

***Kashrut* – the Jewish Dietary Laws**

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Abstract:

This paper examines the Jewish dietary laws from three perspectives: a. the Biblical laws that classify which animals are permitted or forbidden to be eaten, and recent attempts at understanding the rationale that may lie behind these ritual distinctions; b. the later rabbinic expansion and consolidation of the system of '*kashrut*' (Jewish dietary laws), and how the burden of responsibility for their maintenance moved to the local community (the provision of qualified ritual slaughterers) and to the private domestic arena (the preparation of food and requirements for separate utensils); c. the impact of the Emancipation of Jews in Europe, beginning in the 18th century, on adherence to traditional Jewish religious practice. The modern period has also seen the rise of external threats to the traditional practice of Jewish ritual slaughter from animal rights organisations, sometimes allied with antisemitic political movements.

Keywords:

Jewish dietary laws (*kashrut*); Jewish ritual slaughter (*shechitah*); Rabbinic authority; Jewish Emancipation; animal rights.

The Biblical Dietary Laws

I would like to address this subject in three parts: firstly, the Biblical origins of the Jewish dietary laws; secondly, their considerable expansion in rabbinic Judaism; thirdly, the challenges to *Kashrut* from within and without the Jewish world today.

The root '*kashar*', appears seldom in the Hebrew Bible, and only within the later books (Esther 8:5; Ecclesiastes 10:10; 11:6), where it means that something is 'advantageous' or 'suitable'. In the rabbinic period it is used to categorise all foods that Jews are allowed to eat. In the case of meat, the animal has to belong to the appropriate species and has been slaughtered in the correct ritual manner. In later periods the word '*kosher*' (derived from the Ashkenazi (Eastern European) form of pronunciation of *kashar*) comes to stand for food that is 'suitable' to be eaten in conformity with Jewish dietary laws.¹ The term *kashrut* is used to denote the collection of Jewish dietary laws.

However, with regard to the Biblical dietary laws, there is no explanation given in the Hebrew Bible as to why certain animals are deemed to be acceptable to be sacrificed to God or to be eaten by Israelites, and why others are deemed to be forbidden. The terms used to differentiate them are '*tahor*', 'clean' or 'pure', for the former, and '*tamei*', 'unclean' or 'impure', for the latter. The meaning of these terms is restricted to their 'purity' for ritual purposes alone. All that is recorded is the listing of which animals belong to which category.

The Lord spoke to Moses and to Aaron, saying to them: Speak to the children of Israel, saying: These are the living things that you may eat among all the beasts that are on the earth. (Leviticus 11:1-2)²

So, one is forced to speculate as to what rationale might lie behind the designation of such animals as fit or unfit, for sacrifice to God and for a shared meal. Suggestions range from practical issues of health and hygiene, to the promotion of moral and ethical values, to ecological and economic explanations, to the maintenance of cultural identity distinct from surrounding peoples, and to otherwise unknown or internal cultic requirements. All of these offer partial explanations but none is fully comprehensive. The following is an overview of some possible underlying principles that have been explored in more recent studies of the Biblical texts.

The Book of Genesis offers two pieces of information from the creation narratives that have relevance for this topic. The first is God's original intention, according to Genesis 1, that human beings should have a vegetarian diet.

Behold I have given you every herb-yielding seed which is upon the face of the earth, and every tree that has seed-yielding fruit – to you it shall be for food. (Genesis 1:29).

It is only at a later stage, following the expulsion from the Garden of Eden and God's concern with the behaviour of human beings, that God gives permission to eat meat as part of the covenant made with Noah following the flood, presumably as a concession to the weakness of human nature. (Genesis 9:1-17, 3) Already here a condition is included forbidding the consumption of blood, emphasising the sanctity of all life, human and animal. This will have an impact on the later laws about how the slaughtering of animals should be undertaken and what needs to be done in preparing meat for eating.

The second piece of information is more indirect. God brings before Adam all the animals that God has created, and Adam gives them names. This already looks forward to the detailed classification of animals that are considered to be either 'clean' or 'unclean'. Although the reason for these decisions is not given, it does presume a sophisticated underlying system of classification according to empirically recognized criteria.

