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Animal mobility, human mobility: a geopolitical of sheep in Armenia.

By Michael Thevenin

AUTHORS

Michaël Thevenin is a PhD in Anthropology at the University of Paris 7 Diderot, URMIS laboratory (Migration and Society Research Unit - UMR 8245).

1 allée de la Closerie de Gally, 78210 Saint-Cyr l'Ecole

veninthe@gmail.com

RESUME

The ethnographic mission to Armenia carried out by the NHASA International Associated Laboratory (LIA France-Armenia) was established to observe the pastoral practices of Yezidi and Armenian herders in a territory affected by the 1988 earthquake, the collapse of the USSR and the period of independence, and the Nagorno-Karabakh conflict. The political and geographical stakes prevailing in this country at the beginning of the 21st century describe a *drunkenness of statehood*, a culture of mobility, the persistence of the family *plot* among Armenian villagers, inherited from the Soviet Union, and finally, a geographical situation of double enclavement characterized by the absence of a coastline, and 80% of the border line blocked by its Turkish-speaking neighbours. In this context, we wanted to study the mobility practices of herds and men in their seasonal movements in search of grass or in the systems of guarding, but also those related to commercial routes, from collection to import and export movements.

The results show several strong points. First, In the midst of the global crisis of pastoral communities and pastoralism, Armenia offers an exception: rich high pastures that are not exploited due to historical events and cultural and geopolitical circumstances. The possibility of expanding its pastoral domain in a context where it is shrinking everywhere else is one of the strong points of our survey. While sedentarization is becoming the norm in many pastoralist communities, Armenia offers an example of herders taking the road backwards, moving towards semi-nomadism.

There are two types of pastoralism in Armenia: "nearby" and "remove", which could be described as "patriotic". They both respond to a territorial injunction (the protection of the integrity of the national territory) and have as their underlying aim the fixation of the population of the Armenian state in the countryside, in marginal zones and in territories occupied before the crisis of Nagorno-Karabakh by Azeris.

Large mobile pastoralism, called "remove", could be described as "opportunism". This pastoralism is favoured by a culture of mobility, a geographical promiscuity but also by the expansion and challenges of the meat market in the Middle East and the GCC (including the Iran-Saudi Arabia rivalry), the status quo maintained by Russia on the Nagorno-Karabakh conflict, and at least by the climate crisis. It offers the example of *informal transnational transhumance*, but also of possible future *relocated transhumance*. This pastoralism is affected by the workings of globalisation (professional mobility and transnational multilateral issues), but also by fundamental movements. Intensive livestock farming, the marketing of live animals and the health risks associated with their transport and slaughter are increasingly criticized throughout the world. The continuation of extensive livestock farming, the construction of standard slaughterhouses and the development of the chilled meat market are preparing Armenia for this paradigm shift.

The "nearby" village pastoralism with its system of collective guarding, probably inherited from the plot system during collectivism, offers a good example of management of common property. It is a form of social resilience in the face of economic, emotional and psychological shocks due to the multiple crises of today's world. It is also a strong reminder of the centuries-old pluriactivity of the people of mountains and their tendency to have a *double life*. Multi-activity becomes a response as much as an injunction to ensure both the means of subsistence, but also a network that constitutes in this context a purse of opportunity.

KEY WORD

Armenia - Geopolitics of sheep - South Caucasus - Pastoralism - Mobility - Governance of common property

1. INTRODUCTION

The ethnographic mission in Armenia carried out by the NHASA International Associated Laboratory (LIA France-Armenia) aimed at observing the pastoral practices of Yezidi and Armenian herders in a context of a territory in tension. Indeed, Armenia still bears the scars of a dramatic recent past, marked by the 1988 earthquake, the collapse of the USSR and the period of independence, and the Nagorno-Karabakh conflict (Hovanessian 1993). The political and geographical stakes prevailing in this country at the beginning of the 21st century describe:

- *A drunkenness of statehood* (Panossian, 2014) which is characterized by a motivation to occupy territories emptied of their Azeri inhabitants (Ardillier-Carras, 2004), accentuated by the conflict in Nagorno-Karabakh which focuses the Armenian nation on the question of living space, unity and territorial connection (Hovanessian, 1993);
- A culture of mobility characterized by the search for small jobs that respond to economic survival rationales, by a context of emigration influenced by the strong attraction of the Armenian diaspora (Hovanessian, 2017), and by the persistence of the family *plot* among Armenian villagers, inherited from the Soviet Union.
- Finally, a geographical situation of double enclavement characterized by the absence of a coastline, and 80% of the borderline blocked by its Turkish-speaking neighbours (Dubois 2013). Foreign trade can only be conducted overland via Georgia (from its Black Sea port and Russia) and Iran (for the Middle East markets).

Many government reports, international organizations, NGOs, or articles collected in this article address the infrastructural difficulties and prospects of sheep farming, or the political-economic aspects of its development in Armenia. Few examine the mobility of its actors, the impact of socio-cultural dimensions on this sector, or the collective, participatory and reciprocal processes that can be observed. In this context, we wanted to study the mobility practices of herds and men in their seasonal movements in search of grass or in the systems of guarding, but also those related to commercial routes, from collection to import and export movements. We have chosen to focus on the sheep meat sector as it is involved in major transnational issues, unlike wool and dairy production. These two other sheep sectors will nevertheless be addressed briefly because they both participate in the identity and

cultural representation of the country (through wool crafts and cheeses). In the first part, we will propose a synthetic inventory of sheep farming and its productive and commercial problems in Armenia. In the second part, we will describe the two types of sheep farming existing in this country named by R. Tumanian "nearby" and "remove/summer camp grazing" (2006). We will examine in particular the practices of collective guarding of communal herds in sedentary farms, and the seasonal movement routes of mobile yezidis herders that go up towards the Georgian border from the Marz of Armavir, and those from the Marz of Syunik to the banks of the Arax of Lower Karabakh carried out by Armenian herders (map 1). In a fourth part, we will discuss the results obtained and what these tell us about how pastoralism fits into the problems of Armenia in the 21st century.

1.1. Funding and methodology

The two ethnographic surveys were financed by the LIA NHASA under the responsibility of B. Perello (CNRS, UMR 5133 Archéorient) and A. Karakhanyan (Institut d'Archéologie et d'Ethnographie d'Erevan); by the URMIS laboratory (CNRS UMR 8245 - IRD UMR 205) in Paris 7 Diderot; and in 2017 by the International Centre for Agricultural Research for Development (CIRAD) with the laboratory "Animal, santé, territoires, risques, écosystèmes" (ASTRE, UMR 117) directed by T. Lefrançois. The surveys are part of a partnership with CIRAD to collect data on animal mobility in Armenia. They took place in an extensive and exploratory manner, and were conducted in two stages: the first in the summer of 2016 to visit the mountain pastures, the second in October 2017 during the period of the descending transhumance. The surveys brought together a team of 3 people: the Armenian archaeobotanist R. Hovsepyan of the Institute of Archaeology and Ethnography in Yerevan, who co-led part of the mission in 2016, the French-Armenian interpreter A. Mkhikian, and M. Thevenin, who initiated this study. The two missions made it possible to carry out 30 days of field work and to interview 70 people (employee-shepherds, herders, villagers, livestock dealers, elected officials, veterinarians and entrepreneurs, members of local associations and institutions, Iranian intermediaries) in seven different *marz*. Some of these areas were chosen on the basis of the work of R. Hovsepyan (et al., 2016): the *Gegham* Mountains, Mount *Aragats*, the *Talin* region, the *Hankavan* mountain pastures. The *Syunik marz* was targeted on the basis of bibliographical and digital research. This region was one of the places where the herds of Muslim nomads from Karabakh and the plains of the Kura and Arax basins once grazed; today it is also a border territory. The *Jermuck* region in the *marz* of *Vayot Dsor* could be the destination of the longest observable transhumance of Yezidi herders today, and the Shirak region is interesting as it is a border area, located between Turkey and Georgia. Other areas were selected in the field, using the *floating observation* method (Pétonnet, 1982), which consists of noticing areas that are "*remaining vacant and available under all circumstances*".

