

Teaching the shepherds or learning from them?: The Iranian experience

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Introduction

In an anthropological or evolutionary view, human societies are traditionally classified into four classes: hunters-gatherers, pastoralists, farmers, and industrial societies. However, in a sociological/geographical view human societies can be categorized into three classes: nomadic, rural and urban societies. Since the hunters-gatherers are very rare and sparse in the world, the merging of both classifications could leave them out. In the global perspective we could then consider nomadic and transhumant groups¹ as *pastoralists*, rural societies as *villagers*, and urban people as *townsmen*. In this article I focus on the first class.

There is no precise demographic information about pastoralists of the world. According to Roger Blench (2001), the number of pastoralists is about 20 million in the entire world. In Iran alone more than 2 million people directly depends on pastoralism and about 0.5 million people currently do shepherding as a part of their life or a job. Environmentalists frequently claim that the pastoralists are causing land degradation due to the growing exploitation of public lands. Promoting the pastoralists' culture through education, extension and technology transfer are the main topics that try to be addressed by experts, specialists and planners to overcome face this problem. A lot of energy, money and time of relevant governmental and non-governmental organizations in Iran are spent on research about the pastoralists. The main goal of these educational-extensional programs is to inspire the idea that the natural resources are the bases of life. However a critical question here is whether the pastoralists have not been familiar with this idea even before.

The classical idea of ecological books that is being introduced to pastoralists is based on the 'top-down' paradigm of development and ignores the outlined question. However, some specialists – mainly anthropologists/ethnologists – strive to set the development programs from local people's ideas according to a 'down-top' paradigm. In spite of worldwide efforts to promote the second paradigm, the real proponents of this paradigm form a minority among policy-makers, superior planners and key experts.

¹ Transhumant groups have a variety of residence style: nomadic-like, rural and urban. In this short note all of them are considered to be pastoralists because of their nomadic-like profession.

One of the possible reasons is probably that people in developing countries are blinded by technological development. In such a situation local knowledge and experiences start to be perceived as worthless and start to lose their functions. Traditions, traditional knowledge and even professional experiences are neglected and gradually disappear due to modernization and westernization. In order to focus on taking account of traditions by the side of modern and academic knowledge in development process, I try to introduce some findings from an ethnographic research among a part of Iranian pastoralists.

Research method

These short notes are mainly based on my PhD research in natural resource management at the Teheran University, Iran. The main method used was the participant observation. I lived with pastoralists of eastern Alborz in north of Iran for one year from September 2000 to September 2001. The data was collected also by in-depth interviews. The fieldwork notebooks contain 22 pocket-size notebooks. The key phrases have been transferred onto approximately 5,000 small paper notes. These notes have been hierarchically categorized according to mind mapping/concept mapping method.

Study area

Iran is a country with a variety of natural and cultural landscapes. There are two main mountainous chains in Iran – Zagros and Alborz. They are extended along the western and the northern borders respectively. Alborz Mountains have an alpine environment and a cool and semi-moist climate. They are the summer rangelands (uplands) with 300-500 mm of precipitations per year and the height of 3,000 m above sea level. The areas located at the south of Alborz are lower with the height of 1,000-1,200 m above sea level and 100-250 mm of precipitations per year. This area has a semi-desert environment and a hot and dry climate, which makes it suitable for winter rangelands or (lowlands).

In Iran there are more than 100 different nomadic tribes who exploit rangelands, but the studied rangelands are exploited by the transhumant groups who are pastoralists with a dual entity – the shepherds migrate as nomads from lowland to upland and vice versa to manage herds but their families have a permanent residence in rural or urban areas.

Findings

The following examples demonstrate the richness of indigenous knowledge and experiences of pastoralists to perform professional affairs in a relatively sound manner. A ranch or a pastoral unit in the studied area usually expanded over 1,000 to 10,000 ha area and was used for breeding sheep and goat. The ranches are usually situated far away (in some cases over 50 km) from villages or other socio-economic centres. Each pastoral unit usually belongs from 2 to 50 stockholders. Most often each of them has his own herd. Shepherds are either owners of their herd or work for the stockholders. They stay in pastoral units and manage the herds without frequent contact with the socioeconomic centres. Of course, they are provided with nourishments from the villages and towns but not in short time intervals because the frequent traffic increases the costs and makes them less profitable. Besides the economic reason there are also the complex and uncertain environmental

conditions which demand from the shepherds to remain with their herds. In this regard all components of pastoralists' sub-culture (clothing, food, tools, mental schemata, organization, and beliefs) aim at achieving the principal aims of pastoralism and are not subject to fashion trends and technological development. The distinctive components of their culture could be divided between artefacts, environmental knowledge, traditional organization and beliefs.