These two observations come together in defining one clear category of land animals that are permitted for sacrifices and for foods. They are strictly classified according to two characteristics, one physical (that they have split hooves) and the other biological (that they chew the cud). That both characteristics are required serves two purposes. Firstly, it ensures that the permitted animals are ruminants, that is, their diet is vegetarian. This suggests, that despite the permission to eat animals, at least with regards to the Israelites, an attempt is made to conform with God's original intention that humans should be vegetarian, even if only indirectly, by restricting their diet in this way. As Baruch Levine expresses it, the diet of these permitted animals would ensure that 'nothing forbidden to the Israelites as food has been eaten by the living creatures themselves... Ideally, human kind should be sustained by the produce of the earth.'³

The strictness of the definition of what is a 'clean' animal is emphasised by

excluding those which have only one of the two necessary characteristics. Thus, the camel, rock badger and hare, though they chew the cud do not have the necessary split hoof and are forbidden. Conversely the pig, which has a split hoof, but does not chew the cud, is likewise excluded. This points to a second possible underlying principle that has been explored by the anthropologist Mary Douglas in her ground-breaking book *Purity and Danger*.⁴ The dietary laws come within the Biblical category of '*kedushah*', 'holiness', a state to which Israelites are to aspire as expressly stated by God:

You shall be holy, because I the Lord your God am holy. (Leviticus 19:2)

Douglas equates 'holiness' with two values, separateness and wholeness. This latter includes the requirement to align oneself with perceived categories in the world created by God, and not associating with whatever appears to cross boundaries. This is echoed in laws about not permitting mixtures: it is forbidden to mate two different kinds of animals nor plant fields with different types of seed (Leviticus 19:19). In addition, Deuteronomy (22:9-11) adds: ploughing with an ox and an ass together; wearing clothing made with a mixture of two kinds of material.

But this concern with crossing boundaries has a cosmic dimension. Both lists of permitted and forbidden animals in Leviticus and Deuteronomy classify creatures according to whether they live on land, sea or in the air. In this they follow the three domains established by God in the creation story. Arnold Ages summarises Douglas' findings:

Douglas says that kosher animals are herbivorous non-predators who conform to the Torah's idea of separation and wholeness. The special refinement which she adds is that kosher animals are those which use a form of locomotion native to their habitat. Any deviance from this pattern places them outside the kosher stream, so to speak. Two-legged fowl must fly with wings. Scaly fish must swim in water. On land, four-legged animals hop, jump or walk. 'Any class of creature which is not equipped for the right kind of locomotion in its element is contrary to holiness.' (Douglas p. 50). In other words, living creatures which cross the line between species are not kosher. ... Creepy, crawly things cross the clearly defined borders which demarcate species and, therefore, they cannot be kosher. Any indeterminate form of propulsion – swarming, crawling, creeping, slithering –

brings disqualification from the kosher category. 'Eels and worms inhabit water though not as fish; reptiles go on dry land, though not as quadrupeds; some insects fly though not as birds.' (Douglas p. 51)⁵

However, a further categorisation may also be at play with regards animals that are specifically listed as forbidden, because they are either hunters or scavengers. Following Levine's classification, it is the range of their diet beyond the simply vegetarian that would exclude them. However, there may be another dimension. When we turn to Abraham as the progenitor of the nation that Israel is to become, a question arises in each generation as to which of the offspring is to be the bearer of the blessing and the mission. Isaac replaces Ishmael who is destined to be a man of conflict (Gen 16:12). Jacob, the dweller in tents, is chosen over Esau the hunter (Genesis 25:27). The selection process has ruled out those engaged in violent activities. Perhaps the choice of permitted food is a reflection of the idea that 'you are what you eat' and is a further component in the conditioning of Israel as a people committed to certain pastoral and domestic values.

In addition to these listings of permitted and forbidden foods, a variety of other individual Biblical verses or sections introduce qualifications of the conditions associated with food. A number relate to the planting of new crops or fruit trees and questions as to when they should be brought to the Temple and when they are permissible to be eaten. A notable example is in Leviticus 19:23-25.

When you enter the land and plant all kinds of trees for food, you shall count their food as forbidden (literally: uncircumcised). Three years it shall be forbidden to you, it shall not be eaten. In the fourth year, all the fruit shall be holy, an offering of praise to the Lord. But in the fourth year you may eat its fruit, so that its yield may be increased to you. I am the Lord your God.

