


**Please cite the Published Version**

Attar, Maryam, Lohi, Khalil and Lever, John  (2016) Remembering the spirit of halal: an Iranian perspective. In: Halal Matters: Islam, politics and markets in global perspective. Routledge, London, pp. 55-71. ISBN 9781138812758 (hardback); 9781315746128 (ebook)

**DOI:** <https://doi.org/10.4324/9781315746128-4>

**Publisher:** Routledge

**Version:** Accepted Version

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## **Remembering the spirit of halal: An Iranian perspective**

**Maryam Attar, Khalil Lohi and John Lever**

*‘Be like a bee; anything it eats is clean, anything it drops is sweet and any branch it sits upon does not break’ (Ali Ibn Abi Taleb quoted in Masri 2009, 7).*

### **Introduction**

Over the last fifteen years, global markets have become familiar with the word halal and a prevailing understanding that refers to food products that are “permissible” and “lawful” according to Islamic jurisprudence. While the global rise and interest in halal matters in Europe can be aligned with the expansion of global halal meat markets (Miele and Lever 2012), in the Middle East and other Muslim countries the pressures generated by globalization compete with many other local factors. Research on halal supply and consumption is largely focused on the physical rather than the spiritual realm; it is also generally focused on Sunni understandings. In this chapter we explore a qualitative dimension of halal as a way of life that is represented by the inseparable nature of the physical and the spiritual realms from a Shia point of view.

To do this we draw on recent research on the Iranian poultry industry. We examine the reasons for the phenomenal expansion of poultry production in Iran before and after the Iranian revolution of 1979, and the ongoing attempt of those in power to control poultry production in order to maintain the status quo (Gyton 2014). While this is the context in which Iran has immersed itself in global halal networks, we argue that these developments are very much at odds with the true spirit of halal in Iranian society. We argue that the immersion of Iranian products within the global assemblage of halal is fine if the proceeds benefit the state and help to main the status quo. As the pressure generated by the West’s sanctions has intensified over recent years, increases in poultry production have, we contend, helped the current regime to avoid social unrest and maintain internal stability (Gyton 2014). Poultry prices have to be kept at an affordable level, regardless of the cost of production, if the status quo is to be maintained.

To illustrate our argument we look at an award-winning farm in the Binalood Mountains in the north east of Iran. The farm lies outside the sphere of the states direct influence and provides important insights into poultry production that challenge the state’s emergent halal agenda. We explore a production process and innovatory management practices that reinforce an understanding of halal based on its true spirit as envisaged by Ali Ibn Abi Taleb (2009). Despite the continuing threat of disease facing the poultry industry, and the problems that arise from contradictory state policies, we argue that our case study farm has managed to stay disease free for a considerable period of time because of innovatory management practices that remember and remain close to the true spirit of halal. To some extent, this approach can be aligned with the notion of the ‘spiritual economy’ (Rudnyckyj 2013). However, it also illustrates that our argument that halal food should be produced – much like organic food – in ways that are good for human, animal and environmental health (Akhtar 2012). This is our understanding of what ‘authentic’ halal (Lever and Miele 2012) can and should be.

The chapter draws on the organizational literature to examine the adoption of innovations in the Iranian poultry sector (Jassaawalla and Sashittal 2001; Benson and Palaskas 2006) that

facilitate an understanding of halal standing in direct opposition to emergent notions of global halal. We also draw on Ong and Colliers (2005) notion of global assemblages to explore the technological, political and ethical practices underpinning Iran's immersion into the global assemblage of halal. However, we are interested in the conditions rather than the spatiality (Rudnycky 2013) of halal practices in line with the global assemblage of alternative food ethics (Goodman and Sage 2013). The chapter is based on research that utilized a qualitative case study methodology. Semi structured interviews were conducted to examine management practice at a number of Iranian poultry farms producing meat and eggs. The key focus of the study was on the way an organisation's diffusion structures, systems and/or processes influence the adoption of technology, with our findings confirming that senior management support is pivotal to the successful diffusion of innovatory practice. In this chapter we look at one farm in particular where managerial support was essential for innovation (Jassaawalla and Sashittal 2001; Benson and Palaskas 2006) and the production of poultry products in line with the true spirit of halal as envisaged by Ali Ibn Abi Taleb (2009). This related directly to the central research question posed by this chapter: *how are poultry products aligned with the true spirit of halal from a Shia perspective.*

