

## FELT-MAKING IN MONGOLIA

BY

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Discussing the history of the felt, Berthold Laufer expressed the opinion that it had been invented before spinning and weaving. He pointed out further that felt-making was known originally only in Eurasia, and it was spread by the nomadic peoples of Central Asia towards Europe, India and China.<sup>1</sup> Though the fascinating paper only outlined the question we can have little doubt about the nucleus of the problem: the history of felt is an important part of the history of the culture of the Central Asiatic nomads and we have to seek the origin of the felt-making in the early history of the sheep-keeping nomads. Naturally within these limits there remain many points which wait for further investigation and a final solution can only be given by the joint efforts of archeology, ethnology, linguistics and philology. We need in the first place a typology of the procedure of felt-making as a basis for further research and to this typology I wish now to contribute some material I collected on two successive study tours in the Mongolian People's Republic in 1957 and 1958.

The felt-making commences strictly speaking with the shearing of the sheep. The bound animal is shorn ( $\chi\acute{o}n \chi a\acute{e}t\acute{s}^{\acute{c}} i l a \chi$ ) with a special shear ( $\chi a\acute{e}^{\acute{c}} t\acute{s}$ ). The sheep is shorn twice a year. The wool gained in the spring is called  $\underline{y}r\acute{t}-\acute{i}n \acute{n}\acute{o}s$  literally 'long wool'; according to my informants it has this name also when it is in fact short. The wool of autumn is named  $a\chi r i n \acute{n}\acute{o}s$ .<sup>2</sup> The latter

<sup>1</sup> B. Laufer, *The Early History of Felt*: *Am. Anthr.* XXXII (1930), pp. 1—18.

<sup>2</sup> The word  $a\chi ar$  in  $a\chi r i n \acute{n}\acute{o}s$  may be a dialectal equivalent of a classical  $aqur$  or  $*aqar$ . The classical Mongolian  $aqur$  together with a form  $oqar$  has the meaning 'short'. The latter has the Middle Mongolian form  $hoqar$  while the Middle Mongolian form of  $aqur$  is  $haqur$  (On the Middle Mongolian forms and the most important dialectal developments see L. Ligeti, *Un vocabulaire mongol d'Istanbul*: *Acta Orient. Hung.* XIV (1962), p. 32). The opposition with  $\underline{y}r^{\acute{c}}t$  'long' is suggestive for the etymology. But the question is not so simple. The fact that in the Dariganga dialect  $a\chi r i n \acute{n}\acute{o}s$  has the meaning 'wool gained in autumn (not in every case short)' is interesting. In the majority of the dialects a classical  $aqur$  and a classical  $*aqar$  gives the same dialectal development. We find the following data: Kalm.  $a\chi^p r$  'kurz',  $a\chi^p r \acute{n}\acute{o}s\eta$  'kurze Wolle, Herbstwolle (der Schafe)',

is considered better and more suitable for making felt. Occasionally the Mongols shear also in the winter when they clip the wool of lambs. This wool is used only for felts of special purposes e. g. for coverings and rugs for babies and is made only with hands inside the yurt.

Before the loosening of the wool (*nōs* or *uṅgas*<sup>3</sup> *sawaχ*) they spread a piece of leather (*adsaq*) on the ground. They lay down (*ṭawiχ*) on this the wool already shorn. The loosening or fulling is made with several willow sticks. The people sitting around the leather hit rhythmically the wool until it acquires the required looseness. The prepared wool is now wound into little skeins (*myšaidž awaχ*) and put into sacks till the time of felt-making.

I observed the following part of the process personally during the second half of August 1958 among the Darigangas in SE Mongolia, in the Asgat sumun of Sükhbaatar aymak.<sup>4</sup> The material which I collected among other ethnical groups of the MPR can be found in the second part of this paper.

The end of August is a little early for felt-making which normally takes place only in September, but in the cooperative of Asgat the so-called "mother felt" (see below) which is indispensable for felt-making had been consumed and a family undertook the task to prepare it in time.

The place of the felt-making was some one hundred yards away from the ail of the family on a part of the pasture which was less exposed to the wind (Fig. 1). A V-shaped wind-screen was erected to protect the laid wool from the wind. Nearby stood the sacks with the prepared wool. On a ground space of about 8 x 2 yards two pieces of old felt (*eχ ésgī* "mother felt") were spread (*eχ ṭawiχ*) so that they slightly overlapped. One of the *eχ ésgī* was not broad enough and therefore it was lengthened with a piece of sack-cloth. In the first phase only women took part, the grandmother, her married daughter and a 14–15 year old granddaughter. Later the grandfather joined the workers. The husband of the younger woman was away on tarbagan trapping and returned only in the early afternoon. The 5 year old little boy hovered

KhL *achar* '1. короткий, низкий; 2. овечья шерсть осенней стрижки', BurL *achar* 'короткий, низкий' but WBur 'овечья шерсть (летняя после весенней стрижки)'. This means that in KhL and WBur the word *aχar* without *nōs* denotes the autumn wool, wool of the second shearing. The only dialect where a classical \**aqar* and *aqur* gives not the same result is Ordos. In Ordos *aχar* has only the meaning 'laine' and *aχar nōs* 'la laine des moutons et des chameaux ainsi que les poils et le duvet des chèvres' while *aχur* is the word for 'court'. This strengthens our supposition that we have to deal with two separate words even if they are etymologically related. Anyhow there is not enough reason for defining the classical *aqur* as 'sheep's wool of autumn shearing; short' as it is done in Lessing's Dictionary not however by Kowalewski.

<sup>3</sup> The classical form of *nōs* is *noγosun* < \**nuṅgasun* ~ *uṅgasun* < *uṅgas*. There is no semantical difference between *nōs* and *uṅgas*.