It may well be that the restrictions on usage of the fruit during the first three years are firmly based on empirical knowledge about the ideal cultivation of fruit trees. But the fourth-year practice, understood within the rabbinic tradition as offering the fruit to the priests, is effectively an acknowledgement of the source of the fruit from God and to mark the transfer of ownership of the produce from the divine to the human domain; only by formally acknowledging the divine source of all food, is one thereby permitted to use it. Later rabbinic teachings will apply the same logic to the recital of a blessing before

eating or drinking – the blessing does not ‘sanctify’ the food, rather it ‘de-sanctifies’ it; by acknowledging its source in God, we are permitted to partake of it. (b. *Berakhot* 48b)

Another law is puzzling both as to its actual meaning and as how to fulfil it. It is found three times (Exodus 23:19; 34:26; Deuteronomy 14:21). The text reads: ‘Do not cook a kid in its mother’s milk.’ The text can be read literally, which suggests that it might be a corrective to some pagan ritual, though no evidence has been found for this. But an equally plausible emphasis would render it as ‘Do not take a kid away from its mother while it is still receiving its mother’s milk’, which would place it in the category of cruelty to animals. This would link it directly with Leviticus 22:27-28:

27. When an ox or a sheep or a goat is born, it shall remain seven days with its mother, and from the eighth day on it shall be accepted as a sacrifice of an offering by fire to the Lord. 28. But, whether it is an ox or a sheep, you shall not kill both it and its young in one day.⁶

However, the threefold repetition of the verse made it a significant proof-text for a major Rabbinic set of dietary laws that we will consider below.

The Rabbinic Interpretation of the Dietary Laws

The canonisation of the Hebrew Bible is part of the responses to radical changes in the situation of the Jewish people. The process begins after the first exile of large parts of the population following the Babylonian conquest, and the subsequent restoration of national existence under the Persian empire. The experience of exile, with the loss of land, political autonomy and the sacrificial cult, led to the creation of alternative political and spiritual structures so as to maintain a sense of national identity. The process was further developed following the Roman destruction of Jerusalem and the second Temple and the further scattering of the people throughout the known world. The latter coincided with the development of the rabbinic leadership which based its authority on the tradition that an Oral Law was given to Moses by God on Mount Sinai at the same time as he received the Written Law, enshrined in the Hebrew Bible. The rabbis describe their ‘chain of tradition’ as follows, notably excluding the priestly elites and royalty that had previously dominated the society.

Moses received the Torah on Sinai, and handed it on to Joshua, and Joshua to the elders, and the elders to the prophets, and the prophets handed it on to the men of the Great Assembly. They said three things, 'Be patient in judgment, raise up many disciples, and make a fence around the Torah'. (*Pirque Avot* 1:1)

In response to the destruction of the Temple and the end of the sacrificial cult as the central means of maintaining the national and individual relationship with God, certain radical transformations took place. The Synagogue emerged as the unifying centre for the exiled communities, its role exemplified through its three titles as a Beth Midrash, House of Study, Beth Tefillah, House of Prayer, and Beth Knesset, House of Assembly. The Hebrew Bible, as the direct word of God, became the authoritative source for all subsequent developments in matters of Jewish law, but as mediated and interpreted through the traditions of the Oral Law developed and authorised by the rabbis. At the centre of the synagogue worship is the daily prayer, the Amidah, culminating in the appeal for the restoration of the nation on its land, with a restored Temple and monarchy. But the central ritual synagogue act on Shabbat, Festivals and twice during the week, is a reading from the Torah, the five Books of Moses, sometimes accompanied by extracts from the prophetic writings, often with some kind of explanatory teaching. Thus prayer and study became the substitutes for the sacrificial cult, though intended initially only as a temporary measure until the Temple would one day be restored.

But the sacrificial cult itself did not entirely disappear, rather it became democratised and 'domesticated', with the father presiding over the family table replacing the role of the priest. It is in this context that the dietary laws underwent their radical transformation and expansion, and responsibility for maintaining them became the task of every household.

The list of permitted and prohibited animals remained unchanged – though the rabbis debated about animals that were either hard to identify from the Biblical record or were on the margins of acceptability. Perhaps the best-known aspect of dietary laws amongst Jews is the prohibition of eating pork and pork products. But the number and range of limitations on what may or may not be eaten increased considerably depending on the degree of traditional Jewish beliefs and practices to which one adheres.

