfil that wish but have a fundamental problem: Traditionally, a tent was constructed over years. The women collected the goat's cut hair, spun it and wove it when the daily chores left some extra time in the summer months. They had known several years in advance when the new tent was needed. In most cases, it meant the start of a new household provided from the bride's family. This long procedure is missing in regard to the researcher's immediate request. So what did they do? They needed to cut down the whole production line that required months or years in the traditional way. Therefore, they acquired these parts from elsewhere: textile, wooden parts and ropes. The iron stakes were retrieved as well because they knew that they outmatch the wooden ones in everyday life. So what was left to be accomplished easily in one day? It was the assembling of the tent which was traditionally and even today a quick thing to do. Thus, the first day became the cutting down of the long production time span for the single parts and the second day was for assembling these parts in a normal and traditional pace. One day of modern accelerated achievement, one other day for traditional real-time assembling.

Abbreviated, these two views sound slightly different and lead to the same result, showing how an efficient and quick achievement of the desired goal was aimed at. And there, they explain how the two working days of tent creation show such ambivalent approaches of enterprise. The first day is modern, fast and relying on outer sources. The second day is traditional, normally paced and relying on inner workforce.

The graphic tables of chapter 7.3 exhibit how rather differences are found between the old and new way of creating the single tent items. Quite contrary, in regard of tent design (therefore the assembling of the tent) rather commons are present between the old and new. Recapitulatory for the building process, the first day bears a majority of changes or innovations, while the second day means mostly commons to tradition.

Again, keeping in mind how the Yörük family and the researcher had a certain idea of the outcome, it is interesting to take a closer look at how far that goal was met: There is the new tent that ought to please the optical and functional standards, being as similar as possible to the old ones. Was that actually achieved?

Maybe the answer may be “yes” at first sight. The so called “first impression”. Because the overall design resembles closely to the old tents. But rather a “no” is to be pronounced when investigated a bit closer. Here, differences can be detected: How come that the stay-fasteners look slightly different? Why is their surface shiny and coloured? Why do the ridge pieces not look that organic and decorated? Why is the character of the textile slightly different to the old ones? Some things are a bit off the expected scale.

And there, it is the challenge to ask: “Why did that happen?” By that question, the focus turns to the process of tent creation and an answer pops up: Because the production of the tent items had changed. And that had changed their outcome.

Summarised, it can be said that sociocultural changes, as e.g. the initiate reason of production accompanied with the available amount of project time and resources influenced a different way of item acquisition. That way of acquisition implied a different way of production of the items. And that again resulted in changes of the architectural outcome. But, on the other hand, commons were emphasised by the desired result accompanied by an overall idea of traditional design that had put the choice of final assembling process into preferation.

*Therefore, in case of the Yörük black tent, changes in architectural outcome were dependant on the initiate reason of construction, availability of project time and resources. That resulted into differently acquired tent items originating from changed production steps. Similarities in architectural outcome were supported by the desired result and the emphasis on traditional tent assembling.*

Having examined the changes at hand, a certain question may be left unresolved: Mehmet Şimşek and Mustafa Şurgun were able to cut the process of item production down into one day of mere acquisition. How come, that these resources were available at all? How come, that the production of black tent textile was outsourced at all decades before? The answer to this question is nested in chapter 2, describing the cultural, social and political history of Yörük society (2.2.1) presenting their changes in economics (2.2.4), their changes in mobility (2.2.5), costumes and social life (2.2.6) being influenced by their ethnic background (2.2.2), their geographic distribution (2.2.3) and their religion (2.2.6). In response to these changes and the influences that made them develop in a certain way, the villages of tent textile weavers evolved (4.2.1) filling in a new gap on the market that showed how the need for an outsourced textile production grew in the course of time. Changes in infrastructure and technological advances were the basis for their development. There, it is possible to summarise the factors that made changes in production possible and available:

*The possibility to retrieve tent items from a different resource with a different way of production was initiated and provided by cultural, social, political, economical, infrastructural and technological changes that started decades before the research project took place. This shows that, for the Yörük families, the need for reducing the process of item production was already present apart from the research project. It is a change that had already happened within the culture.*

Having outlined initiate factors of influences and having located the major differences available, the next question puts the focus on the changes within the item production process:

