Religious and Non-Religious Slaughter

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Bumper Sticker

Believe Nothing That You Think!
In Europe and North America, there are some people questioning religious slaughter. The Jewish and Muslim Communities need to work together to make sure that religious slaughter will continue to be available around the world to provide meat and poultry for the two communities.
Kosher and Halal Laws Related to Slaughter

Kosher:
The allowed animals for slaughter
  Ruminants
  Split hoof and chew their cud
  Traditional domestic birds

Halal:
  Prohibition of specific animals, most specifically PORK
  (Permit hunting and special slaughter of camels)
2. The prohibition of blood (meat and poultry)
   Specific slaughter requirements: Live animal with a horizontal cut (can be very humane) (Blessing before starting to slaughter)
   Very similar method for both kosher and halal
   Inspection (internal) of animals after slaughter, particularly the lungs (Glatt)
   Deveining (practically eliminates hind quarters) (Washing after 3 days if necessary)
   Salting and soaking followed by rinsing
Though shalt do no unnecessary harm to animals. Bible and Quoran have many strong statements requiring treating animals respectfully. Responsibility goes with “Dominion”.

Prohibition of “Tearing of the Limb” is included in the Noahide Code (Noah’s covenant with all the people of the earth). Is now a detailed English version of these rules from an Orthodox point of view.

How do these ancient traditions of slaughter interact with modern animal welfare concerns?
Kosher and Halal Slaughter

These systems are controversial because both groups use a live slaughter although some Muslim, but no Jewish groups, have permitted a mild reversible stunning (head-only electric) procedure prior to slaughter. Both groups have extensive rules relating to animal welfare and proper slaughter – these rules were designed to protect animals.
What are some of the issues that need to be considered when looking at and evaluating religious slaughter (kosher and halal):

Pre-slaughter handling

If we need particularly calm animals for religious slaughter – how do we get them?

How do we identify them ahead of time?

What equipment and procedures work best to assure calm animals?
Preparing an Animal for Kosher Slaughter

The slaughter man (shochet) needs to carefully check the neck of the animal to be sure it is clean and will not harm the knife. If necessary, a work person needs to wash the neck.

Would there be a benefit to having the animals washed ahead of time?

Technical Challenge: Must not have any standards that appear to rush the slaughter man so that their failure rate goes up.
Who can slaughter kosher or halal?

Only a religiously and practically trained Jewish male can slaughter while all sane adult Muslims can slaughter.

The Shochet

Requires a religious “license”: which includes both a test of religious law and demonstrated “can do” ability.

But how do we improve their “secular” animal welfare/animal handling training?

It appears that a more aggressive cut closer to the jaw leads to more rapid insensibility.

[between the thyroid cartilage and the cricoid cartilage for kosher]
Need to work with many more people and much smaller scale slaughter.

Need for education in animal handling and proper slaughter techniques,

So, we have prepared posters for this purpose in English, Arabic, Urdu, Persian, Malay, Somali, and Spanish [poster will be shown later].
Upright versus Upside-Down Positioning of the Animal for Religious Slaughter

From the AMI Recommended Animal Handling Guidelines for 2005:

[Animals] that are ritually slaughtered without prior stunning should be restrained in a comfortable upright position. ... In a very limited number of glatt Kosher plants in the United States and more commonly in South
America and Europe, restrainers that position animals on their backs are used. For information about these systems and evaluating animal welfare, refer to www.grandin.com (Ritual Slaughter Section).

The throat cut should be made immediately after the head is restrained (within 10 seconds). …
Cattle vocalization percentages should be five percent or less of the cattle in the crowd pen, lead up chute and restraint device. A slightly higher vocalization percentage (vs 3%) is acceptable because the animal must be held longer in the restraint device compared to conventional slaughter. A five percent or less vocalization score can be reasonably achieved….Animals must be completely insensible before any other slaughter procedure is performed (shackling,
hoisting, cutting, etc.) If the animal does not become insensible, it should be stunned with a captive bolt gun or other apparatus and designated as [non-Glatt,] non-Kosher or non-Halal.
An Actual Kosher Slaughter
When an animal is turned upside down in a good piece of equipment (comfortable, not noisy, proper lighting, etc.), then it appears that there is about a 10 second refractory period according to Dr. Grandin where it doesn’t realize what has happened to it and remains calm.

Is this scientifically correct? Can we better document this?

Can we get the religious slaughter done in this time period?
The Chalef

A knife designed to specifically make the process work properly
Has to be twice the length as the diameter of the animals neck and quite “straight”.
Extremely sharp (an important part of the training is knife sharpening – and critical for good religious slaughter)
Knife is checked before and after slaughter
Cannot be nicked!
Pictures of Chalefs of Various Sizes

Beef

Sheep/Goat/Veal

Chicken

(Potential for ergometric handles?)
As long as it is continuous it can be considered acceptable, however, Dr. Grandin has shown that a more aggressive slaughter with fewer strokes leads to more animals becoming insensible quickly.