With the absence of the sacrificial cult, maintained by a professional priesthood,

the issue of how animals should be slaughtered became a matter of major concern. Deuteronomy 12:21 allows for people to slaughter their own animals in certain circumstances, 'as God has commanded you'. But no such detailed commands are given in the Hebrew Bible, so they are understood to have been given in the Oral Torah. Effectively, the 'Laws of *shechita* (ritual slaughter)' became so complex that only a trained and licensed individual, a *shochet*, slaughterer, could perform them. In the act of slaughter, the trachea, oesophagus and the large blood vessels in the neck should be severed in one swift cut using a special sharp knife with no imperfections, chosen to be of the right size for the animal. The rapid loss of blood to the brain fulfils the intention of causing minimal suffering to the animal. The body must then be examined for any blemishes that would make it unfit for consumption as required by the dietary laws. In addition, there are two items of the body that may not be consumed: certain parts of the fat and, as indicated in Genesis, the blood. The removal of blood may be done at the time or carried out domestically, either by broiling or salting the meat. However, the liver, which contains considerable amounts of blood requires special treatment.

A further requirement is also based on a Biblical narrative. When the patriarch Jacob wrestled overnight with a divine messenger he ended up limping, and the text concludes:

Therefore, to this day the children of Israel do not eat the sinew of the hip which is on the socket of the thigh, because he touched the socket of Jacob's thigh in the sinew of the hip. (Genesis 32:33)

This refers to the sciatic nerve that must be removed before that part of the animal is permitted as kosher. However, this is a very difficult piece of dissection that requires special training. If it is not undertaken the hindquarters may be sold to a non-kosher meat market.

As a reminder that taking the life of any living thing is a serious matter, not to be undertaken lightly, the *shochet* recites a blessing before he slaughters: Blessed are You, Lord our God, Sovereign of the Universe, who makes us holy through His commandments, and commands us concerning *shechita*.

While the actual slaughter of the animal is in specialised hands, the art of

preparing food that is considered kosher is also hemmed in with qualifications that the householder has to address. Perhaps the best-known example of this complexity is the forbidding of eating together in a meal meat and milk. The origin of this prohibition seems to be unknown, but the rabbis found a Biblical peg on which to base it in the threefold repetition of the verse noted above about not cooking a kid in its mother's milk. They derived from the threefold repetition, three prohibitions: cooking meat and milk together; eating such a mixture and deriving any benefit from such a mixture. However, at this point, another principle becomes involved, indicated in the quotation above from Pirke Avot, 'make a fence around the Torah'. It means that in order to avoid breaking a particular law, other laws should be created as a 'fence' around it, to prevent any likelihood of so doing. Therefore, in order to ensure that any mixing of milk and meat becomes unlikely, separate utensils, dishes and cutlery are used for milk and meat products, which are to be washed and stored separately. Since there are additional dietary considerations during the Festival of Passover, connected with the prohibition on eating leavened bread or derivatives of it, a further set of implements should be used. These concerns extend to any foods that can be bought from public outlets, so that an entire industry exists to 'supervise' the preparation of foodstuffs and certify them as 'kosher' so that observant Jews feel safe in eating them. Clearly the more stringent the prohibitions one accepts the more difficult it becomes to eat in the homes or restaurants of others, and some would argue that the wish to maintain a separate Jewish existence is part of the rationale behind them.

As to eating itself, since meat takes longer to digest, a period of up to six hours, depending on different Jewish traditions, should pass before milk may be eaten. Conversely, after a milk meal a period of up to an hour may be required.

All the above are only touching the surface of the complexity of the Jewish dietary laws. For example, since the eating of insects is strictly forbidden from the Biblical lists, what happens if vegetables, all of which are permissible, contain a small infestation with insects? Rabbinic debates consider whether it is enough simply to remove those visible to the naked eye, or should optical instruments be used to be absolutely sure. Conversely, perhaps another rabbinic principle should be invoked whereby if food is contaminated by something forbidden that only amounts to less than one sixtieth of the total amount of the food, its presence can be ignored. Nevertheless, elaborate and complex requirements are listed by some rabbinic authorities for the thorough cleansing of every conceivable vegetable. Clearly a borderline exists between genuine piety realistically

expressed and a potentially dangerous obsessiveness.