The interviews were conducted in two different ways: semi-directive with imposed topics of discussion, and using the ethnosociological *life story approach* (Bertaux, 1997) to detect traces of social mechanisms and processes in the life stories of each person interviewed. The semi-directive interviews were sometimes accompanied by a questionnaire, with predefined themes arranged in a table format. This sheet was not only used as a reminder to the interviewer (essential questions to ask that are sometimes forgotten such as the identity of the persons, their contact information, the location of the interview, etc.), but also as a systematic framework for investigation that can include comparative work. It also made it possible, thanks to a pre-response system and checkboxes, to quickly record quantitative

responses or basic information. However, the use of this questionnaire was still dependent on the context of the exchange (welcome, trust, time given, etc.). The other survey aids were two photo slideshows (one on pastoral practices in France and other regions, and the other on sheep breeds) that we showed to our interlocutors when possible. These usually generated discussion and exchange. The interviews were recorded if the interlocutor accepted, and were conducted in Armenian, sometimes in Hezdiki (Yezidi language similar to the Kurdish Kurmandji language), simultaneously translated into English or French.

2. The general situation of sheep farming in Armenia

Of the 915 municipalities that exist in Armenia, 866 are rural, but only 36% of the population live in villages. In 2012, agriculture made up more than 40% of total employment in the country and 75% of employment in the rural zones (ACG, 2014). More than 57% of agricultural land in Armenia consists of pastures and meadows. Animal husbandry makes up more than 40% of total agricultural production, and is thus a central element of the agricultural sector in Armenia and its development. Today, more than half of the ruminants in the country are sheep and 59% of these are in the regions of Syunik, Gegharkunik, Armavir and Aragatsotn (NSSRA, 2019). The majority of the villagers have no more than 100 sheep (between 1 and 50 in the villages that we have visited), but many specialised sheep breeders possess more than 1000 ewes (ALPC, 2017). According to several authors (Ardillier-Carras, 2004; Tumanian, 2006; Avetisyan, 2010; ACG, 2014), the sector suffers from several weaknesses.

The sheep population consisted of two million in 1980 at the end of the Soviet period, but of only 637,978 animals on January 2018 (NSSRA, 2019). This decrease is the direct consequence of the dramatic past situation described in the introduction. The majority of the villagers sold the herds of the *sovkhoses/kolkhoses* which were distributed and privatised, in order to obtain liquid assets or to provide for their living necessities during the 1990s (Ardillier-Carras, 2004). Although the specialists estimate that pasturage in Armenia could reasonably provide for more than a million sheep (Avetisyan, 2010) with a strong investment in irrigation, the first consequence of this decrease in the number of animals is the insufficient use of high mountain pasture. According to the Ministry of Agriculture, only 25% is used. As an example, the high pastures of the village of Gorayk, which reach more than 3000 m in the *marz* of Syunik (photo 1), accommodate every summer more than twenty-seven thousand sheep, whereas their capacity is evaluated at seventy-five thousand animals. This situation attracts Armenia's neighbour Iran, which lacks pasture to satisfy its own sheep population and would like to invest the deserted territories of the *marz* of Vayots Dzor and of Syunik with herds and shepherds from Azerbaijan region. Although the project is on hold because of the refusal of the majority of Armenians (Brook, 2013; Ulubeyan, 2013), Iranian entrepreneurs and those of the Gulf states nevertheless propose to the municipalities that "*the owner can be Ali, and the shepherd Arustam*", in other words, employ Armenian shepherds to take care of foreign herds. However, since the departure of the Azeris, and in spite of the fact that the Yezidi community are described by the Armenians as specialists in herding, the country lacks qualified breeders and shepherds.

Another result of the decrease in the sheep population is delay in the development of quality in sheep breeds. After the dissolution of the kulaks in the 1930s (Conquest, 1987) and the fall of the Soviet Union (Ardillier-Carras, 2004), the breeds that exist today remain

certainly well-adapted to the strong constraints and specificities of the climate and geography of Armenia, but very little adapted to the constraints of market competition. Although a centralised and managed policy of selective breeding is emerging in Armenia, in particular through the implication of many NGOs (CARD, 2017), it has so far had little effect in the sector of sheep husbandry. Crossbreeding of local sheep with Romanov, Karabakh and Daghestan breeds, as well as Merinos and Georgian Tushinsky, has been practised to improve the productive capacities of the sheep population, but this remains dependent upon the initiative of local entrepreneurs and on foreign investment (NGOs). However, a program of ovine production was approved by the government in 2012, to be operational by 2020. Its intention is to augment the number of sheep and to promote the activity of sheep husbandry (FAO, 2012). Despite these, today the country still lacks operational irrigation systems and modern infrastructures. The herders of the Ararat plain complain of insufficient fodder to feed the herds during the long winter months, and there are practically no dipping basins for washing the sheep before transhumance departures in a region that has a risk of epizootic disease (Naghshyan et al., 2018; Markosyan et al., 2017). This lack is compensated by campaigns of biannual vaccination, but these are dependent upon the meagre resources of the state. The sheep barns are very often old ruined *sovkhoses* that are reutilised, the herders living in these camps with material dating to the Soviet period, under old army tents, in summary shelters or in caravans, common in the country and often dilapidated (photo 2).

2.1. The milk products

In 2016, 451,000 litres of milk were produced in Armenia and Cheese production volumes amounted to 22.3 thousand tonnes. But 95% of this milk comes from cows. There are more than 60 cheesemaking companies that collect sheep's milk from farmers. They mix sheep's milk with cow's milk, or produce sheep's cheese and sell it in town. According to official data, Armenia imported 1,200 tonnes of dairy products and exported 1,500 tonnes in 2015 (ALCP 2017). Diversification of the production is also attempted to increase the offer on the market (CARD 2011 online) and decrease imported cheeses and those of industrial origin based on powdered milk. In this context, sheep milk is subject to very strong competition.

In the summer pasture camps of the mobile herders (concerned by the “remote” system of which we will speak again), *Tchettil*, a cow cheese of slender shape in the form of dense ropes, rolled up in a figure eight in thick braided ropes (photo 3), and *Tchanakh*, another cow cheese with a soft body and natural crust which dries without maturing, like feta, dominate the production. Preserved without brine, in bathtubs, barrels, old refrigerators and holes dug into the ground inside tents, these cheeses are brought down from the summer pastures every month or at the end of the summer. The sheep cheeses are: *Lor* (a cheese of reheated lactoserum that is consumed fresh, kept “under vacuum” in smaller containers which are turned over, so that the mouth of the cask is placed on the bare ground. The mouth is then covered with earth to insulate the contents); *Shor* or *Kashk*, made from the buttermilk obtained after the churning of yoghurt, salted, boiled then drained, formed into little balls of casein which are dried in the sun. Very hydrophilic, these little balls can be dissolved in water to provide a whitish liquid that constitutes a milky drink from autumn to winter. Yoghurt, called *Matsoun* (*Mast* in Yezidi), and the buttermilk mixed with salt and water, called *Tan* (*Daw* or *To* in Yezidi), is also produced in the camps, but for family consumption.