<sup>4</sup> On the Darigangas and their dialect cf. A. Róna-Tas, *The Dariganga Dialect, Dissertationes Sodalium Instituti Asiae Interioris*, Budapestini 1961.

the whole time about the place. From time to time the grandfather sent him to turn the flock which were grazing in the neighbourhood.

After the "mother felt" was laid down it was sprinkled (*uslayχ*) from a water-pot (*ɖzavχan*). (Fig. 3). The pot was filled again from a larger barrel (*taǰly*) which stood on a camel-driven conveyance. The fetching of water is the duty of the men. Then begun the laying. The grandmother squatted on the side of the screen, took in her left hand a skein of wool, pressed it with her thumb to the "mother felt" and plucked with the right hand little flocks from it, which she laid carefully down. On her side, parallel with her, worked her daughter who was about in the 6th month of her gravidity. They took great care of the equal laying because on this depends the quality of the felt (Figs. 4-7). The laying is called *ɖzulaχ*.<sup>5</sup> The first layer was made of *axrin nōs*, that is of autumnal, finer wool and then sprinkled with water. The grandfather took care that the water was distributed evenly (Fig. 8). Then followed a layer of *urt-in nōs*, then sprinkling and a layer of *axrin nōs*. The edges of the upper layer were trimmed with selected strong, black wool. Meanwhile the girl plucked grass which was scattered over the upper layer for preventing it from sticking together. After a final sprinkling they began the tight rolling of the layers together with the "mother-felt", which was somewhat broader on the side of the screen, than the layers laid on it (Figs. 9-11).

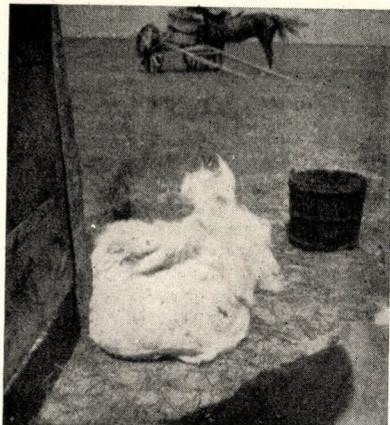
The work started about 10 a. m. and it was early afternoon when they were ready with the laying and rolling. When the young man returned from the trapping he brought a leather (*šir*) from the ail, put it in water until it became well-soaked and then with the help of his father-in-law he put the roll (*širlex*)<sup>6</sup> into the soaked leather. (Fig. 12). Then they bundled the roll longwise

<sup>5</sup> Kowalewski has *ɖulu-* 'fouler le feutre' and together with Golstunskij 'валять войлок', while Lessing 'to lay or spread out; to put in layers; to quilt' *isegei ɖulu-* 'to lay out pieces of felt or carded wool evenly when making felt'. Here we have an example where the dictionaries of the Classical Mongolian give definitions on different recent dialectal basises. The word has in fact different meanings in the different dialects but all are connected with felt-making, only different phases are denoted by it: BurL *zulacha* 'обстругивать, обтесывать, окорять (дерево)', *zulgacha* 'теребить, выдергивать, выщипывать (шерсть)', Kalm. *zulχ*<sup>o</sup> in *iškē z.* or *nōs<sup>o</sup> z.* 'Filz bereiten, Filz rollen', KhL *zulach* 'раскладывать слоем (шерсть)', Dariganga *ɖzula-* 'to lay, to spread (the wool on the old felt)', Ord. *ɖžyly-* 'étendre', *uŋg<sup>u</sup>asū ɖžyly-* 'étendre de la laine battue pour en faire de feutre'. The meaning given by Kowalewski and Golstunskij is the nearest to Kalmuck and Buriat, while Lessing's definition is close to Khalkha, Dariganga and Ordos.

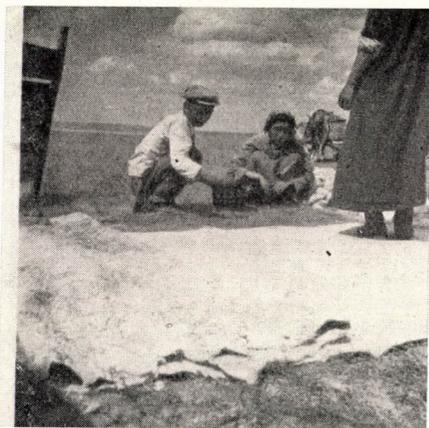
<sup>6</sup> The Dariganga word has the classical form *sirile-*. The etymology of this word is clear, it is a denominal verb from *sirin* 'leather'. Kowalewski has the word *sirilde-* 's'unir comme dans le feutre'. This word was not taken over into the dictionary of Lessing perhaps because the authors found the meaning not convincing or the etymology not clear. If we take into account the process of felt-making, there is no difficulty to verify the definition given by Kowalewski.