The chapter starts off by examining the origins and spirit of Shia Islam. This provides an avenue through which to examine the true spirit of halal and Islamic jurisprudence from a Shia perspective, thus offering a contrast with the emergent notions of Iranian and global halal that are emerging in line with the global assemblage of halal. To get a wider picture of these different approaches and understandings, we next turn our attention to the development of the Iranian poultry industry before and after Iranian revolution of 1979. This involves a close examination of strategic state policy, overseen and introduced, we argue, to keep control of the poultry industry and maintain the status quo. While the poultry industry expanded rapidly throughout the second half of the 20<sup>th</sup> century, we argue that many of the challenges now faced by industry are linked to the underlying strategic mismanagement of the industry over the preceding half-century. We then present our case study of an award winning egg laying farm in north-eastern Iran to illustrate an alternative method of production based on innovatory management practice that, we argue, produces poultry products in a way that lies closer to the true spirit of halal as understood from a Shia perspective.

### **The origins and spirit of Shia Islam**

After Sunnism, Shiism is the second largest denomination in Islam. The schism between Sunni and Shia Islam is well known. Theological as well as political, the break occurred as a result of political controversy over the succession of the Prophet Mohammad following his death in 632 (Ahmed 2002; Nasr 2004). At this time, friends and followers of Ali ibn Abi Taleb believed that leadership of the Muslim community should pass directly to Ali in line with the views of the Prophet (Nasr, 1975; Tabatabai, 1975). However, at the very moment of the Prophet's death, a group of his companions and followers went to the mosque where the community was gathered. The aim was to select a caliph to solve the immediate problems of the community and the first caliph was therefore selected by a majority vote amongst the companions (Tabatabai, 1975). Ali and *his* companions were not present at this time, but protested and presented evidence for their arguments. They were told that the welfare of the Muslim community was at stake and that the solution lay in what has been done (Tarikh Yaqubi, 581; Nasr, 2010).

The second caliph was selected by the will and testament of the first, and the third by a six-man council whose members and rules of procedure were organised and determined by the

second caliph. For Sunnis, the original caliphate, and the companions of the Prophet represent the Prophet's heritage and are the channel through which the Prophet's message was passed on to later generations. It is through companions that the sayings (Hadiths) and manner of living (Sunnah) of the Prophet are transmitted to the Islamic community; in Arabic the word "Sunni" refers to those who follow the traditions of the Prophet. Ali eventually became the fourth caliph after Abu Bakr, Umar and Uthman and was the first Shia Imam. Ali's two sons Hasan and Husayn followed him as Imam and all subsequent Shia Imams are decedents of Husayn, whose son Zayn al-Abidin was one of the only survivors of the battle of Karbala in 680. The Shia did not reject the authority of elected Muslim leaders as rulers and administrators of the Islamic community, but they did not accept their function as Imam and choose instead to follow a line of Imams appointed by the Prophet Muhammad as divinely appointed: in Arabic the word "Shia" means follower and as a group or party supportive of Ali they are called shiat of Ali or simply Shia. For the Shia, Ali and the household of the Prophet (*ahl-albayt*) is the sole channel through which the original message of Islam can be transmitted. Imams constitute a continuation and transmission of the sacred and religious knowledge associated with the spiritual authority of the Prophet, which is passed on through Imams to ensure the authenticity of Devine authority (Curtis 2013).

As this brief exegesis suggests, the difference between the two traditions is essentially a matter of governance. While Sunni Muslims considered the successor of the Prophet to be the guardian and administrator of Islamic law, Shi'ite saw in the successor a spiritual function connected with the inner mysteries interpretation of the revelation as well as with the inherited knowledge and interpretation of Divine Law (Nasr 2010). Shi'ite Muslims believe that the leader of Islam must be a descendant of the Prophet, a "trustee" of his esoteric knowledge and an interpreter of the religious sciences (Nasr 2010). It is this distinction that has a profound and temporal influence on 'the spiritual' in Shi'ite society, on Shia jurisprudence (Curtis 2013) and, arguably, on Shia understandings of halal. While the Sunni undertake a more literal reading of the Quran, Shi'ites look more the spirit of the Quran and Allah's teachings as disseminated through the Imams. In Arabic, these differences are often referred to as the *al-dhaheer* (the apparent) and *al-baten* (the hidden) meanings of the Qur'an (Bassiouni 2012) – what Tabatabai (1979) refers to as the outward and inward aspects of the Quran. The implication of this interpretation is that there are deeper levels of meaning to the Quran that can only be comprehended by members of the spiritual elite. With a central role interpreting the Quran for each generation, the Shia religious hierarchy thus has a much greater influence on government than could ever be possible in a Sunni state.