2.2. The wool product

Of the 1,794 tonnes of wool produced in Armenia in 2016, only 48% was sold, (29.4% was sold for cash, 14.7% was exchanged for products such as fruit, vegetables and others, and 3,9% were exchanged for services). Farmers use wool mainly at home, sell the surplus to neighbours, supply several carpet factories, or give the rest to parents as gifts. The rest is thrown away or burnt for lack of buyers and a commercial outlet (ALPC 2017). On the summer pastures, we can thus witness veritable charnel houses of balls of wool, lit by the breeders (concerned by the “remote” system) to get rid of a product of which they do nothing. The carpet manufacturing factories are mainly based in Yerevan, but the wool collection is mainly in the regions of Guegharunik, Syunik and Aragatsotn where the sheep are shorn once a year to produce longer fibbers (ALPC 2017). If the most requested wool is that of white sheep of Balboas breed, an association of women of Syunik is engaged in the production of handicrafts based on local wool of sheep of the Karabakh breed coming from the small family breeding (registered in the « nearby » system which we will talk again). The association uses the services of an ethnologist and his research to create product design, but also to improve the quality of wool for export. Another similar project is underway in the village of Amasia in the marz Shirak, in the north of the country. Family farms which have a small number of sheep sell wool at a higher price than specialized breeders because of better maintenance: the wool is cleaner and small quantities require less space to store and wash them (ALPC 2017). Thus, it is not uncommon to see in the villages, wool soaking in a bathtub placed in the street, at the foot of the houses (photo 4).

2.3. The sheepmeat market

The market for ovine meat offers little prospect at either the national or international level. According to the Armenian ministry of agriculture, about 18 tons of lamb was produced in 2018 (compared to 379,000 tons in New Zealand, for example), but the country could export between 180,000 and 200,000 head (Ministry of Agriculture Republic of Armenia 2019). In the interior market, ovine meat is in direct competition with other cultural preferences: pork and beef (which represents nearly 55% of the meat produced). And as everywhere, inexpensive poultry meat is very competitive and widespread. Ovine meat remains expensive and seasonal, despite sales of lambs of different ages (3 to 8 months) and the system of 3 lambings in two years practised by some of the breeders. The national commercial flow moves around three kind of activity: the sheep supply areas (livestock markets, villages and specialized breeders), the collectors (livestock dealers), and intermediaries (businessmen, slaughterhouses).

The livestock markets can be mobile, that is they can change place regularly according to the urban expansion of the municipality where they are situated, such as at Gyumri. In this case, they are small, informal, often without any infrastructure. Or they are permanent and famous, such as those at Martuni, Armavir and Artashat. At the same time, new markets have been created, such as that of the municipality of Khot in the *marz* of Syunik (map 2). Created by a Swiss NGO, its purpose is to help small breeders in the villages to improve mainly their breeds of cattle, to help them to find outlets with slaughterhouses, and to provide veterinary care. Training courses are also proposed. A restaurant was established to develop the availability of local products for tourists. The popular village of Tatev and its cable car are nearby. In addition, this market has hosted a sheep-shearing festival since 2017.

Villages and livestock markets are continuously frequented by livestock dealers, the collectors, usually from the Yezidi minority (which we will discuss in chapter 4.2). They travel around Armenia with livestock trucks capable of transporting 40 to 45 lambs, seeking to buy in order to supply supermarkets and restaurants. In this case, they practise the slaughtering themselves. They also work with the large slaughterhouses and are responsible for assembling small groups of animals from several owners of the same village, or from several villages that are geographically close, to form a larger flock. The slaughterhouses then send their own livestock trucks to pick up the animals. The owners of larger herds deal directly with individuals, the slaughterhouses and intermediaries. These intermediaries (as well as the Khot market NGO) act as an *above ground Delal* (the *delal* is a key player in livestock markets from the Middle East to the Sahel. He is broker mediator and intercessor praising the animals). They are Armenians, or Iranians living in Armenia, and are sometimes from the Persian Gulf. The latter represent Arab clients in Dubai and Doha. They buy in Armenia live animals for the religious celebration of Aïd, which are then transported live by airplane from Yerevan or Tbilissi.

The case of Iranian expatriates has been studied by anthropologists F. Adelhah (2004) and A. Moghadem (2015). They highlight a fundamental movement that began at the beginning of the 20th century, with prominent Iranian men seeking new resources from the experience of exile through the figure of the eminence as a social and religious dynamic and the money market. During his stay, through the business he does, but also through his exchanges and donations, he increases his social prestige and the network of his contacts. It plays an administrative or economic-financial intermediation role, and eventually creates a capital of influence and recognition in Iran itself, including in its home province. Finally, the expatriate situation gives the businessman an autonomy vis-à-vis the Iranian state, a "*space by proxy*" (Moghadem, 2015) which allows him to escape the political, economic (embargo and international sanctions) or religious constraints of the country of origin. This actor is very active in the Armenian agricultural sector, particularly in livestock farming.

2.3.1. Exportation and importation

The export of ovine meat from Armenia remains dependent upon the dynamism of the market of the main importer, Iran, far more than those of the Gulf States or Georgia. Iran is an important partner, the 4th after having been the 2nd in the 2000s. This country supplies oil and gas to Armenia, and sheep farming is the main Armenian export to Iran (Moghadem, 2015). In 2013, according to Armenian government data, it still accounted for 85% of sheep exports, or 120,000 lambs (Danielyan, 2015). To increase the quantity produced, Armenian breeder-entrepreneurs do not hesitate to import lambs that come mainly from Russia. Russia and Armenia are linked by a common market since 2015, the Eurasian Economic Union (EEU), which authorizes the export of sheep from the northern Greater Caucasus to Armenia, transiting through Georgia, as well as by the strong relations within the Yezidi and Armenian communities, because of their Diasporas. Transfers from Armenian expatriates represent more than 15% of Armenia's BIP, 70% of which comes from Russia (Coface, 2019). Lambs from Georgia also cross the border at Bagratshen, the only frontier post equipped with a quarantine zone. These lambs are destined for the Iranian markets (via the slaughterhouses) as well as those of the Arabian peninsula (via the airport at Yerevan). As Georgia is not part of the EEU, this supply network does not appear to be economically feasible for the businessmen who use it. However, the latter benefit from the geographic proximity of this market and the presence of an Armenian diaspora in Georgia to buy and

sell inside this country. This brings them a complementary financial benefit. The Russian and Georgian lambs that cross the frontier are fattened in Armenia before being resold. The veterinary service of the Ministry estimates between 400 and 5000 the number of lambs that cross the frontier at Bagratashen each month, and of these in 2017, 1300 animals were Georgian (ALCP, 2017). Finally, there are a few cases of buying lambs and ewes from the Nagorno-Karabakh by young herders of Syunik who wish to constitute their first herd (map 2).

2.3.2. The slaughterhouses and the Iranian market

The Ministry of Agriculture lists eight recent slaughterhouses in service in the country which today function mostly with the Iranian market (epress.am, online 2017). One of these is situated near the Georgian frontier, in the municipality of Odzun in the marz of Lori. Five of them are situated around Yerevan and the wintering zones of the herders of the Ararat plain: that of the municipality of Vardenut in the marz of Aragatsotn, those of Mayakovski, Arzni and Voghjaberd in the Kotayk, and that of Masis in the marz of Ararat. The last two slaughterhouses are near the Iranian frontier: in the municipality of Zaritap in the marz of Vayots Dzor situated not far from the summer pastures of Jermuck, and in the municipality of Kapan in the marz of Syunik (see map 1). The four private slaughterhouses in the country are those of Odzun, Masis and Voghjaberd, which is the oldest, and that of Kapan (see map 2). The latter possesses the only livestock trucks of high capacity (450 heads) in the country. The construction of the state slaughterhouses was financed by the Greek government as well as by private entrepreneurs under the technical supervision of the FAO (FAO, 2015). Four of them were constructed by a Greek company (Hatzioakimidis SA, online). All of the slaughterhouses have *halal* authorisation and employ Iranian personnel who are paid by the Iranian enterprises that import the meat. A veterinarian and a mullah are responsible for verifying that the ritual is correctly carried out. The slaughterhouses function seasonally between April and November, which allows them to buy, from sheep owners practising only one lambing per year, lambs aged 6 and 8 months (August, October and November), mainly the herders of the Ararat plain, as well as lambs from herders practising 3 lambings per year, such as those of Syunik (from April to October). The prohibition of private slaughtering proposed by the government in 2017 should favour the maximum exploitation of these slaughterhouses. But transporting the animals to the slaughterhouses is still too expensive for the villagers who prefer the short circuits (animal dealer, butcher). A large part of slaughtering escapes the control of the state, but the market of the large slaughterhouses which is held by the oligarchs, from the dominating class and who hold the political and economic resources of the country, prevents any intermediate alternative. By monopolizing the tools of production and modernization through their financial strength, the latter instill the laws proposed by the State in favour of their companies under the cover of the standards and injunctions of international organizations, even if it means criminalizing some of the actors in the sector and their vernacular knowledge (Epress.am, 2017 online; Arka, 2017 online).