*Fig. 1*



*Fig. 2*



*Fig. 3*



*Fig. 4*



*Fig. 5*



*Fig. 6*



*Fig. 7*



*Fig. 8*



*Fig. 9*



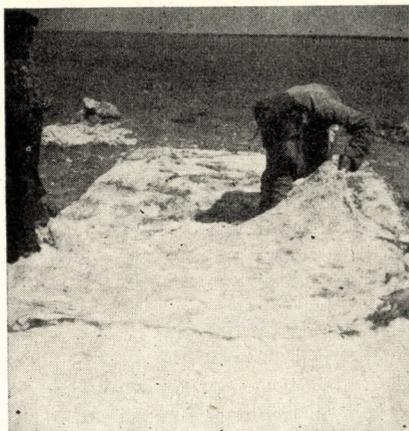
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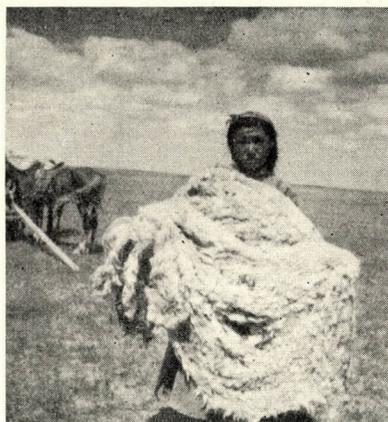
*Fig. 11*



*Fig. 12*



*Fig. 13*



*Fig. 14*



*Fig. 15*



*Fig. 16*

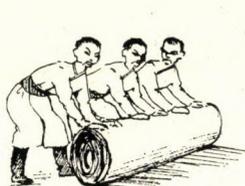


Fig. 17



Fig. 18

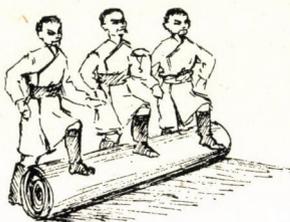
with leather straps, crosswise with ropes and hurled over it a 40—50 m. long rope. The so prepared roll was once more sprayed. The grandfather poured one potful of water (*amni us* 'the water (poured into the) "mouth" (of the felt)') into both ends (*ēsḡin am* "the mouth" of felt') of the roll. Then the two men got on horseback and took a stick (*sawā*) each. The grandfather holding the stick in his right hand bent down from the saddle and raised the end of the long rope with the help of the loop on its end. Then he fastened the rope to the leather strip which goes under the belly of the horse (*bēlχemtš*) so that the stick was driven at the same time through the loop of the pulling rope and the loop of the *bēlχemtš*. Then he began to ride grasping the whip in his right hand and the stick in his left (T. I, Fig. 5). By means of the rope hurled over it the roll began to turn in the opposite direction



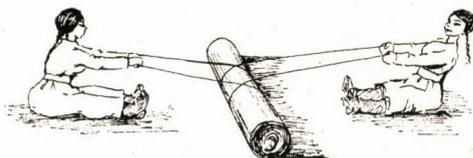
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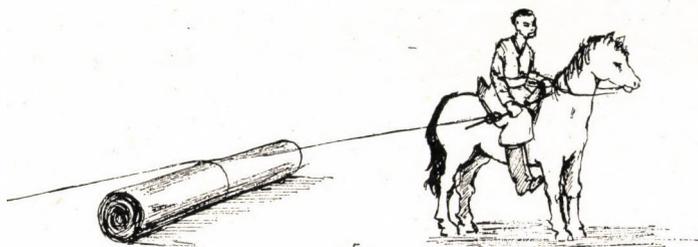
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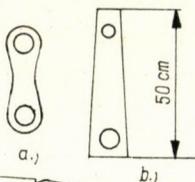
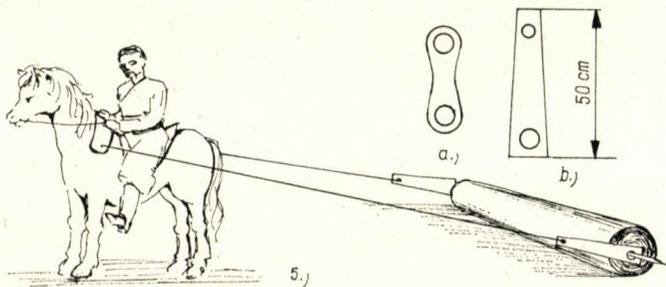
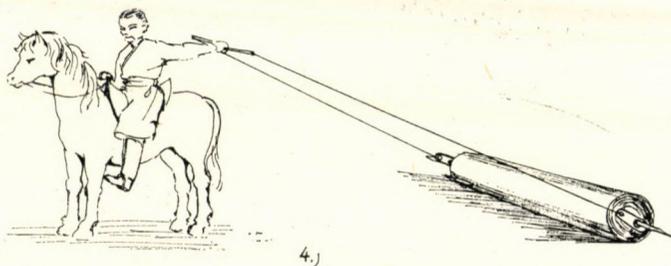
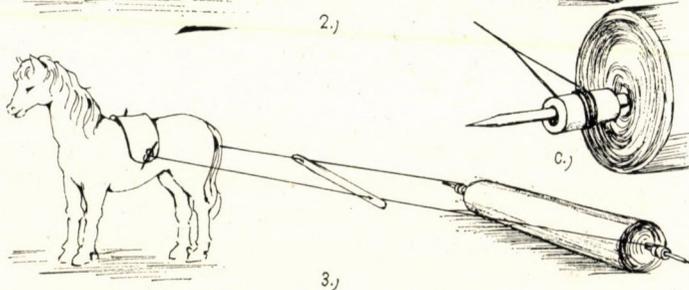
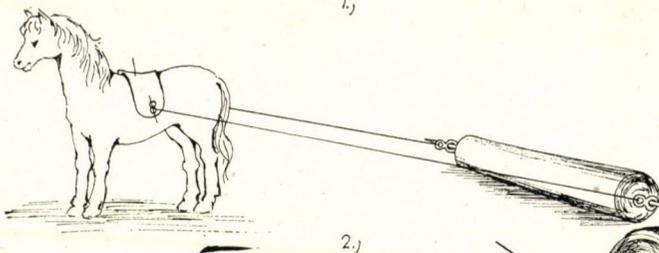
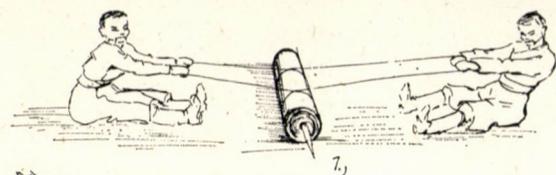
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5.)