### **Shia jurisprudence and halal**

Much like the Hanafi, Hanbali, Maliki and Shafie schools of jurisprudence in Sunni Islam, the divisions within Shia Islam – between Zaydism, Ismailism, Batinis, Nizaris, Mustalis, Druzes and Muqannaah – could be categorized in line with their legal orientation (Lever and Miele 2012). However, Nasr (2004) suggests a better understanding of Shia jurisprudence can be gained by looking at the different positions each school takes on the Imams. In general, Islamic (*Shrai'ah*) law is based on a hierarchy of *Quran*, *Sunnah* and *Hadith*. It was from these three sources that an elaborate methodology was developed to create a body of Islamic laws, with the science underpinning the decision making process facilitating the rise of legal principles and Islamic schools of jurisprudence. The intellectual process of deriving laws from the three sources is called *ijtihad* (independent thinking) and is conducted by *mujtahids* (men of learning) (Tabatabai 1979; Nasr 2004).

Sunnis decided a millennia ago that submission to one of the four schools was allowed and that *ijtihad* or imitation to any other school was not permissible; it is only recently that the Sunni world has turned away from consensus and started to enable *ijtihad* in line with wider global concerns (Tabatabai 1979; Nasr 2004). In Shi'ism, however, *mujtahids* have taken part in *ijtihad* throughout history, thus embodying in every generation what Ahmed (2002) calls the seeds of 'renewal and revolution.' Nasr (2004) confirms the historical difference between Sunni and Shia on this matter in the following way:

'In the Sunni world, the "the gate of *ijtihad*" closed after the tenth and eleventh centuries, when the major schools were established, whereas in the Shi'ite world it has remained open to this day and in each generation the *mujtahids* have derived the laws from the established principles and sources' (Nasr 2004, 123)

Arguably it is this difference that has kept Shi'ite jurisprudence dynamic and fresh throughout the ages. Indeed, for the Shia, the act of seeking guidance by following a living *mujtahid* is central to everyday practice – anything more is forbidden. Leadership, in this sense, is a central aspect of Shi'ism.

These issues are directly related to Shia understandings of halal. In his first days as caliph, Ali made several sermons in which he described the importance of the Quran and the guidance provided on what is halal (permitted/ inherently good) and haram (not allowed/ forbidden). Ali's views are outlined in a collection of sermons, letters and sayings that Shia consider the most valuable text after the Quran (see Talib 2009). In sermon one hundred and seventy six, Ali explains the spiritual dimension of halal and haram as acts that are liked and disliked by God respectively. The implication is that by performing halal actions and avoiding haram actions a person will move closer to God and become a better person. Halal and haram, in this sense, from a Shia perspective, are the rationale behind almost every decision making process, establishing an awareness of how to manage all one's worldly activities.

Ali was an exponent of leading by example. When questioned about his poor diet he answered that he would continue to eat what the masses ate at least once a day until better food was available for all, and not just the elite; it is in this sense that the qualities of leadership can also be considered halal or haram. On this account, the food we eat has a profound impact on our spiritual as well as our physical health. The Qur'an explicitly allows the consumption of meat from certain animals under the condition that they are slaughtered in a specified way. The Quran also places high emphasis on the humane treatment of animals in over two hundred verses. In verse 6:38, for example, it is stated that: "There is not an animal (that lives) on earth, nor a being that flies on its wings, but (forms part of) communities like you." Akhtar (2012) makes a similar point today. She argues that there is mounting evidence of a very real and often very direct relationship between animal and human welfare, most specifically in relation to human and environmental health. Food production companies, on this account, have a direct responsibility to produce food in ways that is good for animal, human and environmental health. Parallels can therefore be drawn between the understanding of halal we are putting forward and organic methods of food production (Friedlander, 2014), which can be linked directly to the global assemblage of alternative food ethics (Goodman and Sage 2013).

Although the rise of Islamic and un-Islamic food can to be traced back to the Iranian revolution and the origins of political Islam, it is only recently – in line with a rise in demand for halal products in Muslim and non-Muslim countries (Lever and Miele 2012) – that halal

has emerged as an internally and externally linked issue in Iran. In addition to national standards governing animal slaughter, principals of hygiene, food safety, food labeling and packaging, the authorities have introduced a national Iranian halal standard in line with the development of global halal discourses. In September 2009, the Institute of Standards and Industrial Research of Iran (ISIRI) passed a proposal for the standardization of halal by launching the Halal Food: General guidelines ISIR 12000. Fifteen national food standards are considered alongside this new halal standard, which covers a wide variety of items and provides a detailed and in-depth account of what is considered to be halal or haram.