The creation of these slaughterhouses, except for that of Voghjaberd, dates to 2015 and is the result of the development of Iranian demand, although other markets are being considered, such as Iraq, Kuwait and Russia (Vorotnikov, 2015). The re-establishment of the embargo on Iran in 2018, which has an impact on imports from Occidental countries through financial transactions controlled by American banks (SWIFT financial transfer system), should accentuate this tendency. This preponderance of the Iranian market has several reasons. In

spite of its 65 million animals, this country must import 120 thousand tons of meat per year, especially for Aïd. The breeds of fat-tail sheep which represent most of the livestock in Muslim countries, from north Africa to the Caucasus, from Anatolia to the Near and Middle East, and which are also found in Armenia (among the Yezidis, a dish called *Kavourma* is prepared with the fat tails of ewes, which are melted in a pan in which the meat is fried) are preferred by Iranian consumers. Moreover, the summer pastures of Armenia are known for their quality and their availability. In 2014, the Iranian government banned the import of live sheep as well as travel through the country of live herds, for sanitary reasons. It is chilled meat that crosses the frontier today, as Iranians do not appreciate frozen meat. Under these conditions, and even if more expensive, imported meat from Armenia offers a certain advantage for the Iranian entrepreneurs. With 72 hours being the regulatory maximum for refrigerated meat, access to non-frozen meat requires a short journey. This proximity enables supply of the markets of Tabriz and Tehran, as well as Isfahan and the central parts of Iran. In early 2019, Iran went through a serious red meat crisis. Annual consumption per family, from 57 kg/p in 2007, dropped to 12 kg/p in 2019 and the price per kg increased by 120% in the same year. The origin of this crisis comes from economic sanctions, the devaluation of the national currency, but also from the scarcity of livestock due to the clandestine trade of live cattle and sheep to Iraq and the Gulf Cooperation Council (GCC). In January 2019, more than 900,000 sheep were reported to have crossed the western borders in the space of nine months, and smuggling was up by 457% compared to 2017. Both the regime and Saudi Arabia were accused in the pro and anti-government media of organizing this large-scale trafficking. In response, the Iranian authorities have promoted the import of subsidized chilled meat, notably those from Armenia, with zero tariffs while strengthening border controls (Thevenin, on process). However, these sanitary restrictions are an inconvenience for the Armenian breeders. They lower considerably the number of possible outlets. Today, many entrepreneurs are soliciting the Iranian authorities to remove this prohibition, in order that livestock trucks can deliver live Armenian lambs as far as Saudi Arabia, whose population prefers live animals. But the rivalry between Iran and Saudi Arabia is blocking the process. Another limiting factor is that although the Iranian intermediaries know the origin and the quality of the meat, the Iranian client does not. An “origin Armenia” label would seem worth establishing, but would have a negative effect on the Iranian market, with the suspicion that the slaughter was not *halal*.

3. The systems of sheep husbandry in Armenia

According to R. Tumanian (2006), there are two systems of sheep husbandry in Armenia, which our studies have confirmed. The first is mobile, called by the author “remote” or “summer camp grazing” which is characterized by distance between the pastures and the winter sheep barns. The herd, which can be made up of the animals of several owners, is grazed throughout the hot season, guarded by the owner families and/or employed shepherds. This system may be qualified as semi-nomad or transhumant. The second system is sedentary. It is called “nearby” by the author and is characterized by using during the hot season pastures, which are close to the village. The herd is also made up of the animals of several owners, and is guarded collectively or by a paid shepherd. Thanks to this proximity, the herd is brought back to the village each evening to the various owners, which avoids nocturnal guarding and economises human labour. The cows are milked in the village, on the

village farms, but there is no or very little milking of the smaller ruminants, as the milk is kept for their lambs.

3.1. The “nearby” system

In the present socio-economic and geopolitical context of Armenia, discussed elsewhere (Hovanessian, 2017; Thevenin, 2018), the necessity to complement meagre revenues through a subsistence economy has maintained small animal husbandry in village families. It allowed Armenians having a small plot of land (we will return to this), to survive during the 1990s (Ardillier-Carras, 2004). The poor households did not have the means for a mobile life (motor vehicles, equipment and rent for summer pasturage) and could not do other than keep their animals around the village. Although many abandoned keeping sheep after collectivism because of the absence of nearby pasturage, this situation accentuated the number of herds on the pastures near the villages, which are today over-exploited (Tumanian, 2006).

Shepherding a collective herd (made up of animals belonging to several families of the same village), by a salaried shepherd or an owner shepherd is quite common in the rural areas. However sometimes, those villagers who do not have the means to pay a shepherd, or simply can't find one, use a system of shepherding by rotation in which the owners take turns to guard the collective herd for a certain number of days according to the number of animals each owns. In Armenia, this system, which is organized around planning which is sometimes recorded in registers, necessitates calculation, which is complex and intentionally (?) imprecise. It depends upon appreciation and mutual confidence between the protagonists (Thevenin and Mikhkian, 2018). Because the number of animals declared by each villager fluctuates during the course of a year for socio-economic, cultural or geopolitical reasons (participation in the war effort during the Nagorno-Karabakh conflict), this regularly necessitates a new calculation and, for the person who manages the planning, an undeniable capacity for negotiation and exactness.

The calculation of the rotation combines five units of measure: (A) the total number of days of shepherding in one year, (B) the total number of small ruminants to be guarded, (C) the number of family units concerned, (D) the number of small ruminants per family unit, and finally (Cy) the cycle of rotation. This cycle depends on the units of measure B, C and D and lies generally within the total number of shepherding days in the year (A). If the end of the annual shepherding comes in the middle of a cycle for climatic reasons (snow), the shepherding does not start at zero the following year. It restarts at the point where it stopped during the cycle. Thus, in a village in the *marz* of Syunik, a rotation may carry on with no interruption for 43 years. The system of calculation of rotation can vary according to the village (Table 1). This variation depends on the number of animals possessed by the village, on the available pasturage and on the history of each village.

The conditions, which allow this system to function and be maintained, provide avenues of reflection concerning the governance of common property (Ostrom, 2010). First of all, it's a sharing system. A village community decides to share shepherding time and territory equitably (management of the load per animal per grazing area, and the duration of the grazing), but also the rams that are pooled, and sometimes the product of livestock in the form of a donation (*Madagh* that we will see later on, war effort). It shares risk management (monitoring health risks, overgrazing, and resource depletion), and the management of inequality between different families (different qualities of private pastures, the quantity of animals per family, and the time of availability). This sharing has its limits. It is seasonal (we

do not guard collectively in winter), and we do not share the income from the family herd. However, available time can become a source of income: days of shepherding can be exchanged for a salary if you are going to guard for someone else. Finally, if a villager wants to start a specialized livestock farm, it automatically takes him out of the system. In each village, it is a limited number of animals per family calculated on the forage capacity of the commune.