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while the end of the rope became longer and longer on the one side and shorter and shorter on the other. The younger man escorted the shortening end of the rope on horseback and cried when it came near to the roll. Then the grandfather stopped, put down his end on the ground, the younger man raised the other and rode in the opposite direction. This turning and rolling was repeated for 30—40 times. If the roll is pulled enough they take the felt out



from the leather, separate the old "mother felt" from the new, which is named the *χῦχεν έsgī* 'the "daughter" felt'<sup>7</sup> (Fig. 13). Now the "daughter felt" is spread on the ground, on this three new layers are laid which are again sprinkled and rolled in the "daughter felt" and the whole is then put into leather. Thus the felt is pulled and rolled on the ground twice, first inside the old felt and then as the covering of the next three layers. This procedure is repeated until they have the pieces of felt in the required number. Only the last case differs a little. This is named *έsgī bulgaχ*. After the first pulling the ready "daughter-felt" (fig. 14) and the old "mother felt" is changed, the "daughter" becomes the outside, the "mother" the inside layer, and then they are rolled again, put in leather and pulled on the earth. This last felt is called *sūltšin έsgī*.

The ready felt is once more watered, then dried and leaned against the western side of the yurt (Fig. 15). The felt parts of the yurt, covers, rugs, carpets, saddle-cloth and some part of clothing are made of it.

As we have seen the felt-making consists of the following phases: 1) The shearing of the sheep, 2) the loosening of the wool, 3) the laying of the wool, and 4) the rolling.

The procedure of felt-making does not show great variations with the different peoples of Asia. But some minor divergencies are noteworthy and can help to establish a more detailed typology. Therefore in the following I shall try to outline the most important of these variations.

### 1. The shearing of the sheep

The Khotons<sup>8</sup> living in the Taryalang sumun of the Khövsgöl aymak remember the old sheep shear the *kīr*<sup>9</sup> which was replaced in recent years

<sup>7</sup> The distinction between new and old with words for 'daughter' and 'mother' is self-evident and to use them in the terminology of felt-making is obvious. K. V. Vjatkina in a very interesting study on the ethnography of the MPR (Монголы Монгольской Народной Республики, Восточно-Азиатский Этнографический Сборник, Moscow—Leningrad 1960, pp. 159—271) has recorded that after the felt is ready, the Mongols say 'a pretty girl (*χῶρχῶν χῦχεν*) is born' (p. 179).

<sup>8</sup> I had no access to the papers of Vladimircov and Samojlovič on the Khotons (ZVORAO XXIII (1916), pp. 265—290). Interesting material and further bibliography is to be found in S. Badamhatan's *Uvs aymgijn Choton naryn garlyg ovgijn ũldcээр sudalsan нэ*: *Šinžlčch uchaan* 1960: 2, pp. 37—41). The originally Turkish but now Mongolized Khotons are living in the Taryalang sumun of the Uvs aymak in the MPR. In 1958 they numbered some 3100 people (cf. Badamhatan, *op. cit.*, p. 37). I met my Khoton informant Džumdan, a 46 year old man, in 1957 in Ulan-gom, the centre of Uvs aymak. I found only a few Turkish words in his speech, he spoke a West Mongolian dialect close to Oirat of Kobdo cf. G. Kara, *Notes sur les dialectes oirat de la Mongolie Occidentale*: *Acta Orient. Hung.* VIII (1959), pp. 111—168.

<sup>9</sup> Dzakhachin of Kobdo *kīr*<sup>9</sup> (Kara, *loc. cit.*, p. 148), Kalm *kīr*<sup>9</sup>, OirL *kīyira* < *kīgira*, Cf. classical Mongolian *kīγara* > KhU *χīγar* 'id.'.

by the new type, the *χαε*'ts.<sup>10</sup> The *kīr* had a wooden handle (*mod*<sup>on</sup> *bar*<sup>i</sup>ul) and an iron edge (*ir*). They pulled down the sheep on its right side, then bound the four legs (*dōrben mōtš*<sup>11</sup>) and sheared the sheep (*χόλ kīrgaχ*).<sup>12</sup> According to the Sartuls<sup>13</sup> of the vicinity of Uljastaj the *χαε*'tš which they use is of a

<sup>10</sup> Cf. Dōrbōt, Dzakhachin, Urjankhai *χātš* (Kara, *loc. cit.*, p. 143), Sartul, Bait *χαε*tš (records by the author), Kalm. *χātš*<sup>2</sup>, OirL *qayiči*.

<sup>11</sup> *Mōtš* is a special term for the upper part of the leg of animals cf. Kalm *mōtš*<sup>2</sup> 'Glied, die Extremitäten (Hände und Füße)'.

<sup>12</sup> The word *χόλ* 'sheep' seems to be of Turkish origin. Kara has Khoton *χόλ* (*op. cit.*, p. 144) and Dzakhachin, Urjankhai *χōn loc. laud.*). I recorded Sartul *χōh*. Ramstedt gives *χōn* and *χō* as Kalmück forms. On *kīrgaχ* cf. Note 9.