Do big production changes indicate a big change in outcome? Not necessarily. Let's take textile production, for example. The organisation and tools of the textile manufacture changed fundamentally. After having been an indigenous handicraft within the family, it became an outsourced handicraft with the professional division of labour (see chapter 8.1.1, changes of production of roof textile). Its tools have been significantly altered in order to allow a quicker manual fabrication. These major changes did not

influence the optical and structural impression of the textile much. But it did indeed influence the textile's quality (8.1.1, adaption in design of roof textile). It is a matter of priorities to pinpoint whether this makes a major or minor difference. But in regard of the desired outcome which is emphasised on impression and not so much on long-lasting quality in this case, it only makes a minor difference that cannot be seen to the nonprofessional observer. However, in detail, it may be seen by the expert who is able to distinguish good and bad textile qualities just by sight.

Taking a look at the production changes concerning the stay-fasteners, it can be seen that big changes in production may as well result in big changes in outcome. The change of the way of production into outsourced handicraft (8.1.1, changes of production of stay-fasteners) indicated the choice of a different material (conifer wood), the choice of different tools (band-saw) and the necessity to protect the softer wood by an additional working step like impregnating it with wood stain. The result shows stay-fasteners that provide a shiny orange surface in contrast to the brown raw one of old stay-fasteners. Here, the resulting outcome of the production changes did not meet the expectations of the architectural outcome. And, it did not meet the quality expectations, as well. But, all in all, the stay-fasteners are just a tiny part of the whole architectural design. The same can be said about the ridge pieces.

In the case of the black tents, there is not an example of how a minor change in production has led to a big change in outcome. It may be so concerning the wooden pins as there was obviously something different in production which made them less smooth on the surface. But as there is data missing about the pins on old tents, no statement can be announced here.

Overall, this subject can be summarised in a way that due to the desired goal of a similar architectural outcome in the end, major changes in production may lead to minor changes in outcome considered from the impressional point of view. If the focus is set on detail parts or quality measures, major changes in outcome can be detected but they influence the overall appearance of the tent only little.

Thus, the change of production may indeed be significantly noticeable in the outcome when it comes to questions of technical quality (8.1.1, see tables named "adaption in design of ...", subtitles: "technically").

*The adaption in design can be held in a low level even when the changes in production show a substantial difference. But a significant impact on the technical quality may happen. This antagonism can be seen when the architectural impression is the top priority.*

Remaining on the issue of technical quality, it is necessary to take a closer look at the stakes and ropes of the new tents which show a considerable improvement. In both cases the material changed into a more durable one. These changes were quite recent but already well integrated in the daily use of black tents among the Yörük. Concerning the architectural impression, this technically substantial improvement does of course show a change of visual appearance. The once black ropes of goat hair turned into white hemp or flax and the bright thick wooden stakes became greyish thin iron. While the ropes' appearance became more prominent, the stakes rather lost their pre-eminent character. In relation to the whole tent form, ropes and stakes are only a minor part. But still, the optical change is noticeable from a distance.

At the field research, the choice of hemp or flax ropes and iron stakes was unquestionable as it had already been an integral part of Yörük tradition. An integration that happened within 50 years in any case. As this change occurred within 2 generations it can be described to be "quick" in relation to the long traditional use of black tents.

*A substantial improvement of detail constructions shows good chances for a quick integration into the traditional design.*

Still focusing on the stakes of the new tents, there is another aspect present: The stakes slightly changed their design. They are no longer mere sticks that got rammed into the ground. At their top end there is a loop that holds a ring. The guy-rope ought to be led through that ring. Additionally, they were considerably shorter than the stakes of the old tents. This innovation only got implemented with the new tents while the old tents of the Yörük were still fixed with plain iron bars or tubes. As explained in chapter 8.1.1, this was a momentary adaption of design that should suit the predefined use of the new tents. They were not planned to become constant habitats but temporary installations for an audience.

*Although a traditional architectural outcome is desired, small adaptations in design happen when the predefined use of the new object is different to the traditional one.*

So far, differences in design have been discussed. Now, the focus turns to the commons, leaving the details behind and going back to a look at the tent as a whole. Re-

membering the first unbiased impression of a tent again, it is interesting to ask: What is it, that makes the Yörük black tent a Yörük black tent?