The many local veterinarians and zootechnicians who were part of collectivism, whether in function or not – when these individuals are not former heads of brigades or administrators of *sovkhoses/kolkhozes* who manage the registers – supervise this system and act as a respected exterior institution. They obtain a compensation that is symbolic (recognition of their *savoir faire* and a prestigious status because of their acquired agropastoral knowledge, but also the continuation of a previous status) and sometimes real, in the form of dispensation from shepherding their own herd. The complicated and imprecise calculation establishes these individuals in their role as mediators as much as it discourages small breeders from replacing them. At the village level, this practice generates a very strong social bond. It is part of a village environment that offers a context of mutual surveillance. The inhabitants know each other. *“It’s our village life. Each evening, everyone comes to the entrance of the village to recover their animals, and discuss... Everyone knows everything about everyone”*. The fluctuation of the number of animals owned by the families concerns everyone, and the rotation brings advantages and constraints for everyone. In addition, just as the harvesting of wool from villagers’s sheep brings life to the production of Armenian carpets (true national pride), the *Madagh* ritual gives a symbolic dimension to this village herd in a context of increased religious nationalism (Da Lage, 2018). The *Madagh* is the sacrifice of an animal by a family to realise a very dear wish, or in thanks for something extraordinary or gratifying that has happened to them. This ritual is related to the biblical episode of the sacrifice of Ismaël by his father, Abraham. The people take a sheep to the church, a male, but the gift can also be a cock if the family has not much money. The horns of the sheep are decorated, the animal is led 12 times around the church, and is then blessed by placing salt in its mouth. In the village of Tatev, a small piece of the ear is cut off within the enclosure to symbolise the sacrifice, as it is prohibited to slit the sheep’s throat. There is sometimes a special place near the church, as at the village of Gerhard, where the blood of sacrifice is spilled. At the end of the ritual, the meat is distributed to 7 particular families or to the poor present at the doors of the church. The family who made the wish cannot eat the meat. The ritual of *Madagh* enables the feeling of being one with the community and with the *Armenian Eglise-nation* (Mahé, 2000). The Armenian Church became a refuge of identity in the absence of a state from the 14th to the 20th centuries. Finally, to his concern for a vital space, the Armenian nationalist also brings a fulfilling ideological framework, both for the local notables as well as the village population. The auto-subsistence economy participates in the occupation of the national territory and in the fight against the haemorrhage of migration. It receives financial assistance from numerous NGOs, which flood the Armenian countryside with development programs (improvement of cattle breeds, access to and creation of local markets, creation of enhancement events such as the sheep-shearing festival in the Syunik). Thus, possessing a few sheep is for the villagers a source of access not only to means of subsistence, but also a capital that is social and symbolic, religious and ideological. This assemblage of elements maintains the engagement of all concerned to respect the system of rotation of shepherding.

3.2. The “remote” or “summer camp grazing” system

Mobile herding is characterised by a high mobility of humans and animals. We have pointed out the existence of many intermediary stopping-places between winter quarters and summer pastures. Annual planning can sometimes be complex, with as many as 7 stopping-places during the year where the herd is in different places, as for a Yezidi family of the *marz* of Ararat (Thevenin et al., 2017). Between their village and their summer pastures in the mountains of Jermuck in the *marz* of Vayots Dzor, there are 7 stops:

- a wintering period, from the beginning of December to the beginning of February, when the herd is in barns (in fact, old *sovkhoses* renovated and rented by an individual to the herders);
- a lambing period from the beginning of February to mid-March, when the herd is in the village, guarded by the herders and their families;
- a period of care, from mid-March to the end of April/beginning of May, which takes place in the shelters-*sovkhoses* before departure on the transhumance;
- an ascending transhumance for 6 days, from the end of April/beginning of May, the herd accompanied by shepherds only;
- a first stopping-place at an altitude of 2300 m, from the beginning of May to mid-June, when the family joins the shepherds and the herd;
- then a summer pasture at a higher altitude (2700), from mid-June to the end of August;
- finally, a descending transhumance of 3 months, from the beginning of September to the end of November, probably with places of stabling, taking place across the mountains, the shepherds being alone with the herds on their return to the sheep barns.

Besides the mobility of the animals, there is that of the humans. In the collective herds of several owners, sometimes the owners alternate shepherding the herd in the summer pastures. Each family, or sometimes members of the same family, come up to guard the herd during a given period before being replaced by a brother, a father or another family. The employees, whether they are intermittent, such as those who follow the transhumance or take care of the lambs in the summer pastures, or are employed full-time, also take part in the rotations which cause them to make weekly return trips between their village occupations in the wintering zones, a complementary work, and the herd. This system of rotation, which is declining as we have seen for guarding the collective sheep and cattle herds, also functions in relation to the haymaking season and to school transport.

3.2.1. Seasonal movements in the *marz* of Syunik

In the *marz* of Syunik, since the cease-fire of 1994 in the Artsakh (Armenian name for the High-Karabakh), the herders of the municipalities of Goris and Tegh benefit from the status-quo of the conflict to restart pastoral activity on each side of the Karabakh frontier: a double transhumance, ascending and descending, practised starting from their village, situated in the middle of the distance journeyed, up to an altitude of 1200 m, between the summer pastures of the village of Gorayk and the winter pastures on the northern shores of the Arax river at the Iranian frontier (Thevenin, 2018). These pastures are in Azerbaijani territory under the control of the armed forces of the Nagorno-Karabakh (see map 1). Meadows at altitudes of around 500 m, a milder winter and the availability of land enable these herders

to reach today the number of 50,000 head of sheep and to operate a rotation of 3 lambings over 2 years, which is rare for specialised mobile herding in Armenia. This territorial complementarity, between the summer pastures of Syunik and the meadows of the Arax River, is not new. Throughout the last millennium, nomads coming from the plain of Moghan, from the basin of the Kura and from lowland Karabakh took the Goris route to join these summer pastures (Tapper, 1997). During the Armeno-Tatar war of the beginning of the 20th century, these movements were the pretext for conflicts between the herders and the Armenian villagers (Ybert-Chabrier, 2007). In the Soviet period, it was the Azeri herders who ascended the Vorotan River from the shores of the Arax, taking with them in a spirit of cooperation the small number of Armenian livestock in their ascent and descent. This is thus an ancient pastoral route that has been rehabilitated, ignoring the contested frontier (Photo 5). Thanks to this route, the local elected officials and the veterinarians of Syunik take pride in having stopped emigration in their region.

A secondary consequence of this pastoral rehabilitation, these movements produce among the inhabitants of Syunik a change of paradigm. Traditionally, specialised sheep herding was practised by Muslims, and today by Yezidis as we will see in the next section. The Azeris no longer being present “to go up there”, and the Yezidis being “too distant” and “too community-based” to come to the Syunik according to the villagers, the herders are thus Armenians, former workers or craftsmen, who began to be herders after the cease-fire (see picture 3). They could take advantage of their experience of small family animal husbandry and of the *sovkhoses/kholkozes*, as well as the *Barekam*, literally “those who wish us well”, the extended family, including friends. This network, which remains to be studied, is very meaningful because of the weakness of the state. It includes male and female employees, young and less young, who are also novices, sometimes members of displaced families coming from Shirak and Lori, zones affected by the earthquake, who established themselves in occupied territories, as often happens after an episode of emigration in Russia.

In parallel, entrepreneurs invest in specialised herding. In the region of Zangezour one of them possesses five herds which moves to summer pastures in the nearby mountains, shepherded by employees. He also possesses a cheese dairy that supplies the national market and one of the private slaughterhouses that does business with Iran. He takes advantage of the network, acquired in that country through his other professional activities, to distribute his products. However, according to his own words, the lack of qualification, but especially the lack of motivation of his employees, holds back the development in his sheep-breeding business. This point of view was many times heard during our investigation among the elites. The status of an employee in a market that has become capitalist and competitive appears to be still poorly experienced and poorly understood. The reason often evoked is the seventy years of collectivism that has shaped mentalities and a distrust of all that is imposed from the top. The causes are also to be found in feelings of injustice, suspicion, even jealousy because of the monopolisation of riches by the oligarchic powers, but also a particular worry in relation to the subsistence resources of individuals (the plot of land, the small family herd) in the face of an uncertain future.

