New Trends in Animal Welfare
Science, values and education

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What is animal welfare?

• What is it to them?
  – What is meant by welfare, wellbeing, sentience, stress, suffering?

• What is it to us?
  – Ethics of animal welfare

• What should we do about it?
  – Awareness, education, promotion

What are?

• Animal welfare and wellbeing
• Sentience, stress and suffering
• Animal welfare education: science & values
• The role of the veterinarian
• Animal welfare assessment, quality assurance & promotion of added value

The alternative and insufficient questions posed by ‘welfare scientists’

• Is the animal living a normal life?
  – Ethology, sociobiology
• Is the animal fit and healthy?
  – Veterinary science
• How does it feel?
  – Psychology, motivation analysis

What is animal welfare?

-questions posed by ‘welfare scientists’

• Is the animal living a normal life?
• Is the animal fit and healthy?
• How does it feel?

So what then is animal welfare?

• It is the physical and mental state of a sentient animal as it seeks to cope with environmental challenge
• It thus covers the full spectrum
  • satisfaction to suffering
“Well-being”

‘Fit and happy’
[wherever they may be]
- sustained physical and mental health
- absence of disease
- absence of suffering (e.g. pain, fear, exhaustion)
- feeling good (‘happy’)
- comfort, companionship, security

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What is animal sentience?
- ‘Feelings that matter’
  - Perception of environmental stimuli
  - Interpretation: emotion & cognition
  - Motivation:
    - a measure of how much it matters
  - Measured response
  - Assess effectiveness of outcome
  - Modify mood and understanding in light of experience

A Sentient View of the World

Animal Sentience
- ‘Feelings that matter’
  - Perception of environmental stimuli
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Stress, adaptation & suffering
Stress 1: alarm then full adaptation

Stress 2: alarm and incomplete adaptation

Stress and suffering

- Suffering occurs when an animal cannot cope (or has difficulty in coping) with unpleasant feelings:
  - because the sensations are too intense, too complex or too prolonged
  - because it is unable to respond in a way that will effectively improve how it feels

Suffering: failure to cope

- Exhaustion
- Injury and chronic pain
- Malaise - feeling ill
- Chronic anxiety/apathy

Fear & Anxiety

Pain

‘How do we know it matters?’

- Immediate reaction
  - alarm, escape - No
- Modified behaviour
  - rest and locomotor changes - maybe not
  - aversion/learned avoidance - possibly
  - reduced positive behaviour (e.g. grooming) - probably
- Altered Mood
  - apathy, reduced appetite - probably
- Response to analgesics
  - externally administered - not necessarily
  - self selected - Yes
Animal Sentience

Why does it matter to us?

- Suffering and pleasure are defined by the capacity to feel, not the capacity to think
  - chimpanzee = horse = rat
- Sentient animals learn by experience as they attempt to cope with life. If they fail, they suffer
  - suffering is a learnt experience

Relief of suffering

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Medical</th>
<th>Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>Antipyretics</td>
<td>Thermal comfort</td>
</tr>
<tr>
<td>Pain</td>
<td>Analgesics</td>
<td>Physical comfort</td>
</tr>
<tr>
<td>Inappetence</td>
<td>Tonics</td>
<td>Rest</td>
</tr>
<tr>
<td>Fluid loss</td>
<td>i/v Rehydration</td>
<td>Oral rehydration</td>
</tr>
<tr>
<td>Mental distress</td>
<td>Unnecessary?</td>
<td>Reduce social stress</td>
</tr>
</tbody>
</table>

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Animal Welfare

"What can we do?"

- Awareness
- Understanding
- Action
  - “It is comfortably easy to care about animals: to care for them requires skill, patience and humility”

Lack of awareness

Education:

A Curriculum for Animal Welfare

- Principles of husbandry and welfare
- Animal welfare science
- Animal welfare Law and Regulations
- Animal welfare in clinical practice
Principles of husbandry and welfare

- Definitions of welfare, sentience and suffering
- The "Five Freedoms"
- Good husbandry: management of farm and companion animals
- Ethics of animal welfare

Freedoms and Provisions

- **Freedom from hunger and thirst:**
  - access to fresh water and a diet to maintain full health and vigour
- **Freedom from discomfort:**
  - a suitable environment: e.g. shelter and a comfortable resting place
- **Freedom from pain, injury and disease:**
  - prevention and/or rapid diagnosis and treatment
- **Freedom from fear and stress:**
  - ensure conditions which avoid mental suffering
- **Freedom to express normal behaviour:**
  - ensure sufficient space, proper facilities and social contact

