The 5 Freedoms: Where are we today?

Cassandra Tucker
Center for Animal Welfare
Department of Animal Science
UC Davis
Five Freedoms

1. Freedom from thirst, hunger and malnutrition
2. Freedom from discomfort
3. Freedom from pain, injury and disease
4. Freedom to express normal behavior
5. Freedom from fear and distress

Brambell Report, 1965
Farm Animal Welfare Council, 1979
Now: many ways to categorize concerns

<table>
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<tr>
<th>Year</th>
<th>Description</th>
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Animal welfare concerns

Basics
• health and disease
• access to resources: food, water, protection from elements
• human-animal interactions
• appropriate euthanasia or slaughter

Next level
• ability to perform natural behaviors (space restrictions or resources)
• processing/alterations: procedures and pain relief
How we relate to these concerns
How we relate to these concerns

Responsibility
ability to respond

Tucker, 2019
How we relate to these concerns

Absent blind spots, look away

Responsibility ability to respond

Tucker, 2019
How we relate to these concerns

- **Absent**: blind spots, look away
- **Responsibility**: ability to respond
- **React**: defend or create a crisis

*Tucker, 2019*
Since 1960-70s, more responsibility

1960-70s
Five Freedoms

1
2
3
4
5

Aspirational, 100% “free” is not achievable

2019
measure & manage concerns
Responsibility: measure & manage basics

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Branding cattle

Hot iron

Freeze
Branding cattle

**Beef: herd ID**
- 45% cows & calves hot-iron brand for herd ID
  - 83% Western herds

**Dairy: herd & individual ID**
- 25% of large herds hot-iron brand for herd ID
- 13% of dairy cows are freeze branded for individual ID

*NAHMS dairy and cow calf surveys*
Hot-iron branding
1990s: branding is painful

- tail flicking, kicking, falling down
- escape attempts
- ↑ and louder vocalizations
Now: how long does the pain last?

Absent blind spots, look away
Brand with fire-heated iron at 126 d
Brand with fire-heated iron at 126 d

n=48
Monitored brand healing over 10 weeks

Tucker et al., 2014
Brands remain painful for up to 10 weeks

Tucker et al., 2014
• can’t change: state regulations require brands
• featured in undercover expose videos
• a Western rancher that stopped branding
• a corporate executive suggests lobbying to change regulations; invest in technology, alternatives
Millennial consumer
Animal welfare concerns

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Natural behavior: cattle eat & digest fiber

Pasture: high fiber
9 to 13 hours/day eating

Feedlot: low fiber, high concentrate
1 to 2.5 hours/day eating
Feeding high concentrate, low fiber diets

Pros:
- better growth rates
- cattle prefer grain over fiber

Cons:
- acidosis; liver abscess (eg 30%)
- cattle prefer fiber when acidotic

DeVries et al., 2014; Rezac et al., 2014
How much does it matter to the animal?

Absent blind spots, look away
Heifers had been fed 88% concentrate diet for 30+ days.

- Open; ad lib high-concentrate
- Gated; 7 oz hay

View from inside of pen for each individual heifer.
Heifers had been fed 0% concentrate diet for 30+ days

Open; ad lib high fiber (hay)

Gated; 7 oz hay

View from inside of pen for each individual heifer
Half the heifers were fed high-fiber diet at 08:00 and 14:00 h.
Half the heifers were fed high-concentrate diet at 08:00 and 14:00 h.
For all heifers, 7 oz of hay was delivered behind the gate at 08:00 h
• video recorded 24 hours per day
• continuous observation of open and gated bunks
+ 75 lbs/day
As the weight on the gate increased, those fed a high-fiber diet became less eager to eat additional hay.

Latency (min) to use the gated bunk after hay delivery

Van Os et al., 2018
But those fed a high-concentrate diet continued to push within 3 min of hay delivery even as the gate became heavier.
No difference in weight pushed

Maximum weight pushed (% BW)

Van Os et al., 2018
What we learned:

• all willing to push: want to explore
• quick to approach hay: feedlot cattle on high-concentrate diet for 30+ days are motivated, it matters
• some feedlots increase % fiber in diet, especially to reduce antimicrobial use
• **future:** liver abscess included in feedlot welfare audits
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Compromised cattle: severely lame
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Cattle with gait abnormalities given pain relief

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<tr>
<td>More time standing up</td>
<td>Offinger et al. 2013</td>
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<td>More willing to bear weight</td>
<td>Rushen et al. 2007</td>
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<tr>
<td>More even weight distribution</td>
<td>Flower et al. 2008</td>
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<td>More symmetrical steps</td>
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<td>Less restless behavior</td>
<td>Chapinal et al. 2010 Wagner et al. 2017</td>
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Compromised cattle: emaciated
Many parties involved:
  – producers: dairy, beef
  – haulers
  – auction markets
  – packers
  – corporate customers

*Edwards-Callaway et al., 2019*
• not “seen” on the dairy or feedlot
• reluctant to euthanatize
  – perceived as giving up, rather than compassion
• no control: they arrive this way
• featured in undercover expose videos
Responsibility: measure & manage basics

Many parties involved in best case response:
- producers: dairy, beef: euthanize or prevent compromised animals
- haulers: would not load compromised animals
- auction markets: would not accept compromised animals
- packers: would not accept compromised animals, primary item in audit
- corporate customers: purchasing policies would not include them

Audited with accountability for all, not fit for transport.

Edwards-Callaway et al., 2019
The 5 Freedoms: Where are we today?

Since 1960-70s, there has been progress:
- more responsibility, more insight into blind spots

But challenges remain:
- “next level” topics
- “basics” like compromised animals
The 5 Freedoms: Where are we today?

“Above and beyond all these matters, important and relevant though each is, stands the fact that modern, intensive animal production methods most markedly increase the responsibility of those who use them towards the animals in their charge.”

Brambell Report, 1965