3.2.2. The seasonal movements from the plain of Ararat

The majority of the herders wintering in the plain of Ararat that we have encountered during our investigation are Yezidis. Their seasonal journeys take them southward to the summer pastures of Jermuck and Martuni, eastward to the mountains of Gegham, and northward to the summer pastures of the Pambak mountains, Mount Aragats and Shirak (those of Lake

Arpi and the Kharakhatch pass). The Yezidis of Armenia are a minority consisting of traditional nomadic herders who came from Turkey in the 19th century and after 1915 to flee the genocide that also affected them under the Ottoman Empire. Besides their language (Kurdish) and their religion (a syncretic belief system derived from an ancient Iranian religion close to Zoroastrianism, having many similarities with Islam, Christianity and Gnosticism - Amy de la Bretèque, 2013), the semi-nomadic sheep herding that they practise *en masse* imposes another aspect of otherness for the Armenian majority. Considered by the latter to be specialists in sheep-herding, the relationship of the Yezidis with this activity is expressed among Armenian villagers in recurring stereotypical jokes. In these stories, the goal is to show with humour that a Yezidi without sheep is no longer a Yezidi. This attitude is compounded by land conflicts that occurred in the 1980s. According to a report by the UN High Commissioner for Refugees (2008), the rural Yezidis were the great losers in the process of land privatisation after the fall of the USSR, leaving many of them without rights to property or necessary access to pasturage. The survival itself of the community was implicated in the conflicts over land rights with Armenians. *Although views differ as to the extent to which this may be attributed to discrimination, the more fact that it is a national minority that has been disadvantaged in this way has given rise to claims of discrimination and exclusion* (2008 :16). However, pastoral activity was not experienced by this minority as a primary identity, as being Kurdish or Yezidi could almost exclusively be since the 1980s (Kaval, 2016), nor even as a tradition which it was necessary to rehabilitate or to consider as patrimonial. Although the practices of seasonal mobility and herding appear to have safeguarded the solidarity of their community upon their arrival in Armenia, since then the activity has retracted in its economic aspect. The film *Zare* produced in 1926 by the Armenian filmmaker H. Beknazarian presented us with the image of a nomadism experienced as a definite social fact on the slopes of Mount Aragats, but a hundred years later mobile herding that had become semi-nomadic is nothing more than a means for the Yezidis to obtain viable work in a weakened Armenia, in which they possess a secular and recognized *savoir-faire* and make up a mobilizable number: the community to which they belong, but sometimes also Armenian employees. The nomad material culture, the black tent, all of that disappeared with the use of summer pastures.

On the route that links the *marz* of Armavir to the summer pastures of Shirak (regions of Amasia and of the Kharakhatch pass), the seasonal movements of the Yezidi herders follow the Turco-Armenian border which since the Nagorno-Karabakh conflict is completely closed (Map 3). On this journey of 5 or 6 days by foot, more than 40,000 head benefit from a little-frequented route suitable for motor vehicles, regular sources of water (the water supply and the Akhuryan river) and an old ruined *sovkhoze* to join the Georgian frontier through the town of Gyumri (Thevenin, 2018). Small vans follow the convoy and no milking is practised during the ascent, unlike for example the transhumance of the Kurdish mobile herders of Iraq in which the journey is punctuated by this necessity. Gyumri was a very active stopping-point between Kars and Tifflis with a quarantine zone for the caravans (de Besse, 1838; Ardillier-Carras, 2004). The summer pastures of Lake Arpi have been frequented by herds of nomads since the invasions of the Seljuks and the Mongols (Margarian, 2001; Peacock, 2005). A sedentarised population of Azeris still lived there as indicated by numerous cemeteries, established probably starting in the second half of the 19th century during the great period of sedentarisation of nomadic tribes in the Lesser Caucasus due to Russian colonisation (Karapetian, 2007). With an average altitude above 2000 metres and a mean annual

temperature of 1°C (AUA online), this place is called “the Armenian little Siberia”. During the Karabakh war, all the Azeris left, and it was Armenians coming from southern Georgia or fleeing the massacres in Baku who became established in the region (Galstyan, 2015). Although the little family herd, the hayfields and the plot of land constitute a base of subsistence for the new arrivals, the renting of summer pastures to transhumant herders brings in a complement. Grouped since 2010 in communities of municipalities, the villages now manage the rental contracts, renewable for three years. The majority of mobile herders summering in the Shirak are Yezidis. But as in the Syunik, an Armenian entrepreneur has a herd of sheep from the *marz* of Armavir that performs the transhumance to the summer pastures of Amasia district (Photo 6), thanks to Armenian and Yezidi employees. Also the owner of large cattle farms, he buys and sells Russian and Georgian lambs destined for the markets of the Middle East. As in the Syunik, this person is confronted with the problems of employee status and the jealousy that his enterprise arouses among his employees.

4. Discussions

4.1. Extension of the pastoral domain and representations

The surveys revealed a trend towards an extensification of sheep mobility in Armenia. This trend is all the more remarkable as it runs counter to that observed in neighbouring countries and offers, in addition, examples of seasonal cross-border pastoral movements. The Iranian entrepreneurs' desire to have their herds appraised in the *marz* of Vayots Dzor and Syunik under Armenian guard appears to prolong the movement of Iranian expatriates. Like Iranian notables and tourists who come to Armenia, Iranian herds are brought because "*a space by proxy*" (Moghadam, 2015) is sought, to meet the high demand for fresh sheep meat because of overgrazing (Digard, 2017), mass smuggling, desertification and water shortage in Iran (Gilbert, 2018). This movement, if it were to materialize, would seem to be new. To our knowledge, it would not correspond to any earlier territorial complementarity, or to seasonal sheep-herding routes of the last few centuries. Shasevan nomads who summered in the Iranian Azerbaijan region wintered in the Mughan plain east of Karabakh, creating cross-border conflicts during the time of the Russian Empire (Tapper, 1997). Livestock farmers on the northern shores of the Arax River were divided between the Zangezur and Karabakh in the summer (Chantre, 1893; Ismael-Zada 1960), and the Karadağ massif for those on the southern shores on the Iranian side (Bazin, 1982). At the same time, in a reverse movement, Syunik's Armenian herds also crossed a border to graze on the shores of the Arax River, a territory that is now disputed, occupied by Nagorno-Karabakh forces, but which is part of the Republic of Azerbaijan, according to the international community. Finally, a third area of expansion concerns the margin areas of the mountains, which were emptied of Azeri herders and collectivist livestock and have become Armenian national territory that must now be occupied and exploited. This extensification deserves to be examined because it is the result of several factors.