<sup>13</sup> We find very little material on the Sartuls (*sartūl*). The name Sartaγul, Sarta'ul is well-known in the earliest documents of the Mongols (the material and bibliography is collected by Cleaves: *HJAS* XII (1949), p. 101), and denotes 'Mohamedan, merchant'. The group which now bears the name lives in the Dzavhan aymak of the MPR. Their language was classified by Vladimircov (Сравнительная грамматика Монгольского письменного языка и халхасского наречия, Leningrad 1929, pp. 10, 18) as a Western Khalkha dialect. A few words are to be found in the papers of Š. Barajšir (*Chalchyn ajalquuny zarim chēsgijg sudalsan tuchaj tēmdēglēl*, Ulan Bator 1957) and Ė. Vanduj (*Zarim nutgijn aman ajalquuny ūgsijn sangijn tuchaj*, Ulan Bator 1957) who visited the territory in 1956 and Ž. Coloo (*Archangaj ajmgijn baruun chojt nutgijn chalchyn aman ajalquuny tuchaj: BNMAU Šinžlēch Uchaany Akademijn Médēl* (1962), pp. 44—49) who visited the Sartuls in 1960. On the Western Khalkha dialect see further L. Bese, *Remarks on a Western Khalkha Dialect: Acta Orient. Hung.* XIII (1961), pp. 277—294. My informant was born in 1902 in the Chandaman sumun of Dzavkhan aymak and lived since 1925 in Uljastaj, the centre of the aymak. Since we have very scanty material from this interesting dialect I give here a short text which is told by the suitor during the Sartul wedding ceremonies: *erfēn χisen dēmbērel | ūrdīn χisen jōrdōlōr | sarin saǵniǵ | saχin χūlēDž | ōdūrin saǵniǵ | ōndžin χūlēDž | endin ōrgēnēs | χišǵiǵ χūrtgēr | Barālχadžīrlē!* The translation: 'The auspice formed a long time ago | the benediction formed before | the good month | we waited with care | the good day | we waited for a long time | (and now) from this tent | to fetch the happiness | we came to make a visit'. *dēmbērel* is a Tibetan loan-word (cf. *rten*-*'brel* 'the connection between cause and effect; the auspices of an undertaking' see C. Damdinsurēn, *Mongol chēlēnd orson Tōvd ūgs: Studia Mongolica* II (1961), p. 74). To the honorific expression *Barālχadžī ire-* 'to make a visit' cf. Kalm. *barālχ<sup>v</sup>χv* 'dem Fürsten aufwarten', (*noj<sup>n</sup>*) *barān bolχv* 'zu der Suite des Fürsten gehören, vor dem Fürsten gehen', KhL *baraa boloch* 'состоять в свите'. It is interesting that the majority of the expressions used in this short text are from the honorific language: *saχin χūlē-* (*sakin küliye-*) 'to wait while watching (for orders of somebody of higher rank)', *ōndžin χūlē-* (*ōnžin küliye-*) 'to wait passing the day', *ōrgē* 'tent, yurt' (*ōrgūge*, cf. the old name of Ulan Bator: *Urga = Ūrgē < ōrgūge*). The verb *χūrte-* (*kūrte-*) has the meaning in the spoken language 'to fetch, to get' only if one gets something from somebody who is of higher rank (cf. KhL *chūrtēch* 'получать принимать (от высокопоставленного лица)', Kalm. *kūrt<sup>v</sup>χ<sup>v</sup>* 'eine Gnade empfangen'. On the place of the old palatal *k* we find spirants in *χisen*, *χūlēDž*, *χišǵiǵ*, *χūrtgēr*. I heard <sup>k</sup>χ only in a few words e. g. in <sup>k</sup>χōl 'foot'. The transition of *k* > <sup>k</sup>χ > <sup>k</sup>χ > χ, is in progress. My material from the Oirat dialects of Kobdo and from the Sartul shows this clearly. L. Bese has expressed the opinion (*op. cit.*, p. 281) that the cause of the alternation <sup>k</sup>χ ~ χ is connected with the careful spelling or stressed position. This is a valid

new type but they called the old type also *χαετς*. The Sartuls consider the wool of the lambs the best for making felt and say that the wool of autumn (*αχαρ νōs*) is very near in quality to it. At the time of shearing (*χονι χ'αργαχ*) they do not add the wool of the legs to the material waiting for processing into felt. The finest wool is of the abdominal parts (*εχωνι νōs*<sup>14</sup>), while the wool of the back parts is of second sort. According to the Khotons the best felt can be made of 25% short and 75% lamb wool. Such felt is called *šandz išgī*. The felt which is made only of autumnal wool is called by the Sartuls *αχριν išgī*.

The Turkish nomads also distinguish between the wool of the spring and autumn, and most Turkish languages have separate names for them.<sup>15</sup> The shearing is the same as with the Mongols.

## 2. The loosening of the wool

We know of two different types of loosening. The beating with sticks is known all over the territory inhabited by Turks and Mongols. (cf. the painting of Mardzan Sherab, Fig. 16). The terms for the stick and for the beating has the same origin in both groups of languages, cf. *saba-* 'to beat'<sup>16</sup> I found only at the Khotons a diffe-

observation which I can only corroborate. Beside this alternation within the speech of one individual there is a tendency of the language for replacing the aspirated stops by affricates and the affricates by spirants. This tendency has reached the spirant stage (*χ*) in the Central Khalkha dialect and is in its incipient stage in the Western Khalkha. It has also commenced in the Oirat of Kobdo. It seems not at all impossible that the influence of the Central Khalkha, which has a special prestige, is helping this development. The strong influence of Western Khalkha on Oirat of Kobdo was remarked by Kara (*loc. cit.*, pp. 112—113). To this I would add that the Western Khalkha is under strong influence of Central Khalkha and with this we have an important chain of changing in the Western dialects of the MPR. Naturally this is not to deny the independent processes within the Western dialects. As it was stated by Ramstedt (*Das Schriftmongolische und die Urgamundart*, Helsingfors 1902, p. 17) and Bese (*op. cit.*, p. 281) the *kχ* is present in words with back vowels after nasals, cf. e. g. Sartul *tsam<sup>k</sup>χara* 'the cross-rod of the roof-ring of the tent'. In some Sartul words of velar vocalic harmony we find on the end of the word an affricate *kχ* or *<sup>k</sup>χ* in place of classical *γ*: *ugylyry<sup>k</sup>χ* (= *uyulurya*), *tūro<sup>k</sup>χ* (*tuγurya*) 'felt for the yurt-wall'. The velar *γ* as result of metathesis came to the word-end and through a stage of unvoiced media stop became an unvoiced aspirated fortis and then an affricate.