The jurisprudence of the standard, including the provisions of food, beverages, animal slaughter (Zebh) and fishing is aligned with Jafari (shi'ite) jurisprudence. Everything that Jafari jurisprudence considers halal is also considered halal by the four Sunni schools (with one exception), whereas the reverse is not true. In the introduction to the guidelines it is stated that steps have been taken to ensure that there should be coordination between the Iranian national standard and those of other Islamic countries whenever this is possible. Although halal certification is not yet obligatory in Iran, over recent years Iran has participated in the Malaysian International Halal Showcase (MIHAS) in order to extend its influence (Iran Daily 2014). A number of Iranian food products have also been recognized by the Halal World Institute, which is linked directly to the Organisation of Islamic Cooperation (OIC) (Halal Focus 2014). While these links give Iranian 'halal' products authenticity and credibility within the emerging assemblage of halal at the global level, our case study provides important insights into a production process that challenges the authenticity of these Iranian 'halal' products. Despite the continuing threat of disease, and a range of production problems linked to the mismanagement of the industry by the state, we argue that our case study farm has stayed disease free for a considerable period of time because of innovatory management practices that remember and remain closer to the true spirit of halal.

### **The Iranian poultry industry: past and present**

To have a clear understanding of halal in Iran in general and within the poultry industry in particular it is necessary to examine the socio-political and economic changes that took place before and after the Iranian revolution of 1979. Between 1941 and 1979, the head of the monarchy, the late shah of Iran, introduced steady and gradual changes in line with the economic and technological tenets of Western modernity. Educated in Switzerland, the Shah attempted to bring about widespread social and economic change through controversial policy reforms in a number of areas. What he called *The White Revolution* was to include land reforms, the introduction of voting rights for women, the elimination of illiteracy and the industrialisation of small-scale industries such as poultry production. However, the changes introduced were seen by many to undermine the cultural and institutional foundations of society, thus provoking fear amongst religious leaders that they were losing their traditional authority. This culminated in the revolutionary uprising of 1979 (Mirsepassi 2000; Ansari 2001).

The poultry industry started to feel the force of the changes being introduced by the Shah from the 1950s onwards. There was transition from small-scale production focussed on indigenous breeds grown for local consumption towards a process of commercialisation based on the importation of new breeding lines and production technologies from the West. However, the arrival of industrial breeds such as Truman, Plymouth Rocks, Rhode Island Reds and New Hampshires (Anon 1994) was accompanied by the arrival of the Newcastle disease – one of the major contagious diseases affecting the poultry industry worldwide (Fazel

et al 2012) – which wiped out Iran’s native breeding stock. As a consequence, throughout the 1960s there was a gradual increase in the number of poultry breeding and production farms. With the production of day old broiler chicks subsequently increasing, imports started to decline and the domestic market grew intensively throughout the 1960s.

Between 1965-1975 Iran’s population grew by 15 million to reach 45 million. At the same time, there was mass migration from rural villages to large cities and urban areas as people looked for work and searched for a better way of life. The effect of this migration on the poultry production was two fold. First, as the demographics of rural society changed, traditional ways of poultry production also declined, thus facilitating an increase in demand more generally (Anon 1995). Second, this reduction in agricultural produce increased Iran’s dependency on imports, which in turn contributed to the rapid expansion of poultry industry after the revolution. At this time, the halal-haram dichotomy was most evident in the slaughter process, although the availability of pork meat was also problematic. Although a limited number of pig farms were providing meat for minority groups (Axworthy 2010), the risk was minimal; pork meat was only sold in particular shops and it did not enter the mainstream food supply chain or the national meat market.