Ergometrics: Can the handles of the knife be better designed to help the slaughter – different knives for upright and upside-down slaughter?
Rules of Slaughter

No Pausing (Shehiyyah): Can be multiple continuous strokes
No Pressure (Derasah): Concern that the head falls back on the knife
No Burrowing (Haladah)
No Deviating (Hagrama)
There is a proper spot (area) for slaughter
No Tearing (Ikkur): If the neck is stretched too tight, tearing may occur before the cutting
Good religious slaughter may actually be more humane than “humane slaughter”

Concept is that no pain occurs with a very sharp cut

The release of endorphins occurs if the animal is unstressed

Animal dies on a “high”

Postulate: Process is more successful if the animal goes into slaughter unstressed

This needs a lot of critical research
A good system needs to get the animal insensible properly and quickly (consensus, i.e., policy, not science) seems to be that 15 to 20 seconds is maximum acceptable time). Note time to unconsciousness is shorter.

Need to then stun any animal that is not insensitive even if it is then unacceptable to the kosher or halal community.

At least one “Temple Grandin plant” is using this standard and getting from 90 to 95% of the animals insensible in that time.
Slaughter of Sensible Animals

Methods currently used and defined as humane in the US by Congress:

- Captive bolt – penetrating or non-penetrating
- Electrical stunning
- Gas
- Religious slaughter with cutting of the esophagus, trachea, jugulars and carotids

[Actual religious requirements are technically for cutting the esophagus and trachea]
Key Animal Welfare Questions:

What do animals feel when these religious methods are done right? When not done right? How do we deal with these two different situations?
All slaughter systems should be audited and quantitative measurements made on them. If there are problems, the problems need to be corrected.

However, such systems cannot and should not be used to judge the inherent potential of religious systems or other systems to humanely slaughter animals until the best possible version is evaluated (and in the future with new systems, the evaluations will be needed again).
Some Further Research Needs

An understanding of the process by which “endorphins” (opiates) function in animals at the time of slaughter.

Role of the sharp cut in optimizing endorphin release.

Detailed animal physiology, biochemical, and behavior measurements on a system where during religious slaughter animals are becoming insensible in 15 seconds or less. (And what is the time to unconsciousness?)
The impact of the actual slaughter needs to be separated from a number of important but peripheral issues that confound the results, e.g., the people, the equipment, and the non-slaughter stress of animals need to be optimized before looking at the impact of the religious slaughter. And equipment and management will need to be improved to improve animal welfare consistent with the rules and needs of our religious communities.
Philosophy and Morality

Philosophy, like morality itself, is the first and last an exercise in reason – the ideas that should come out on top are the ones that have the best reasons on their sides.


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What Constitutes a Rational Argument?

If something specific is wrong with religious slaughter, what does that mean?
1. We should work hard to correct the specific problem? Yes
2. It is proof that religious slaughter should not exist and therefore we should promote stunned slaughter? No

There certainly are things wrong with some current religious slaughter, so let us work on correcting them and improving our image.
Jeremy Bentham, the philosophical father of Utilitarianism [Greatest good for the greatest number] was a carnivore!

“ We are the better for it, and they are never the worse…The death they suffer in our hands commonly is, and always may be, a speedier and, by that means, a less painful one than that which would await them in the inevitable course of nature.”

But we can make it even less painful by paying attention to animal welfare!

Ref: Pollan, 2002
We also need to educate the general public in many Western countries, where their value systems and attitudes towards slaughter may be very different from the Muslim and Jewish values.

“Comparing kosher, halal and secular practices for the slaughter of mammals.”

Dr. Shuja Shafi (Muslim Council of Britain), Dr. Stuart Rosen (Imperial College, London), Dr. Joe M. Regenstein (Cornell University), and Dr. Eric Clay, (Shared Journeys, USA)

Reviewers: Dr. Temple Grandin (Colorado State University), Dr. Ari Zivotofsky (Bar-Ilan University), Dr. Doni Zivotofsky (DVM, Israel), Dr. Muhammad Chaudry (Islamic Food and Nutrition Council of America, Chicago)
There are different views within the Muslim community as to how to slaughter. Some will permit light stunning others will not. Some will permit upright slaughter others will not. Almost no Jewish authorities will accept any stunning. Some fervently Orthodox rabbis require upside down slaughter.