<sup>14</sup> To *εχωνι* 'the middle of the abdominal part of the sheep's skin' cf. Dariganga *ixwi* 'id.' (*Acta Orient. Hung.* XIII [1961], p. 164b).

<sup>15</sup> The two terms are Turkish *japay* and *jün* or *jun*, the dialectal equivalents of which are present in the majority of the Turkish languages.

<sup>16</sup> Kowalewski has for *saba-* only 'rader (le coton, la laine)' while Lessing 'to hit or throw an object against something; to beat wool in making felt'. KhL *savach* 'сегать, бить; хлопать, ударять', BurL *habacha* 'биться', Kalm. *sawχp-* '(mit zwei od. nur einem Stock) schlagen, die Wolle schlagen (beim Filzbereiten)', Ord. *sawa-* 'frapper, battre'; *αχαρ sawa-* 'battre la laine quand on fabrique du feutre', *sawaχy sywυχy* 'battre (la laine)' etc. For Turkish examples see *saba-* 'Wolle schlagen' (Tel., Tar., Kaz., Kir., Shor), 'heftig schlagen' (Kaz.), *sabau* 'Stock mit dem man die Wolle walkt' (Kaz.),

rent term, where the beating is called *tsakʰɣ*, but this word has also the basic meaning 'to beat'.<sup>17</sup> The material on which the wool is spread is generally leather which, for instance is among the Sartuls fastened with wooden pegs (*gadas*) into the earth, before the laying (*nōs delgeɣ*). Some other groups put the wool waiting for loosening on old felt. Such data are known from the Khalkhas (Vjatkina, *op. cit.*, p. 177), Kalmücks,<sup>18</sup> Buriats<sup>19</sup> and from the Tibetan nomads.<sup>20</sup> The stick is about 1 m. long and usually made of willow or some other flexible wood. The Khotons remove the bark except on the handle. The Buriats of Tunki<sup>21</sup> use iron sticks (*tómór havā*).

The second method for loosening the wool is the tearing with a bow. The Mongols have a special term for this practice. In Ordos the expression *aɣar numɣda-* is defined by Mostaert (*Dict. Ord.*, p. 501b) 'carder et faire bouffer la laine au moyen de la corde d'une grand arc (artisans chinois quand ils fabriquent des tapis de feutre)'. In Khalkha *numdach* means: 'быть шерсть при помощи специального лука' (Luvsandéndêv, p. 277a) and *ungas numdach* 'выбивать шерсть при способлении напоминающим по форме лук' (*ibid.*, p. 456b). Vjatkina has recorded this method from Cecerleg (Arkhangai aymak) and Mōngōn Morit (Central aymak) (*op. cit.*, p. 177). The various Turkish groups also know this method. Similar procedures are to be met with among the Bashkirs<sup>22</sup> and in Asia Minor.<sup>23</sup> As we have seen

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*saucaš* 'der Kampf' (Osm., Chag., Karaim), *sap-* 'schlagen (Sag., Koib.), etc. Radloff who published an interesting Turkish text on felt-making from the Abakhan Tatars (*Proben*, IX, p. 235) has the sentence: *tüktü sabōsnaɣ sâp-čâlar* 'they beat the wool with a stick'.

<sup>17</sup> The only meaning registered in the dictionaries of Classical Mongolian of the verb *čaki-* is: 'faire du feu, battre le briquet' (Kowalewski), 'to strike fire from flint; to flesh' (Lessing), cf. Kalm. *tsakɣa* 'Feuer schlagen', Ord. only in *gete džaʰɣi-* 'battre le briquet', BurL *sachicha* 'высекать (огонь)', KhL *cachich* 'id.' etc. That the word had originally the meaning only: 'to hit, to beat' can be seen from the Turkish parallels: *čaq-* 'mit einem kurzen Schläge schlagen', *ot čaq-* 'to strike fire'.

<sup>18</sup> P. S. Pallas, *Sammlung historischer Nachrichten über die mongolischen Völkerschaften I* (StPbg. 1776) p. 142.

<sup>19</sup> Народы Сибири, под ред. М. Г. Левина, Л. П. Потапова Moscow—Leningrad 1956, pp. 230—231.

<sup>20</sup> W. W. Rockhill, *Notes on the Ethnology of Tibet*, Washington 1895, p. 700.

<sup>21</sup> I met my Buriat informant in Khadgal (Khövshöl aymak MPR). He came from Tunki in 1920. In his native village the people lived in houses, but they made felt for bed-covers.

<sup>22</sup> Tagán Galimdsán, *Baskir gyapjúmunka* [= Bashkirian felt-making]: *A Magyar Nemzeti Múzeum Néprajzi Osztályának Értesítője* (= Communications of the Ethnographical Section of the Hungarian National Museum) XXVI (1934), p. 106 henceforth referred to as Tagan I. On the Bashkir felt-making see also the description of Georgi, cited in Rudenko, Башкиры, p. 143.