After coming close to agricultural self-sufficiency in the 1960s, by 1979 Iran was importing 65% of its food. Declining productivity was blamed on the use of modern fertilizers that had inadvertently scorched Iranian soil. Unresolved land reforms, lack of economic incentives to raise surplus crops, and low profit ratios combined to drive increasingly large segments of the rural population into urban areas (Ansari, 2001). The 1979 Revolution sought self-sufficiency in foodstuffs as part of its overall goal of decreased economic dependence on the West. In line with demands for ‘Islamic authenticity’ and a ‘novel political interpretation of Shia doctrine’ (Zubaida 2002, 60), Ayatollah Khomeini banned all imported meats and declared them *un-Islamic* (Washington Post 1979). Higher government subsidies for grain and other staples, expanded short-term credit and tax exemptions for farmers complying with government quotas were all intended by the new regime to promote self-sufficiency. However, although the poultry industry continued to grow in the post revolutionary period, it was affected by Iran–Iraq war (1980-1987) in different ways. The state focus in this period was on maintaining the growth of the domestic market to reduce the volume of imports and reduce foreign currency expenditure. Nevertheless, the strategic decision to limit the import of breeding stock was to affect Iran’s poultry industry for the next decade. Stock was reduced to only one breeding line in order to strengthen the domestic market, create a sustainable environment and allow the state to gain greater control over production. The policy was controversial and opposed on scientific grounds because of the dangers of limiting production to one breeding line, diversity of breeding stock giving some protection from the increased threat of disease. Not surprisingly, contrary to what might be seen by late 1990s, Iran became more dependent on agricultural imports (Shariatmadari 2000).

Another decision that affected the industry in this was the Poultry Industry Liberalisation Act 1998, which was implemented in two phases. In the first phase in 1998, government relinquished control of stock but retained control of price regulation. In the second phase seven years later, the state attempted to introduce a supply and demand pricing scheme to provide the industry with a degree of economic freedom. The second phase also set out to improve management, reduce waste and increase productivity by making more efficient use of resources and credit and foreign currency, thus getting poultry meat and eggs to the same quality as imported products. The hope was that this would enable exports of poultry products in line with the development of non-oil products export policy to provide a secure

environment for investment and a reduction in the role of government. The Fourth Development Program for 2005 (Mustafavi, 2012) outlined similar plans to peruse macro socioeconomic and agricultural development. Poultry producers received the program enthusiastically, as it raised the hope that as the industry became more self-sufficient they would be able to export their products without added customs and excise duties. In line with this renewed enthusiasm, the targets and milestones set for the industry in the program were met in full and in some cases exceeded recommended national targets.

The global poultry industry made significant advances through the 1970s and 1980s through the use of new technology, including buildings with better ventilation and lighting, as well as improvements in disease control and innovations in animal feed science (Delgado, 1999). In 1996, Iran joined the World Poultry Science Association (WPSA). The Iranian branch participated in educational activities in accordance with WPSA rules and requirements in order to promote greater awareness amongst Iranian farmers. A study of over 13 poultry meat-producing countries over the past forty years illustrates the improved position of Iran in poultry production during this period (Mustafavi, 2012). Between 1969 and 2009 Iran rose from twenty-seventh to sixth in the league of global poultry meat producers, and from fifty-sixth to twelfth in the league of egg producing countries (USDA, 2011). Between 1997 and 2009, per capita consumption of poultry meat in Iran increased from 8.6 kilograms to 11.5 kilograms, with egg consumption increasing from 8 kilograms to 9.8 kilograms during the same period. Compared with global poultry meat consumption, Iran is 10 kilograms higher than the global per capita average; egg consumption per capita is slightly higher than the world average. However, despite these seemingly positive trends, the industry faces some very significant challenges, many of which are arguably driven or enhanced by state policies, mismanagement of the industry and international sanctions.

### **Challenges facing the poultry industry**

The poultry industry's share of national Gross Domestic Product (GDP) in Iran is 1.2% and it currently employs around six hundred thousand people. Although the phenomenal quantitative growth in production over recent decades has pushed Iran up the global league of poultry meat and egg producers, the industry continues to face many challenges. One of the most significant problems is the supply and production of poultry feed. Corn is the most important energy source in poultry feed and it constitutes approximately 60% of the feed ration. The cost of feed is one of the most serious challenges for the industry. Iran imports around 4.5 million tonnes of corn annually, a figure that has been increasing year on year for the past 10 years. In 2011, the price quickly rose from \$100.00 per tonne to \$320.00 per tonne. Soymeal is another important protein source that constitutes 30% of the feed ration and Iran requires 2.3 million tonnes of this vital protein feed per year. However, the increased global demand for soymeal has almost doubled in usual price and since 2007 imports have increased from 1 million to 2 million tonne per year.