I ethically define my task as working with each of these communities to evaluate and then improve their slaughter until it is the best possible for animal welfare consistent with their rules. Their responsibility is to be willing to work with us to reach that goal. (Only after that level of slaughter is achieved, can we even begin to consider whether it remains a problem or possibly whether regular slaughter is the problem.)
Scientific Reductionism

Allows one to isolate the various factors that are involved in affecting a process

Can critically evaluate the scientific contribution of each factor to the net outcome

Can then focus on correcting the most critical factors, which would also need to reflect policy considerations

In my opinion this has been poorly done for religious slaughter! (And also for regular slaughter). Which effects actually reflect the slaughter? Which reflect the animal handling? And which reflect the equipment?
Consequences of Religious Slaughter

If all the steps are done properly, the animal should be expected to be insensible quickly: we might want to suggest that this should be less than 20 seconds.

If the animal is NOT insensible by the suggested 20 seconds then a post-slaughter stun should be used, even if this requires that the animal no longer meets religious requirements. [Some authorities permit post-slaughter “stunning”.]
“Recently, I participated in a ritual kosher slaughter -- in this ritual, the way it was meant to be done, I must say. This was at a plant where the management really understood the importance and significance of what they were doing, and communicated this to their employees -- and to the animals as well, I believe. As each steer entered the kosher restraining box, I manipulated the controls to gently position the animal."
After some practice, I learned that the animals would stand quietly and not resist being restrained if I eased the chin-lift up under the animal’s chin. Jerking the controls or causing the apparatus to make sudden movements made the cattle jump… Some cattle were held so loosely by the head-holder and the rear pusher gate that they could easily have pulled away from the rabbi’s knife. *I was relieved and surprised to discover that the animals don’t even feel the super-sharp blade as it touches their skin. They made no attempt to pull away. I felt peaceful and calm.*” (Regenstein and Grandin 1992)
What is the issue?

Is the agenda really to do good science, i.e., trying to improve the slaughter consistent with people’s religious requirements or is it to eliminate religious slaughter and religious freedom?

My agenda: to get a fair and objective scientific evaluation of both religious and non-religious slaughter. For those items that are unsatisfactory, we need to work with the plants and their people to fix the problems.
To justify the continued total ban on religious slaughter in Sweden:

1. They observed the worst upside down pen (Weinberg) – N=1; never considered banning the pen?

2. They pointed out that much of the kosher slaughtered meat in Sweden is sold to gentiles (non-Jews); never considered labeling such meat?

Therefore, for these two reasons alone, Sweden is justified in continuing to ban religious slaughter

Is this science or an agenda? I do not think this is science but rather an embarrassment and an anti-Jewish and anti-Muslim agenda at best!
Look at the Best Plants

Need to study a Temple Grandin compliant plant with really good religious slaughter and see what the status of that plant is (and I do believe that even these plants can be improved.) And then: Certain practices (not religious slaughter itself) may need to be banned, e.g., shackling and hoisting and the Weinberg pen (see the Royal Veterinary Society of Sweden statement on slaughter discussed above!).
A Reminder

With normal stunning procedures – if the animal is not stunned on the first try, it is extremely stressful. Sometimes it takes as many as 6 tries to eventually stun the animal. The new AMI (American Meat Institute) expectation, as also accepted by the FMI (Food Marketing Institute, supermarkets)/NCCR (National Council of Chain Restaurants) Animal Welfare Technical Committee still permits 5% of the animals to be “missed” on the first try! (And most animal activist organizations in the US accept this standard.)
Can one really determine how the religious slaughter was done reading the literature?

Can one really determine how the time to unconsciousness, insensitivity and death is affected by improper handling and poor handling equipment from that which is inherent in well done religious and standard slaughter?

I would suggest that the literature from those on both sides of the argument does not meet the standard of sufficient information so the experiment can be repeated or the data cleanly interpreted, which is surprising for such important questions – if objective scientific answers were really desired?
Important Caveat

There are many currently operating religious slaughter systems that do NOT meet the modern expectation of animal welfare, but there are also some that we believe do. Those that do not **should not be accepted** if the measurements reported suggest that these are out of control – but the extrapolation to all religious slaughter is inappropriate until good measurements are made and reproduced on the best available systems. A proper test of the null hypothesis is needed, i.e., religious slaughter is as humane as any other modern approved slaughter system.
It is my personal belief that in the future the most humane slaughter may well be religious slaughter. All research on the issue of religious slaughter (as opposed to evaluating a particular situation) needs to be done on a system that is operating properly and provides the best possible condition for slaughter – only then can the potential of religious slaughter be properly evaluated. Hopefully then we can have a open-minded scientifically-based discussion.
As part of Cornell’s Northeast Sheep and Goat Program and Spirit of Humane, we have tested a commercially available Muslim slaughter knife, have developed a restraining pen that should cost less than $1000, and developed a multi-lingual instruction poster that will permit individual Muslims to do halal slaughter consistent with modern animal welfare standards. (Currently available in English, Arabic, Persian, Urdu, Somali, Malay, Turkish and Spanish.)
Humane (Halal) On-Farm Slaughter of Sheep and Goats