<sup>23</sup> Tagán Galimdsán, *A gyapjú feldolgozása a kisázsiai törököknél* [= The working up of the wool at the Turks of Asia Minor]: *ibid.* XXXI (1939), p. 234. (= Tagan II)

Mostaert mentions that it is a Chinese practice among the Ordos. Tafel<sup>24</sup> describes it among the Chinese of Kansu. In Europe it is also known.<sup>25</sup>

The essence of this method is that they place a bow or an instrument formed like a bow, into the wool spread on a leather and then pluck the string of the bow with a little piece of wood. The vibrating cord tears fine flocks from the wool. This way of loosening produces finer material but is less productive and therefore less frequent among the nomads, but used everywhere where felt-making is in the hands of specialized craftsmen.

### 3. The laying of the wool

While the Mongols and the Tibetan nomads (cf. Rockhill, *op. cit.*, p. 700) use an old piece of felt, the "mother felt" to lay the wool on, the Chinese use bamboo rugs (Tafel, *op. cit.*, p. 139) and some Turkish tribes use grass- or reed-mats (Tagan I, p. 106 and Tagan II, p. 235) or even sack cloth as the Kazaks.<sup>26</sup> Naturally the latter is also used as a substituting material in other places as we have seen above with the Darigangas. The Khotons, for making the rolling more cautiously, lay down a camel hide on the earth, put a canvas on it and lay the "mother felt" over this.

The term for the layer of wool is formed in the several Mongolian dialects from the Mongolian *ǰulaqai*<sup>27</sup> but the Baits of Ulan-gom<sup>28</sup> call the upper layers simply *öngübtš* 'surface' and if it is made of special white wool it is named *tsagān öngübtš*. The Khotons call the lower layer *ul dzulχae*, the middle *tsaug dzulχae* and the upper *öngün dzulχae*. The laying is made everywhere in two or three layers. Rockhill's record, that the Tibetans have only one layer seems to be very problematical (*op. cit.*, p. 700).

The laying is everywhere made with the hands. We know only of one case from Asia Minor (Tagan II, p. 235) where there was in use a little instrument like a wisp made of twigs<sup>29</sup> for this purpose.

An important phase of the laying is the sprinkling with water. The Kazaks (Potapov: SMAE XII (1949), p. 52), the Tatars of Abakan (Radloff, *Proben*, p. 235) and the Turks of Asia Minor (Tagan II, p. 235) use hot water.

<sup>24</sup> A. Tafel, *Meine Tibetreise* I (Stuttgart—Berlin—Leipzig 1914), p. 139.

<sup>25</sup> Here I would only refer to the Hungarian felt-making which shows in his recent form in some respects strong German influence, but the Hungarian hood-felt makers use also this instrument.

<sup>26</sup> W. Radloff, *Aus Sibirien* (Leipzig 1893), pp. 431.

<sup>27</sup> The word *ǰulaqai* also denotes simply 'felt' replacing the word *isigei* in the speech of woman, cf. Laufer, *op. cit.*, p. 15.

<sup>28</sup> The Baits are speaking an Oirat dialect of Kobdo. Cf. Vladimircov, *loc. laud.*, I collected my Bait material in Ulan-gom, from my informant Damdzid, a 44 years old herdsman.

<sup>29</sup> Its name is *sepki* or *süpürge*, the object is used only by specialized felt-makers.

The water has to be distributed evenly and this makes understandable that we have records of sprinkling from the mouth (Tafel, *op. cit.*, p. 139) and through sieve (Tagan I, p. 106). The Khotons use 40—50 litres of water for a roll of felt.

#### 4. The rolling

We know of two different types of rolling which can be divided in further sub-types.

To the first type belong those techniques which do not use a pole. It is not without any interest that on the famous painting of Mardzan Sherab<sup>30</sup> (fig. 18) we can see the layers as they are wrapped up on a pole, but in the second scene, painted next to it, (fig. 17) we can observe the rolling without any pole in the same way as among the Darigangas.

The rolling without pole can take place without the help of ropes. This was recorded by Montell from the Torguts of Inner Mongolia.<sup>31</sup> Here the bound roll is rolled only with the hands on the ground. It seems to be the same method as indicated by the terms *esegī óη<sup>k</sup>χórũl* in Mostaert's Dictionary (T. I fig. 1). A special way of rolling was observed in 1776 by Pallas among the Kalmúcks of the Volga region. Pallas writes: "...so viel Leute als nach der Länge des aufgerollten Filzes nöthig sind, setzen sich nach der Länge in zwei Reihen auf die Hacken und werfen einer um den anderen die Rolle abwechselnd vom Knie auf die Erde und von der Erde wieder auf die Knie. Diese ziemlich schwere Arbeit wird oft über eine Stunde fortgesetzt wodurch die Wolle genugsam in einander gefilzt zu sein pflegt" (*op. cit.*, p. 142) (T. I fig. 2). Among the Kazaks (Radloff, *Aus Sibirien*, p. 431—432) the partners stay in two opposite lines, and kick the roll to each another with their feet (T. I fig. 3). The felt-roll is unrolled, then flapped with the palms. Afterwards they stick the edges and sit down around it. Then they turn round the felt slowly on the ground so that everybody gives his part into the hand of his neighbour. The Bashkirs use the method with a pole, but after it they take off the felt from the pole, fold it in four and flap it on a plank-bed (Tagan II, p. 236). According to Tafel the Chinese (*op. cit.*, p. 139) kick the roll with the feet, the Tibetans beat the felt with their fists (Rockhill, *op. cit.*, p. 700).

Another form of the rolling without pole is with ropes. This is possible with hands and with horses. The first method is known from the Western

<sup>30</sup> On Mardzan Sherab cf. A. Róna-Tas, *Some Notes to the Agriculture of the Mongols, Opuscula Ethnologica Memoriae Ludovici Biro Sacra* (Budapest 1959), p. 452. On p. 462 the entire painting is reproduced.