Regarding the artefacts the shepherds use distinctive clothes (*Lamchukha*), food (*Komaj*) and dairy production tools (*Kandil*) which all point to the functional nature of pastoralism sub-culture inside the traditional herd management framework. *Lamchukha* is an especial overcoat of shepherds. It is made of felt or compact wool. Besides being an overcoat it has several other functions. It frequently used as an outdoor carpet during rest-time or as a mattress/blanket at occasions when shepherds sleep outdoors near their herds. During day- and nighttime shepherds many times fire small fires to make tea and *Lamchukha* is fairly insensitive to the sparks coming from fire. Making it tidy after use is also easy and fast and this is important also because shepherds have to be ready to often repel carnivores during their outdoor sleep. By using the *lamchukha* instead of sleeping bags means that they can sleep with their shoes on. *Komaj* or *kelva* is traditional nutrient-rich cake-like bread that shepherds bake themselves. During the day, especially in fall and winter seasons, shepherds must constantly direct the herds and they do not have time to stop and cook their lunch. *Komaj* is in these cases their usual food during the day – substituting lunch. *Kandil* is a traditional tool for extracting butter from yoghurt. The residuals are dried by sunlight and transformed into *Kashk* – a kind of dried whey. This process aids pastoralists to convert the milk into dairy products which contain little water and can be stored in the camps for a long time with little risk of decay. Such dietary regime reduces the need of shepherds to go to the market. At the same time these dairy products are easy to carry because of their low weight and small volume, which eases their transport to the socioeconomic centres.

Regarding the environmental knowledge of shepherds, the shepherds have a distinctive model of the ecosystem and its components (*Setare/sheshe zadan*). In classical ecology the components of ecosystem are classified as biotic and non-biotic components. The sun is the most important non-biotic that works as a source of energy but in shepherds' mental model the moon and stars are also other important components that have affects on animals and their behaviour. The majority of the shepherds believe that the rays (*Sheshe*) of some stars in second ten-night period of June are harmful to ewes. The variety of terms that are used to describe related things can be considered as indicators of complexity and richness of the experience-based knowledge. Most often people use two terms regarding human or animal digestion – hunger and thirst. The shepherds in the studied area, however, use three terms to refer to thirst and hunger: *goshnegi* (hunger; need for food), *teshnegi* (thirst; need for water) and *shoorazi* (salt crave; need for salt). This classification of digestion indicates that the shepherds are aware that salt is the main part of nutrition for animals and humans, although they have no knowledge about the human and animal physiology.

Regarding their organization, shepherds traditionally organise themselves in *Varamkari* – a cooperative form of exploitation and ownership of common resources

(pastoral units, watering points, etc.) – to achieve synergetic benefits and common profits in the summer rangelands. *Varamkari* enables the participation of a variety of pastoralists with different herd sizes in a temporal and localized organization. This cooperation begins on May 20 and lasts for about 2 months (approximately encloses the whole milking period). The shepherds determine a day in the middle of the milking period called *vadoosh* to make a reference or criteria according to which the measure the proportion of milk offered by each pastoralist for final calculation and division of costs and benefits.

Regarding their beliefs and metaphysics all herders in the study area are Moslem but there are also some with non-Islamic probably Zoroastrian roots. However theism forms the foundation of their beliefs. The following sentences are some key believes² identified through the in-depth interviews with a number of local notables:

God is perfect and God's will is reference to explain main reason of all phenomena. [...] God's word (The Holly Qumran) is the main reference to evaluate things whether good or not? But because of the limitations in human perception people should use: (1) the Prophet's and Imams' words and habits, (2) logic or intellect, and (3) consensus of opinions for interpretation of God's words and good understanding of superior will. [...] God replies all people's requests but responses are not necessarily immediate, sensible, or commonly perceptible. [...] Every bad or good action no matter how small it is has early or late compensations determined by God. [...] God has created nature in order for humans to survive but mankind should appreciate God in a suitable manner.

According to pastoralists' believes and their cosmology as it was understood by me, each micro or macro ecosystem comprises these components: (1) inanimates, (2) plants, (3) animals and (4) superior will. In this cosmology two reasons are used to explain all events or phenomena. The first explanation is superior or God's will. It may not be sensible and perceptible to all people but it is understood as a necessity of life and creation. The second explanation is a natural necessity. It often is more sensible and perceptible than the first one. For example, the infertility of an ewe is explained as rooted principally in God's will to compensate it's owner's sin(s) but from the perspective of natural necessity the infertility is apparently an outcome of decreasing quality of grazing land's grasses in bucking period.

Conclusion

Local communities have many experiences with their professions, their environments and with the efficient management of relevant natural resources. Degradation is in this view a historical consequence of modernization and not a result of the disabilities of indigenous knowledge. Cultural components of traditionalism are in the same sense the outcome of people's adaptation to environmental limitations. In this situation traditions supply a base

² I believe those are more or less common in and basic believes of all Shiites.

to increase feasibility and profitability of profession by increasing compatibility of actions to environmental condition and its variability – *lamchukha, komaj and kandil* are good examples for this.

There are many subjects in indigenous knowledge that can extend the academic knowledge or guide the thorough scientific research. Scientific investigation of the effects of star rays on ewes is one example in this area. We should strive to collect and document local experiences, knowledge, beliefs and local sub-cultures to find the best solutions for subsequent applications in development processes. Within local and traditional communities, groups and professionals there are invaluable mental models and cosmologies which help them to cope with nature's and creator's inexplicabilities. For a long time the positivist scientists have been claiming that there was a conflict between science and religion/metaphysics. This question remains one of the most important challenges of our time. However, in shepherds' mental schemes both religious beliefs and experience-based knowledge complement each other and are not considered to be in conflict or in contradiction.

Both, developing and developed societies need to focus on tradition and indigenous knowledge beside the academic knowledge. Focusing on local knowledge offers a good opportunity not only for the healthy development of the communities but also for the people-friendly promotion of science and knowledge from a global point of view. Therefore, the researchers should follow the guide to learn from the shepherds before they try to teach them.

References

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