Values: The Ethics of Animal Welfare

<table>
<thead>
<tr>
<th>Wellbeing</th>
<th>Autonomy</th>
<th>Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human society</td>
<td>Wholesome, cheap food</td>
<td>Welfare legislation</td>
</tr>
<tr>
<td>Producers</td>
<td>A fair living</td>
<td>Good husbandry</td>
</tr>
<tr>
<td>Farm animals</td>
<td>Wellbeing at all times</td>
<td>&quot;A life worth living&quot;</td>
</tr>
<tr>
<td>Living environment</td>
<td>Conservation</td>
<td>Respect for envt. &amp; stewards</td>
</tr>
<tr>
<td>Biodiversity</td>
<td></td>
<td></td>
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</tbody>
</table>

What is welfare science?

Animal Welfare Science (y2)

- Sentience and suffering
- Physiology of pain, stress and adaptation
- Ethology
  - normal behaviour in relation to environment
- Psychology
  - perception, emotion, cognition and motivation
- Abnormal behaviour
  - causes and management of anxiety, stereotypies etc.
- The human-animal bond.

Animal Welfare in Clinical Practice

- Practical assessment of husbandry and welfare
  - animal-based welfare monitoring
- Recognition of animal abuse
  - unnecessary suffering
- Herd health and welfare
  - on-farm strategic planning
  - welfare-based quality assurance
**What are?**

- Animal welfare and wellbeing
- Sentience, stress and suffering
- Animal welfare education: science & values
- The role of the veterinarian
- Animal welfare assessment and quality assurance

Welfare Science is part of Veterinary Science and vice versa.

- An understanding of animal welfare state (as perceived by the animal) is an essential prerequisite for proper professional veterinary care.

**Why do vets. need Welfare Science?**

- because animals need vets. who understand not only what keeps them healthy but also how they feel as they seek to meet their physiological and behavioural needs.

“**Our Constant Endeavour**”

The Duty of the Profession

- Professional ability
  - to assess welfare and recognise suffering in a sentient animal or population of animals
  - to identify and remedy failures of provision
- Humanity
  - to respect the needs of animals and their owners
- Courage
  - to act according to that which is right, not simply that which is regulated

**Welfare-based Quality Assurance**

“The Virtuous Bicycle”

Public

Self-assessment

Review

Improve

Assure

Promote

SET STANDARDS

Producers

Monitor

Action

Review

quality, value & impact

Assure

Promote
**Welfare Quality: Progressive evaluation structure**

- Measures
- Criteria
- Principles
- Overall assessment

- ~30 on-farm measures developed by animal scientists
- 12 preference dimensions giving value judgment
- 4 main independent dimensions describing welfare
- Synthetic information attached to a product

**Advice to farmers**

**Information to consumers**

- Rank Unclassified
  - *Basal*
  - **Good**
  - ***Excellent***

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**“The Virtuous Bicycle”**

**Part 2: Animal welfare as an element of added value**

- “Better food” defined by belief in:
  - taste and texture
  - food safety
  - production methods (including animal welfare)

- “Trust” achieved by:
  - proven (local) origin
  - proven organic production
  - proven high welfare

- Promotion achieved by:
  - Labelling within store (e.g. organic, welfare stars)
  - Brand image of retailer

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**Increasing consumer demand: Obstacles**

- Most consumers (world-wide) haven’t thought about FAW at all
- Most consumers in the affluent, industrialised world have no real knowledge of, (or sympathy with) farming systems
- Many “educated” consumers express a desire for improved FAW but few convert this desire into a demand when shopping for food

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**Consumer trends, U.K.**

- **Eggs**
  - Free-range >50% Market
- **Milk products**
  - organic <10% Market

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**Increasing consumer demand: The 5%:95% rule?**

- Promotion of QA for FAW as a positive element of added value (5%?):
  - e.g. Freedom Foods, Waitrose (U.K.)
- Promotion of QA for FAW as a defence against accusations of improper practice (95%?):
  - Free range eggs (no cruel cages)
  - Higher welfare = higher price contracts for UK dairy farmers (Waitrose, Tesco - don’t be mean to the farmers)
  - “How we came to love McDonalds”
**Added Value from improved welfare:**

**Deliverables from the virtuous bicycle**

- For the animals
  - improved productivity and welfare
- For the consumers
  - greater trust
  - greater satisfaction ("feel good" factor)
- For the farmers
  - more pride
  - survival!