<sup>31</sup> Gösta Montell, *Durch die Steppen der Mongolei*, Stuttgart (1938), pp. 71—75.

Buriats (Народы Сибири, pp. 230—231) (T. I fig. 4) where the felt-roll is pulled to and fro by the means of a rope flung over it. The pulling with horses was described above (Cf. also Vjatkina, *op. cit.*, p. 177, painting of Mardzan Sherab, T. I fig. 5 and Fig. 17). A more developed method is the rolling with a pole. This has also a variant where the roll is pulled by hands e. g. among the Buriats of Tunki who roll the felt which is wrapped on a pole (*gol*) with a rope (T. II fig. 1.). The Turks of Asia Minor move the roll wrapped on a pole with their feet (Tagan II, p. 236). Usually horses are used for this method. The Khotons, when the laying is ready, put a wooden pole (*bul<sup>la</sup>*) across the layers and wrap the whole up tightly. The two ends of the pole are tapering and called *bulna tšik*.<sup>32</sup> The wrapped layers of wool are covered with horse or camel hide (*išgene būrēs*) tightly bound once more with ropes of horse or camel hair. The binding begins in the middle, goes to the two ends and comes back to the middle of the roll. The wrapping is named *išgi tül<sup>k</sup>χed baiχ*. Then they take two wooden boards both of which are fitted with two holes (T. II fig. a—b). This is called *dōrē* 'stirrup'. The end of the pole is set in one of the holes, in the other a rope (*išgene köbtš*) is fastened. The two ropes coming from the two „stirrups” have on their other ends loops into which a stick (*bar<sup>i</sup>ul tšagta<sup>k</sup>χ*) is put which goes then through the wooden ring of the saddle (*emēlen χonχ*). The stick is held with the hands by the man who sits on the horseback. (T. II fig. 4). The roll is thus pulled only in one direction. If the way is e. g. 500 m. long the Khotons pull the felt 6—8 times slowly and 8—10 times rapidly. Then they look at it and if it is hard (*χatū*) enough that means, that holding it up to the sun, one cannot see through it, the outer felt is put inside and the new outside and it is pulled 6—8 times more. Then follows the pulling and pressing with the hands (*išgē darχ*). If it is ready they draw its edges apart (*išgē tataχ*) so that the felt becomes more even, and put it in the sun for drying (*išgē χataχ*). For the night they always place the ready pieces of felt to the outer western part of the yurt. The other Mongolian ethnical groups do likewise. The time of the pulling on the ground depends on the quality of the wool. The finer the wool, the shorter the time of pulling — so say the Khotons.

The Baita call the pole *gol*. According to them the Khalkhas living in their neighbourhood call the little board not *dōrē* but *tš<sup>i</sup>χ* 'ear'. The stick which is fitted into the saddle-ring has the Bait name *tākōm*, the pulling of the roll is called *išgi tšireχ*. The Sartuls call the tapering ends of the pole *ugul<sup>u</sup>ry<sup>k</sup>χ* and name the board with the two holes *būla*, the stick put into the saddle-

<sup>32</sup> The *bul* (cf. classical *bulu* 'le moyeu (d'une roue), une meule de foin; cylindre, battoir'), is also the name of the threshing roller (Cf. *Some Notes to the Agriculture etc.*, pp. 451—452), while *tšik* is denoting e. g. the cross-bar of the wooden plough (*ibid.*, pp. 446, 448), Kalm. *terg<sup>2</sup>nē tšik<sup>η</sup>* 'Achsen Nagel, Vorstecknagel (des Karrens)'. The technique of the felt-rolling and the threshing with roll-harrow shows many similarities.

ring *sawā* — that is, the same as the stick with which they loosen the wool. Among the Sartuls two horsemen pull the roll, the right takes the right, the left the left rope (*tatūr*).

The Eastern Buriats have the same method but here the "stirrup" is replaced by a little tube (T. II fig. 3) on which the pulling-rope is fastened (Народы Сибири, pp. 230—231).

The method using a pole is also well known among the Turks. According to Prinz<sup>33</sup> the Kirgiz nomads fasten only a loop of rope at the ends of the pole. The Bashkirs use an instrument close to the "stirrup" (T. II, fig. 5) (Tagan II, p. 232).

There are also different ways of fastening the roll to the horse. We have already seen two types, the rope fastened to the loop on the belly-strip and to the ring of the saddle. The two ropes can also be bound on one stick and held in the hands (T. II, fig. 4) or bound on one stick and then this stick can be connected with further ropes to the harness of the horse (T. II, fig. 3). With this we come to the use of the roll-harrow (see note 32) the construction and techniques of which show many convergencies to those of the felt-roll.

The last phase of felt making is followed in some places (Tagan II, p. 999) by the washing of the felt. The felt is put into water and is beaten with sticks.

Coming to the end of our material, which could be easily enlarged, I would like to call attention to a scene on the painting of Mardzan Sherab (Fig. 17). A woman dressed in a festival garment stands before the felt-roll and sprinkles it with kumys. This kumys-libation has the aim to assure the whiteness of the felt which is the sign of high social standard and welfare. This leads to the questions of the social function, the cultic background and the history of felt-making which I shall try to summarize in a subsequent paper.

<sup>33</sup> Cf. Prinz Gy., *Második belsőázsiai utazásom néprajzi eredményei* [= The ethnographical results of my second journey to Central Asia]: *A Magyar Néprajzi Múzeum Néprajzi Osztályának Értesítője*, XIV (1913), p. 172. This is the fastening method also on the thresh-roll which can be seen in Mardzan Sherab's painting (*Some Notes to the Agriculture etc.*, p. 446).