The Impact of Modernity

The dietary laws could function effectively in the early rabbinic period because Jewish communities tended to work within a closed system, guided by rabbinic authorities, and largely independent of the wider society when it came to such internal, largely domestic, matters. In the early centuries local communities tended to follow their own traditions and customs, with guidance and sometimes judgments provided by local centres of rabbinic studies and lawcourts. The Middle Ages saw the advent of codifications of Jewish law, with ‘responsa’ from leading rabbis to deal with new questions that might arise. But with the advent of printing and the ready availability of fixed legal compilations, much of the earlier flexibility went out of the system, a tendency that was reinforced by the advent of modernity and radical political changes to the status of Jews in the world.

If the Biblical dietary laws are susceptible to some kind of symbolic interpretation, the rabbinic developments have tended to be subsumed under the general view that they are commanded by God and therefore not to be seriously questioned. This also means that it is very difficult to make changes within the system itself because one runs up against major questions of the authority of rabbinic bodies that must ultimately rule on such matters. Since rabbis and their institutions are jealous of their independence, whether locally, nationally or internationally, religious debates are also bound up with political dimensions. Moreover, the existence of the State of Israel and the authority the State has granted to its Orthodox rabbinate, has given the latter a considerable dimension of political power relative to the authority of Orthodox rabbinic bodies in the Diaspora. But all of this is acted out against the changing nature of Jewish identity and community in the wake of the European Enlightenment and Emancipation.

For Jewish communities in Europe, political Emancipation meant the gradual removal of Jewish disabilities and the recognition of Jews as entitled to full citizenship, equality and rights. Beginning in the late 18th century it enabled Jews to integrate into their national societies as individuals. Effectively this broke open the closed inner world of Jewish life as a society within a society, regulated by Jewish law under strict rabbinic authority. The result was that Jews became able to choose whether or not to identify fully with Judaism or fully to assimilate to the wider society or else find some compromise

position between these two extremes. Moreover, since Judaism is a complex mix of peoplehood and religion, it became possible to identify as a Jew, on family, historical, political or cultural grounds, while choosing to ignore the framework of Jewish law. In this situation a variety of religious movements emerged from those virtually dismantling all but what they considered to be essential Jewish values within the Jewish legal tradition, to those committed to maintaining the fullest adherence to traditional practices. Among the laws that were challenged, the complex dietary laws were often the first to be abandoned by Jews in their quest to integrate into the wider society. The grounds for doing so ranged from their inconvenience and cost to the absence of an acceptable rationale for keeping them. Perhaps today the greatest issue in this area is simply one of indifference to the dietary laws. This goes so far, paradoxically, as a readiness to include the occasional or regular eating of kosher, or 'kosher-style', food simply as a matter of 'life-style', and as a weak marker of a Jewish cultural identity.⁷

Yet if the Jewish dietary laws may be of relatively little interest to some Jews, they nevertheless express a central part of the core practice of Orthodox Jews, and, in amended but equally committed versions, to Jews within the broad non-Orthodox religious spectrum. Therefore, it is very serious to an active Jewish life that a central aspect of Kashrut is under attack from individuals and groups motivated particularly by concerns about the actual process of ritual slaughter, *shechita*. They argue that the method by which kosher (and often in parallel, Halal) meat is slaughtered causes significant pain and distress to animals and therefore should be banned. Organisations concerned with animal welfare argue that the animal should be stunned prior to the act of slaughter, something unacceptable to Jewish law as it would produce physical damage, thus making the animal unfit. Studies and experiments have on the whole justified the argument that the Jewish method is virtually painless, and, conversely, methods like pre-stunning are not foolproof in this regard. Moreover, the handling of the animal prior to the slaughter and the care that is shown are also important factors in the degree of suffering. One Jewish response to such criticisms has been the promotion, particularly amongst American Conservative, Reconstructionist and Jewish Renewal movements, of the concept of 'eco-kashrut'. The term is credited to Rabbi Zalman Shachter-Shalomi and is part of the infusion of environmental issues into mainstream Jewish life. Thus, the way in which animals are raised, the human and environmental costs of food production should be taken into account when deciding on what food to eat and what values should be part of a kosher diet.