The large increase in poultry farms has also led to an increase in demand for different types of vaccines to comply with the Ministry of Veterinary's policy for the prevention of disease. This has been a significant challenge. Domestic production could not meet the increasing demand for vaccines and huge volumes had to be imported from abroad, which were then restricted by economic sanctions. As a result, the industry suffered a heavy fatality amongst broiler chickens and laying birds and there were serious financial implications. The lack of a vaccination policy and the inability of domestic laboratories to identify new strains of disease took its toll on farms across the country, causing the loss of 20 million layer chickens and



over a million broiler chickens. Another related challenge is the lack of adequate farm biosecurity to reduce cross contamination and disease transmission in poultry processing plants. This is an area where progress has been slow. The recent outbreaks of H9N2 in Iran, H7N9 virus in China and H7N3 in Mexico have both heightened the awareness and need for an effective biosecurity program (VAG, 2008).

The Poultry Industry Liberalisation Act 1998 also removed the foreign exchange rate subsidies and the rate of exchange for poultry producers this increased six fold. In order to finance the sudden rise in expenditure brought about most farmers resorted to heavy borrowing from state banks and financial houses. As raw materials, vaccines and technology related items have to be imported by producers and paid for in foreign currency, the exchange rate fluctuations significantly increased the costs of production, which were not reflected in their market value, which were determined by the state. It has also become much easier to get an operating license and set up a poultry farm than it once was; farms are now often run by people with little or no knowledge and experience in taking up such a responsibility. Obtaining a license to set up a farm also facilitates a favourable bank loan and credit facilities, which places a significant burden on these new farmers when the enterprise fails; debt amongst poultry farmers is substantial and on the increase.

The poultry industry is mainly private; some services are provided by cooperatives and there are few poultry farms owned and managed by government. There are currently more than 15000 poultry farms rearing broiler breeders, more than 350 parent stock, broiler, layer farms and 1500 layer breeder farms. The market is heavily regulated and controlled by government, but if prices drop the government rarely intervenes. Interventions are conducted solely for the purpose of restocking, which often results in a glut on new birds and a price crash. In the absence of a professionally tailored export strategy, surplus production will continue to disturb the market balance for the foreseeable future and it is estimated that there is a surplus of 20 thousand tonnes of poultry meat being produced every month (Mustafavi, 2012). One of the objectives of the Fourth Development Program was avoid imposing export duties on the export of poultry meat and eggs, but this was later disregarded and duties were introduced after production had increased.

At the same time, incentives of a 25% reduction of export duties were being offered to poultry exporters in Turkey (Iran's neighbour), where mortality rates amongst broiler chicks are almost four times lower than they are in Iran (Mustafavi, 2012). If the output of an Iranian poultry farmer is compared with his Turkish counterpart, the Turkish farmer will fare 35% better. This is not all down to the poor performance or a lack of enthusiasm on the part of the Iranian farmer; it highlights a combination of factors impacting the industry, including the poor strategic planning, contradictory government policies, both domestic and trade related, mismanagement and poor decision making.

Another blow to the industry came in 2011 when the state imposed a 40% import duty on the already expensive corn imports. This caused the price of corn to reach unprecedented levels and the industry suffered greatly. At the same time, the government made the astonishing decision to reduce the import duties on poultry meat from 10% to 4% (Mustafavi 2012). When the price of poultry meat is reduced in the market by such actions there is a domino effect on the price of day old broiler chicks, which has knock on effects throughout the industry as all types of breeding stock (first the parent stock and then the grandparent stock) have to be taken out of the production cycle. Under these conditions, it is the private sector

that bears the brunt of government's mismanagement and their disparate attempts to keep control of production.

Increases in poultry production to feed a restless population and avoid social unrest in the face of international sanctions are paramount (Gyton 2014). The price of poultry products has to be kept at an affordable level, regardless of the cost of production and the problems government policy creates for producers, if the status quo is to be maintained. Taken in its entirety, the preceding analysis draws attention to the state's wide-ranging attempts to control the poultry industry for its own political purposes. Arguably the recent development of national halal legislation and Iran's engagement in global halal networks is another way for those in power to govern effectively. We now turn to our case study farm in northeastern Iran to examine an alternative approach to poultry production that can arguably be aligned with the true spirit of halal from a Shia perspective.