First, it was possible only because of the creation of the Armenian and Azeri nation-states. It cut off pastoral territorial complementarities, both that of the Arran country in Azerbaijan with Syunik and Lake Sevan (Thevenin *et al.* on process), and that of Nakhchivan with the Jermuck mountain pastures. It emptied the shores of the Arax River of its former Azeri inhabitants (Constant, 2002) by freeing low-lying pastures. Second, this is only possible in the context of Armenia's precarious geopolitical balance: between Russia, which maintains the status quo in the Nagorno-Karabakh conflict, the United States, which turns a blind eye

to its Armenian ally's failure to respect the embargo, and Iran, which invests in its neighbour and imports its meat. The third factor is the centrifugal force of the Gulf Cooperation Council (GCC) countries on the importation of live sheep and the consequences of climate change. The GCC is the second main importers of sheep and goat meat behind China (Egger, 2016). It acts as a real 'sheep pump' both on the major exporters (Australia, the European Union), on the countries of the Near and Middle East, of the Horn of Africa, but also on the small Caucasian producing countries (Georgia and Armenia). Its market is booming (9% per year) due to population growth, rising incomes and urbanization. Especially climate change installs episodes of drought repeatedly and increasing water stress in the GCC area and Near and Middle East. In the absence of arable land, it favors the shortage of animal feed (fodder) and thereby an insufficient local production of meat, which must be met by an import, official and unofficial, where health risks, social dimensions and geopolitics intertwine. For example, in 2011, 150 Georgian lambs destined for Qatari high society died of cold in the hold of a plane leaving for Doha at Tbilisi airport due to lack of fuel. These lambs are renowned and sold four times more expensive than Australian animals. The Azerbaijani company, which imports petroleum into Georgia, had restricted the sale by its Georgian subcontractors of fuel to the airline registered in Armenia (Thevenin, on process). While the majority of Armenia's sheep exports are currently chilled meat to Iran, the sale of live sheep or chilled meat for the GCC market, by air by truck, or by ship from Georgia, remains a medium-term objective for which the Armenian sheep industry is preparing (Entrepreneur, specialized breeders, slaughterhouses).

This possibility of extension is also the result of a cultural preference. Armenian entrepreneurs and villagers share the same observation: "*The Armenian would not have been born to make sheep. With the sheep, it must be a Yezidi or an Azeri*". As we have seen on several occasions, the sheep-herding speciality of Yezidis is an established fact. "*Who's going up there? Not even the birds?*" is an expression heard several times among the villagers and is not a reference to the Azeris. Components of stereotypical processes (Boyer, 2007), jokes are an example of the stigmas of this categorization. But they categorize the Yezidis as much as they lock Armenians into the representation they have of themselves. However, there does exist an Armenian tradition of pastoralism with mobility practices. In the 19th century, in the Shamkir region of present-day Azerbaijan, the high summer heat in the lowlands required moving the livestock. In Barsum, the Armenian villagers left their winter village in the Shamkir River gorges to return to their summer village, which was located above the gorges. The same was true for the village of Zayam Cirdakhan located on the plain and its summer equivalent, the village of Hacialilar located at an altitude of 1200m (Karapetian, 2007). Armenian pastoralism also has places of memory in the Armenian films "*Autumn Pastoral*" by M. Vartanov (1971) or "*Seasons*" by A. Pelechian (1975), and "*Menq enq, mer sarere*" (we are our mountains) by H. Malyan (1969). But the general image of the shepherd and the practice of mobility similar to nomadism remain attached to Muslim, Kurdish, Turkish and Azeri nomads, (whom the Armenian villagers call the *Terekeme*). The collective memory of nomadic tribes involved in raids, murders, kidnappings of young women and who benefited from the protection or at least from the benevolent attitudes of the khans and begs, remains vivid. These stories served as inspiration for the famous 19th century Armenian novelist H.M. Hakobian called *Raffi*. Today, this mobile livestock farming at the family level is associated with a minority, the Yezidis, in a new political context, the Armenian nation-state.

While the sale of Soviet herds during the early years of independence cannot be attributed to a cultural reason - the other countries of the Soviet Union experienced the same decline in livestock at the same time - it may explain why national livestock has remained at a low level in Armenia in the 2000s. Indeed, to take the example of Azerbaijan, since 2008 the number of animals has risen to levels never before reached and practically all the mountain pastures are under contract (Neudert and Rühls, 2013). In Armenia, the attractiveness of the diaspora, a real life insurance for the Armenian community, was a disruptive factor (and continues to be) for the inhabitants during the dark years at the end of collectivism. However, our surveys show that there is an inverse process of remaining and returning to the country in relation to the ongoing development of pastoral activity. This observation is not at the present time supported by figures or censuses. It probably has only a small impact on the haemorrhage of emigration. But the interviews inform us that Syunik is keeping its inhabitants, and that Yezidis are coming back to tend sheep. For Armenians, the extension of the pastoral domain encourages them to become mobile herders, to *go up there* in a way. This is now an ongoing process in Syunik thanks to the long-term needs of the nearby Iranian market, the absence of Yezidis, the presence of a labour force from displaced populations, and finally the existence of a subnational community framework, the *Barekam*. The revelation of the latter during our investigations is not surprising given that the family, nuclear or extended, plays a predominant role in specialized mobile herding all over the world.

4.2. Two kinds of mobility

Armenian sheep farming is also affected by two kinds of human mobility. The first is long-term mobility, which followed six centuries of stateless Armenians, the genocide of 1915, the earthquake of 1988, the end of the Soviet Union and the conflict in Nagorno-Karabakh. It has shaped Armenian identity around an essentially stateless, decentralized and multi-local process (Panossian, 2015). This mobility is reflected in the life stories, which include sheep farming, of the herders, employees and livestock dealers we have met, whether Armenians or Yezidis, who have very often experienced an episode of emigration. There is also the mobility of oligarchs and notables repatriated from Russia, Iran, Europe and the United States, who invest in their *small homeland* (Moghadem, 2015), *marz*, city or village, through livestock farming. They are the main actors in the country's structural and normative alignment in this sector. Finally, there is the mobility of foreign expatriates, members of NGOs, international organizations, students, living in Armenia. The mobility of Iranian notables is a factor observed since the beginning of the 20th century. It still occurs today through intermediaries, slaughterhouses and in the search for unused mountain pastures.

Sheep farming is also subject to short-term mobility. We have seen the commercial mobility of lambs and imported animals for the improvement of local breeds. Both types of mobility cause the oligarchs to move between Yerevan and their *achkhars*, in Russia or Iran. The seasonal mobility of herds and people, sometimes complex, between wintering areas and mountain pastures has enabled us to study the rotation system set up by families and employees. This system affects all pastoral, mobile and sedentary practices, and impacts rural Armenian society. It is one of the forms of livelihood activities that occur in Armenia. This rotation makes it possible to experience the *drunkenness of statehood* (Panossian, 2015), the experience of a new national territory, and to depart from the *achkhars* in a centrifugal movement, between the family plot, inherited from the Soviet Union, necessary

in order for Armenians to face the extreme poverty that affects the country (FAO, 2012), and the place where the herd is located (rangeland, mountain pastures).

'The plot was a refuge in the collectivist universe, it becomes an island of survival in the midst of the turbulence of the transition' of the 1990s and 2000s (Ardillier-Carras, 2004: 151). The family plot, also known as "small agriculture" or "second agriculture" (Maurel, 1985), refers to small informal and auxiliary family food farms during the Soviet era. Besides the *sovkhoses* and *kolkhozes*, each family was entitled to a few hectares of land and a few cattle from which they could make small profits (sales at local markets). While it provided relative food autonomy and additional income, the plot was nevertheless added to the official economy in which it played an economic and social regulatory role, thanks in particular to its flexibility, its short circuits and the virtues of individual initiative. Towards the end of the USSR, Soviet leaders tried to make greater use of the possibilities of individual farms to overcome the structural weaknesses of the collectivist economy increased by the Second World War. Lists of recommendations to promote their development and productive potential accompany a theoretical rehabilitation of individual initiative. It was a pragmatic ideological compromise that would be expressed in the terms of L.I. Brezhnev: *A peasant without a plot is a tree without roots* (Maurel, 1985).

In villages today, the small-sized, sedentary family livestock, an integral part of the post-Soviet family plot, is a means of subsistence as well as a generator of social bonds and a symbolic factor. As in the Soviet era, it acts as a strategy of distrust and empowerment in the face of arbitrariness. It protects villagers from *top-down* development projects (driven by oligarchs, NGOs, and urbanized elites that appeared because of globalization), and their bureaucratic frameworks that require employees. But as at the end of the Soviet Union, the small family farm is an official and formal element in the national balance. This is a matter of general interest for the young Republic of Armenia, which is seeking to keep its population in the country. It participates in the maintenance of patriotic sentiment and is the subject of particular attention from NGOs, which create a tourist and heritage dynamic around it (like the *Sheep shearing festival* in the Syunik marz), at the risk of monopolizing it.