Step 1:

1. Selecting and adapting animals for halal slaughter.
2. Preparing the slaughter area.
3. Calming and restraining the animals.
4. De-horning and tail docking.
5. Cutting the jugular vein and carotid arteries.
6. Driving the animal into the stunning area.
7. Stunning the animal.
8. Cutting the neck and tying the jugular vein and carotid arteries.
9. Removing the spinal cord.
10. Slaughtering the animal.

Step 2:

1. Placing the animal on the slaughter table.
2. Placing the animal in the stun chamber.
3. Stun chamber activation.
4. Verifying the animal's death.
5. Removing the spinal cord.
6. Slaughtering the animal.

Step 3:

1. Placing the animal on the slaughter table.
2. Placing the animal in the stun chamber.
3. Stun chamber activation.
4. Verifying the animal's death.
5. Removing the spinal cord.
6. Slaughtering the animal.

Step 4:

1. Placing the animal on the slaughter table.
2. Placing the animal in the stun chamber.
3. Stun chamber activation.
4. Verifying the animal's death.
5. Removing the spinal cord.
6. Slaughtering the animal.

Step 5:

1. Placing the animal on the slaughter table.
2. Placing the animal in the stun chamber.
3. Stun chamber activation.
4. Verifying the animal's death.
5. Removing the spinal cord.
6. Slaughtering the animal.

Step 6:

1. Placing the animal on the slaughter table.
2. Placing the animal in the stun chamber.
3. Stun chamber activation.
4. Verifying the animal's death.
5. Removing the spinal cord.
6. Slaughtering the animal.

Step 7:

1. Placing the animal on the slaughter table.
2. Placing the animal in the stun chamber.
3. Stun chamber activation.
4. Verifying the animal's death.
5. Removing the spinal cord.
6. Slaughtering the animal.

Translated by: Ali Motamedzadegan
It is not our differences that divide us. It is our inability to recognize, accept, and celebrate those differences.

Audre Lorde
Questions and Comments

For copies of this presentation or further discussion, contact me at jmr9@cornell.edu

There is a comprehensive paper at www.ift.org on kosher and halal rules; please go to publications: Comprehensive Reviews, volume 2 issue 3.

For talks on kosher/halal and on animal welfare (JMR) and animal welfare (TG), go to www.cybertower.cornell.edu and log in.

For a 2 credit distance learning course on kosher/halal go to the Kansas State University distance learning program in food science.
Humane (Halal) on-farm slaughter of sheep and goats

Step 1
Minimize stress when catching animals. Avoid sudden moves or noises. Herd animals into small area. Catch gently.
Step 2

Move animal to slaughter quickly, without stress. If small enough, carry with one arm over the horns and other arm tucked between hind legs (Step 2a). For larger animals, have one person lead animal with chin held high, while another person pushes from behind (Step 2b). If handler is alone, hold animal’s chin with one hand while grasping the dock or tailhead area with the other hand, or carry forelegs to lead the animal (Step 2c). A chute or lane can be used to move animals calmly (Step 2d).
Step 3
For humane reasons, do not shackle the animal for slaughter. Place the animal on a double rail (Step 3a) or firmly restrain the animal (Step 3b), which is safe and comfortable for both animals and people.
Step 4

A well sharpened slaughter knife with a straight blade twice the neck width is absolutely necessary for making the slaughter humane (Step 4a). A knife with a hand guard is safest.* If the handler is alone and the animal is docile, it can be slaughtered by straddling the animal next to a wall (Step 4b).

*One source for slaughter knives is [www.dexter-russell.com](http://www.dexter-russell.com)
Step 5
Slaughter gently but firmly by holding animal’s head back, and in a quick, single cut move across animal’s throat just below the jawbone, cutting the windpipe, esophagus, arteries and veins forward of the neckbone.
Step 6.

It is both a halal law and a requirement for animal welfare to wait until the animal is insensible (at least 1 minute) before starting further processing (Steps 6a and 6b).
Step 7
Dispose of the offal (animal remains) by composting or other sanitary and legal means. To use the static-pile composting method (inset), alternate layers of offal with high-carbon materials, such as wood chips, straw, leaves, peat or finished composted. This method also protects against odor and vermin. For more information, see www.cfe.cornell.edu/wmi/composting.html.