The civil and citizenship rights received by Jews as a result of Emancipation, did not mean the end of anti-Jewish sentiments within European societies, influenced by two millennia of Christian teachings. But in the early twentieth century a new kind of racial antisemitism appeared in the changing economic, social and political climate. It was to reach its climax in the rise of the Nazi party in Germany and eventually the death of six million Jews in the Holocaust. In the 1880's anti-Semitic political parties allied with animal protection groups to campaign for legislation to ban Jewish ritual slaughter in Switzerland, Germany and Scandinavia. But different circumstances in different countries over the twentieth century effectively led to the banning of *shechita* by the imposition of the requirement of stunning prior to the act of slaughter or related provisions in Norway, Iceland, Denmark, Latvia, Estonia and Finland. The European Union directive, "European Convention for the Protection of Animals for Slaughter" (1998), generally requires stunning before slaughter, but permits member states to allow exemptions for religious slaughter: "Each Contracting Party may authorize derogations from the provisions concerning prior stunning in the following cases: – slaughtering in accordance with religious rituals...." But recent decades have seen increasing attempts to ban all ritual forms of slaughter in European countries, both Jewish and Muslim.⁸ From a Jewish perspective it is difficult not to see in this a further expression of a new rising wave of antisemitism in Europe, coinciding with damage done to Jewish monuments and buildings and attacks on Jews. Moreover, Jews are particularly concerned that this is only an opening stage in an assault on the right of Jews to perform ritual acts like circumcision, and in general to make life difficult for Jewish populations. But from a broader perspective, it belongs to wider concerns and prejudices related to the growth of immigrant populations in European countries, new and growing nationalistic political movements, and accompanying antisemitism and islamophobia.

Concluding thoughts

The Jewish dietary laws represent a key pillar in Jewish religious and institutional life, irrespective of the degree to which individual Jews may adhere to them. They are part of the uniqueness of Judaism that seeks to view all aspects of life, physical and spiritual, individual and collective, as part of a coherent whole. At their best, apart from the disciplines they impose on our eating habits, the dietary laws embody principles such as '*tza'ar ba'aley chayim*', preventing unnecessary suffering to animals, even in the extreme situation of taking life. Perhaps there is still within them an echo of the idea that

the choice of permitted animals is part of an attempt at the physical embodiment of domestic and pastoral values within the Jewish people. More generally, the traditional recital of blessings before and after eating is a constant reminder never to take for granted the food that we have been given, or the earth that has yielded, directly and indirectly, its harvest, or the source of life, however we imagine it, that sustains us.

Notes

- ¹ The word 'kosher' became generalised in common parlance to apply to anything that is fitting or appropriate, from a legal document to honest business dealings
- ² The major listings of permitted and forbidden animals are to be found in Leviticus 11:1-47 (20:24-26) and Deuteronomy 14:3-21.
- ³ Levine, Baruch A. *The JPS Torah Commentary: Leviticus*. Philadelphia: The Jewish Publication Society, 1989 p 247-248.
- ⁴ Mary Douglas *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London, Routledge and Keegan Paul, 1984).
- ⁵ Ages, Arnold 'The Subtle Grammar of the Biblical Dietary Laws' *Jewish Bible Quarterly* Vol 30, No 2. 2002.
- ⁶ It would also belong to a similar law in Deuteronomy 22:6-7: 6. If you happen to come upon a bird's nest along the way, in any tree or on the ground, with young ones or eggs, and the mother sitting on the young or on the eggs, you shall not take the mother with the young; 7. you shall certainly let the mother go, but the young you may take for yourself, in order that it may be well with you and that you may prolong your days.
- ⁷ See Shannon Leavitt 'How is Jewish Identity Manifested through Food?' (University of California Santa Barbara).
http://www.writing.ucsb.edu/sites/secure.lsit.ucsb.edu.writ.d7/files/sitefiles/publications/2013_%20Leavitt.pdf
- ⁸ For an overview of 'anti-shechita' legislation in different countries see the article 'Legal aspects of Ritual Slaughter' in https://en.wikipedia.org/wiki/Legal_aspects_of_ritual_slaughter. For a highly detailed overview of the practical issues associated with all the stages of ritual slaughter and associated regulations, see: 'Shechita (Kosher Slaughtering) and European Legislation' Paolo S. Pozzi and Trevor Waner, *Veterinaria Italiana* 207, 53 (1) 5-19, available on line at http://www.izs.it/vet_italiana/2017/53_1/VetIt_910_4625_2.pdf.