Though this question was already examined in chapters 2.2.7, 3 and 3.1, it is convenient to include it again. Traditionally, the identity of the Yörük black tent is based on its black colour, on the choice of material of the textile and on its tensile construction system including a number of varieties (see 2.2.7). It is difficult to define whether the identity is as well nested in the details of the tent. For example, in chapter 5.1.1, the tribal use of different stay-fastener designs is examined closer. A tendency of the use of certain stay-fastener types within a tribe can be seen. At the same, the use of certain types in several tribes shows that the frontiers there can be blurred and thus, such a definite statement is not liable. It is unknown whether stay-fasteners types are used due to tribal affiliation or just due to the geographical distribution of construction knowledge. Because, if it had shown a tribal identification, it may have been possible to draw conclusions from it in regard to the overall identity of the Yörük black tent. As the case of the stay-fasteners is the best documented resource for examining the significance of detail identities in this study and as this particular aspect does not allow definite assumptions to the desired subject, it cannot be said, whether the identity of the Yörük black tent goes down into detail construction.

Therefore, there only is the significance of colour, textile material and a group of construction varieties available when it comes to questions of the Yörük tent identity. These three points correlate with the main points of “first impression”. It may be that the identity correlates with the impression given to outside observers.

However, the commons between old and new tents can be found in this regard. It is simply taken care of to uphold the major aspects of the traditional tent.

*In case of the Yörük black tent, adaptations in design in course of changes in production are rather not compromising the architectural features that support the particular building type's identification and the overall impression of the building itself.*

This statement can only be assigned to construction projects that are meant to stay within the context of cultural identification of the Yörük on an authentic level. This is to be mentioned because building projects for tourism being sold as “Yörük” may contain severe changes in construction that are already far outside the evolved “group of construction varieties” (see chapter 4.2.6). Nonetheless, in such cases, the colour and the choice of textile material stay yet unchanged.

But even in regard of the Yörük black tent, exceptions did happen concerning the colour (see chapter 4.2.6, image 4.102). And, regarding the choice of textile, it may be possible to find changes there, as well. Here, no Yörük example is available in this study but there is at least one typologically related in the Mauretanian culture of black tents as depicted in chapter 3.2.

Another common feature has been mentioned previously, namely the traditional sewing process. This process was undertaken for the new tents as well and it does not differ much from the old methods (see chapter 7.2.1. and 7.2.2). The similarity does not happen as a matter of course only. Because, it is well possible to order a completely sewn Yörük tent in the weavers' villages (see chapter 4.2.6). But Mehmet Şimşek and Mustafa Şurgun preferred to let the tent be sewn by their own people. This notion was settled long before they knew that we would film the whole endeavour. When I asked them about the Yörük tent production in the weavers' villages they answered me that these are not real Yörük tents to them even if they were identical to their own. So, in that regard, the sewing of the tent is somehow linked to the identity of the tent to be Yörük. And that, again, is another reason why the second construction day of the research project was chosen to be traditional.

*From the Yörük's point of view in this study, certain construction processes, as in particular the sewing of the tent, need to remain indigenous in order to create a genuine cultural identity of the tent.*

Overall, before closing the subject, it is helpful to briefly recapitulate the undergoing in this thesis: At the beginning, in chapter 2, information about the environment of the Yörük black tents is given in all levels. In chapter 3, the tent itself is described in detail. Chapter 4 shows the field research and thus the building of the new tents, while chapter 5 offers a close look at the traditional way of building old tents. Out of this, in chapter 6, first lists and tables are made, defining and describing the typical new and old tents and the new and old production processes. In chapter 7, the differences and commons are drawn out of these tables. In addition, graphic tables allow to depict tendencies of change or constancy on a categorial level. In chapter 8.1, conclusions and main points in detail are drawn out of differences, commons and graphic tables while chapter 8.2 provides a summarized discussion with resume.

The herein shown adaptations in design in the course of changes in production are restricted to the Yörük black tent and the research project in this thesis. It offers basic data for a more general approach to the subject. As well, it offers detail data on the technical construction of Yörük black tents. It is, as already mentioned in chapter 1, a documentation that had the chance to happen shortly before the culture underwent further severe changes. It may be that these future cultural changes shift significantly the focuses of architectural identity of the Yörük and their tents. These shifts may even render the conclusions in this thesis into a historical snapshot standing at a marking point of changes. However, it will be interesting how the development proceeds.

Looking back, this thesis offers an analysis on the subject over a time span of several decades counted back from the year 2014. It is just another building brick in the incredibly big heritage of architectural knowledge.

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