### **Innovation in the poultry industry: remembering the spirit of halal**

In this section, we present a case study of an innovative poultry farm in the north east of Iran. Despite the many problems faced by the poultry industry, we argue that the farm has managed to stay disease free for a considerable period of time because of innovatory management practices that remain close to the true spirit of halal. The case study farm backs on to the Binalood Mountains on a large plot of land. On arrival, four very large buildings separated from each other by quite large distances catch the eye. On entering the courtyard there is a designated area for parking and a point at which it is not possible to drive beyond. The farm has been under the same management for the past twenty years; home to more than 100,000 laying hens, it has been disease free for the last fifteen years.

The manager of the farm has won an award for innovation based the design and introduction of the first cages for layer and breeder chickens in Iran. The supplies used are the best available; the water supply, for example, comes from a deep well from the mountains. Asked how the farm has managed to stay disease free so long, the manager replied:

*The short answer is good management, adequate buildings, proper nutrition and sanitation... [and] management support is required not only in terms of resources but also in acting as role models, you have to get your set of priorities right. Priorities must be set around the reduction of the risk of disease transmission and that is what we have tried to achieve here and we have also enjoyed the good luck of the nature by being far away from any other poultry farm. This poultry farm enjoys the mountainous fresh air and the land is quite elevated the buildings are almost free from any feces or ammonia smell. Chickens are intelligent animals. We recognise this fact and try to treat them that way. We are not on the path of any migrating birds. We have tried to follow and apply this principal rule of keeping what is inside the farm (bacterial or viral populations) inside the farm and keeping what is outside the farm outside.*

The manager explained that this had been achieved by following a number of interrelated management practices. All employees on the farm have their own living quarters on the site and there is no interaction with employees from the neighbouring farms: although there is no farm nearby this is part of the culture. No poultry products are allowed onto the farm from premises outside the farm and employees are allowed to consume as much chicken, meat and eggs as they need on site. There is a policy of no equipment sharing with any other farm. Vehicles delivering or collecting products have a designated area and they cannot enter the

inner part of the farm. For this reason, there is a special building for storing feed deliveries and collecting boxes of packed eggs. The equipment used for transport between this building and the main farm area is regularly cleaned and disinfected.

The buildings have also been designed to keep the farm healthy. The farm buildings are constructed in two floors so that bird droppings are collected at the lower level in deep pit system about 3-4 meters high. The cages are monitored and cleaned regularly. Each building is well ventilated on both floors and each house is home to 30-35,000 laying chickens. All the staff are trained and experienced, with the average length of employee service being over 15 years. There are CCTV cameras in every part of the farm, which facilitates remote monitoring of all the buildings for the farm manager. Because the buildings are well-ventilated buildings, the chicken manure collected in the pits is dry and can be used as valuable compost and by product.

A number of management lessons can be drawn from this case study. Within the organisational literature, it has long been assumed that a primary condition for the adoption of innovations is managerial support. Jassaawalla and Sashittal (2001) note that the successful adoption of an innovation is inherently dependent upon the ability of the management team to create an environment of trust, creativity and collaboration. Benson and Palaskas (2006) emphasise the responsibility placed upon senior management for fostering an organisational culture and climate that is supportive and encouraging in ways that motivate staff. The research on which this paper draws clearly illustrates that senior management support was pivotal to the successful diffusion of innovatory practice. As Rudnycky's (2013) work confirms, Islamic ethics and management principles can be brought together effectively in ways that help to create more ethical and disciplined employees. On this account, religion is not seen by as a retreat *from* or as a form of resistance *to* global capitalism; it is closely aligned with capitalism in ways that enable Islamic virtues to address the challenges of globalization within a 'spiritual economy'.

The analysis of technical change in poultry production shows that innovation is a complex economic and social phenomenon. Bryant (1998) argues that for a single firm innovation can be defined as applying ideas new to the firm in products, processes, services, organization, management and/or marketing. However, the concept of innovation is not restricted to technological innovations. Schumpeter (1939) defined innovation as setting up a new production function. In other words, if we vary the production function by changing factors of production instead of quantities of factors, we have an innovation. Technology transfer is not merely an exchange of documents or reports embodying the details of an innovation, it is a process whereby the transfer of knowledge takes place from one person to another (Ratnasiri, 1984). In poultry farming, innovation dissemination is a collaborative activity involving a set of actors, activities, organizations and institutions. As they interact with each other in order to gain, develop and exchange various kinds of knowledge and information, communication channels play an important role. Rogers (1995) defines diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. In reality, innovation diffusion in poultry production is an economic and social process, with interdependencies between various actors such as farmers and researchers playing a crucial role as determinants of innovation.