5. Conclusion

The ethnographic surveys carried out in the framework of the LIA NHASA, necessarily limited in the prospective framework in which they took place, offer some elements for reflection on the specificities of pastoralism in Armenia. They reveal a real 'Geopolitics of Sheep', an expression we borrowed from the journalist J. Brook (2013), but also a prolific laboratory of analysis in the management of common goods.

First of all, in the midst of the global crisis of pastoral communities and pastoralism (Digard et al., 1993; Brisebarre et al., 2019), Armenia offers an exception: rich high pastures that are not exploited due to historical events and cultural and geopolitical circumstances. The possibility of expanding its pastoral domain in a context where it is shrinking everywhere else is one of the strong points of our survey. These remote summer pastures, rented by mountain communities on short contracts, oblige the breeders who use them to adopt a practice of seasonal movements across several territories. This implies the mobility of a human group and the use of temporary shelters that are also mobile. Again, while sedentarization is becoming the norm in many pastoralist communities, Armenia offers an example of herders taking the road backwards, moving towards semi-nomadism. But this is neither a return nor a new route. For Armenian pastoralists, it is above all a change of

paradigm, so much so that the image of the nomad is associated with the Turkish or Kurdish persecutor, or the Yezidi pastoralist. In this context, the study of the *Barekam*, a family and solidarity community that enables and accompanies this process, is to be carried out. It should make it possible to draw more precisely the contours of this *category of otherness* (Hovanessian et al., 1998), its implications and efficiency, but also its interactivity with pastoral mobility practices.

Another striking fact is that we see two types of pastoralism ("nearby" and "remove") developing in this country, which could be described as "patriotic". They both respond to a territorial injunction (the protection of the integrity of the national territory) and have as their underlying aim the fixation of the population of the Armenian state in the countryside, in marginal zones and in territories occupied before the crisis of Nagorno-Karabakh by Azeris. It is as much a question of stopping the migratory haemorrhage as of providing the population with the means to occupy this now national territory and ensure its subsistence, while making its economy competitive (Dubois, 2013).

Large mobile pastoralism, called "remove" in the text, could be described as "opportunism". These seasonal mobilities are the result of a *habitus* among the yezidi. Cheese-making and the age-old *Baran-Bardan* festival (the placing of rams in the herd on their return from the mountain pastures) bear witness to this. However, the latter exists in the state of a relic and is largely impregnated by the Armenian liturgy. No other aspect of nomadic culture or identity seems to have survived, no other aspects than that of a culture of mobility. On the side of the Armenian herders, this opportunism is even more flagrant. In both cases, the identity of "semi-nomadic herders" does not seem to bring any added value, nor does it seem to be the object of any cultural valorization. In both communities, mobility is part of history and the present, a way of life. This pastoralism is today dependent on the status quo on the Nagorno-Karabakh conflict, and on the markets of the Middle East (and the rivalry between Iran and Saudi Arabia). Many times, following the Yezidis livestock dealers during their peregrination, we have heard "there is nothing left. Everything has been sold to the Iranians". The promiscuity of the Iranian and GCC markets, their stakes, and the climate crisis actually creates a reliable economic opportunity (the only one?) for this kind of pastoralism in this country. By the way, the "remove" pastoralism offers the example of *informal transnational transhumance* (since it takes place, in the winter part, on disputed territory), but also of possible future *relocated transhumance* (Middle Eastern herds, kept in Armenia by Armenian shepherds; purchase of land in Armenia and investment in irrigation to provide fodder during the winter; Lambs slaughtered in Armenian slaughterhouses). This pastoralism is affected by the workings of globalisation (professional mobility and transnational multilateral issues), but also by fundamental movements. Intensive livestock farming, the marketing of live animals and the health risks associated with their transport and slaughter, are increasingly criticized throughout the world. The continuation of extensive livestock farming, the construction of standard slaughterhouses and the development of the chilled meat market are preparing Armenia for this paradigm shift.

Finally, "nearby" village pastoralism with its system of collective guarding, probably inherited from the plot system during collectivism, offers a good example of management of common property. The guarding practice it proposes, its "*Ronde aux moutons*" (Thevenin & Mikhkian, 2018), echoes today's shared gardens (INP, 2007) and, more generally, the phenomenon of urban and peri-urban agriculture (Mougeot, 2000). It is a form of social resilience in the face of economic, emotional and psychological shocks due to the multiple crises of today's world (Bukharaeva & Marloie, 2010). Everywhere, small-scale family livestock farming is a means

of rebuilding a defeated world and fighting poverty and malnutrition. In Iraqi Kurdistan, it is not uncommon to see displaced people or refugees restarting a herding activity with a farmer or a fattening farm to rebuild a herd, in other words a capital. It is also a strong reminder of the centuries-old pluriactivity of the people of the Alps in Europe and their tendency to have a *double life* (Lebaudy, *online* quoting the anthropologist P. P. Viazzo), a tendency imposed by the climate, altitude and the rhythm of the seasons. In Armenia, 76.5% of the country is located at an altitude of between 1,000 and 2,500 m, but more than 64% of the population lives in cities. Combined with high levels of impoverishment (30% of the inhabitants live in poverty and 18% are unemployed), the stakes are therefore major for Armenians, but also for world governance (Calame, 2009). Half of humanity lives in cities and the number of refugees has never been so high. The number of people excluded from the welfare state remains high and the effects of non-redistribution are detrimental to the poor segments of the population. Multi-activity becomes a response as much as an injunction to ensure both the means of subsistence, but also a network that constitutes in this context a purse of opportunity. The study of these guarding systems must therefore be continued in order to better understand the mechanisms governing them, to know precisely when and under what circumstances rotational management was introduced in Armenia, and the factors contributing to its success or failure.

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DECLARATION OF INTEREST: none

DOCS

- Map 1. Large Seasonal Mobility of Sheepstock in Armenia.
- Map 2. Commercial Sheep Mobility in Armenia.
- Map 3. Roads to Shirak summer pastures.
- Photo 1. The Gorayk pastures.
- Photo 2. A camp of Yezidis mobile breeders in the Kharakhach Pass.
- Photo 3. Example of *Tchetchil* in Yezidi summer camp on Pambak Mountain.
- Photo 4. Wool soaking in a bathtub, village of Kechut.
- Photo 5. Seasonal movement of flocks, Marz of Syunik, october 2017.
- Photo 6. Summer pastures of Amasia district.
- Table 1. Systems of calculation of shepherding rotation.













Table 1- Systems of calculation of shepherding rotation in the villages of Armenia.

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. Units of measure

A Total number of days of shepherding in one year
B Total number of small ruminants to be guarded
C Number of family units concerned

D Number of small ruminants per family unit
cy Cycle of rotation (total number of days of shepherding for all the family unit)
R Key figure
N Total number of days of shepherding per cycle and per family unit

. Example of the village of Tatev (the Syunik marz)

$$B(\text{cy}) / D = N$$

. Example of the villages of Kechut and Amasia (marz of Vayots Dzor and the Shirak)

$$A(\text{cy}) / B = R . D \times R = N$$

. Example of the village of Tegh (the Syunik marz)

Family Unit (F.U)	Comments	Total nb of small ruminants per F.U (D)	Key figure (R)	Total nb of days of shepherding per Cycle and per F.U (N)	Comments
Family A and B	Two brothers	53	10	5	In turn
Family C	/	22		2	2 days per 3 cycles
Family D	/	7		1	/
Family E	/	13		1	3 days per 3 cycles
Family F	/	10		1	/
Family G	/	28		3	/
				Cycle (cy)	13 Days