## **Discussion**

Over recent decades, the key drivers in shaping the poultry industry worldwide have been shifts in consumer demand, changes in government policies, environmental concerns, technological advances and innovation and an increasing demand for animal friendly food products (Akhtar 2012; Miele and Lever 2013; 2014). The rise and growth of alternative methods of production such as organic and free range illustrate the growth of consumer concerns about the way animals are reared (Lang and Heasman 2005). Consumers now want food that is antibiotic free, ethically packaged, fairly traded, tasty, nutritious and halal (Abdul Matin, 2010). In traditional poultry farming, tacit knowledge played an important role in production. Chickens were kept in small coops with free access to outdoors where they could exercise their natural behaviour, but with the advent of factory farming the ability to engage in instinctive behaviour has been lost (Akhtar 2012). There are many dictums in Quran that prohibit cruelty to animals. Animals are referred to as being part of communities like human beings and it is our understanding that the application of the concept of halal covers the whole life cycle of animals up to the point of slaughter. Halal should not, in this sense, simply be a confirmation of the fact that an animal died well.

In line with Ong and Collier's work on global assemblages, we could say that Iran's poultry industry is currently based on a range of discourses that cut across debates in theology, politics and regulation in a national and global context. As noted in the introduction to this volume, the proliferation of the global market for halal products signifies broader changes within regimes of exchange, ethics and values. The mobile and dynamic qualities at work within these exchanges are helping to reconstitute 'society', 'culture', and 'economy' simultaneously, subjecting individuals, groups and collectives to reflections on questions of value and morality (Collier and Ong 2005). Although primarily used as a means of maintaining the status quo within Iran, the notion of 'Iranian halal' has, we would argue, in this context, now become inherently global as the state looks to enhance the authenticity of Iranian products. In this instance, as in many others, a local epistemology has become ubiquitous by extension (Mol and Law 2005) within the global assemblage of halal.

We can observe throughout this volume a number of competing definitions of halal at work within national and global contexts simultaneously. Iran is a unique case in many ways. Instrumental in the rise of political Islam, ostracized by the international community, the ruling elite is starting to use global halal for its own political purposes, much as it has previously used the poultry industry. The Shia perspective we are putting forward presents an opportunity for Iran to take a more central and leading role at the global level in this sense. Viewed alongside emerging debates about food security and sustainability at the global level (Marsden and Morley 2014), our case study farm presents an alternative and more significant notion of what Iranian halal can and should be. Linked to changing regimes of exchange, ethics and values within the global assemblage of alternative food ethics (Goodman and Sage 2013), halal is, under certain conditions, slowly being aligned with a range of inclusive environmental qualities (Lever 2013) linked to 'a new, more mobile, global philosophy' (Haenni 2010, 335). In this context, innovation and leadership is the key if Iran is to play a more central role in global poultry production in a way that can be aligned with the true spirit of halal within a spiritual economy.

## **Conclusion**

The poultry industry is one of the fastest growing parts of the food industry. If the industry is to move forward effectively, technological innovation is required to satisfy new demands in the supply chain. This presents an historical opportunity for halal advocates in general and

Iran in particular to take the lead and make up for lost opportunities by following the clearly drawn boundaries between humans and animals in Quranic dictums. The Shi'ite belief teaches us that halal as a concept must be fully encapsulated within the construct of a product. Halal reaches much further into the disciplines of the management of a company, its organisational behaviour and the inherent relationships between management and workers, workers and animals: it is a spiritual endeavour.

As the poultry industry in Iran and other developing Islamic countries has moved from a traditional to an industrialized system of production, there have been many missed opportunities by *mujtahids* to encourage and improve animal welfare. Although the Iranian poultry industry is not yet under any great pressure from consumers about animal welfare and genetically modified organisms in feed at this time, the industry will no doubt be confronted with these additional challenges in the near future. Consumer concerns over food safety, product quality and the environmental impact of industrial production system are already emerging. However, if production costs are to be kept at a level that can encourage innovation and address these emerging concerns, sustainable supply chain management is an absolute necessity. Our study of an award-winning farm in northeastern Iran clearly illustrates the need for leadership and innovation if the Iranian poultry industry is to become a producer of poultry products for external as well as for internal markets – a reoccurring theme in state policy. This can only be done by encouraging collaborative practice between decision-making bodies and by developing better governance arrangements. A scientific approach to data collection and analysis for educational purposes is also crucial if the industry is to innovate and lead the halal industry by example in the manner encouraged by Ali Ibn Abi Taleb.

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