

## New Trends in Animal Welfare Science, values and education



John Webster  
University of Bristol  
NFACC Conference, Ottawa 2007

## 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

## 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?

## 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

## 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

## What are?

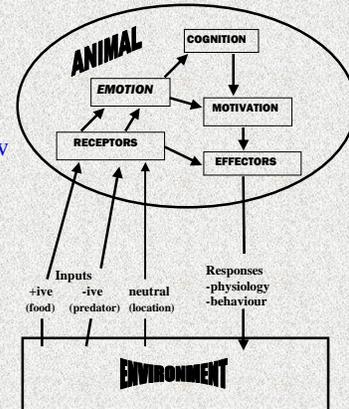
- Animal welfare and wellbeing
- **Sentience, stress and suffering**
- Animal welfare education: science & values
- The role of the veterinarian
- Animal welfare assessment, quality assurance & promotion of added value

## 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

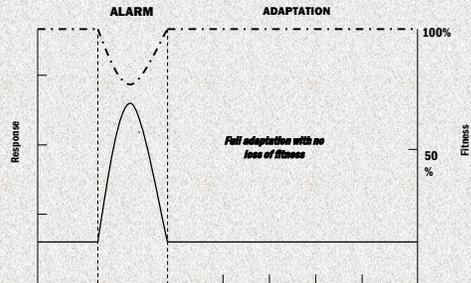
### • ‘Feelings that matter’

- Perception of environmental stimuli
- 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

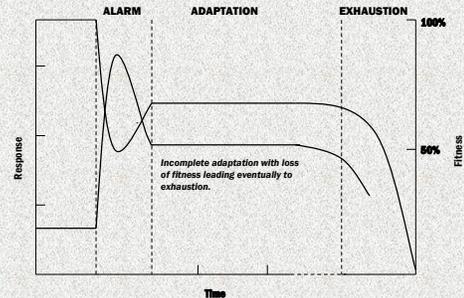
## Stress, adaptation & suffering



### Stress 1: alarm then full adaptation



### Stress 2: alarm and incomplete adaptation



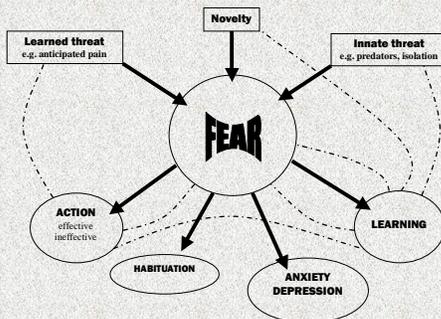
### Stress and suffering

- 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

Symptom	Medical	Nursing
Fever	Antipyretics	Thermal comfort
Pain	Analgesics NSAIDs	Physical comfort Rest
Inappetence	Tonics	'Treats'
Fluid loss	i/v Rehydration	Oral rehydration
Mental distress	Unnecessary?	Reduce social stress TLC

## 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

## Animal Welfare "What can we do?"

- Awareness
- Understanding
- Action
  - “ *It is comfortingly 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

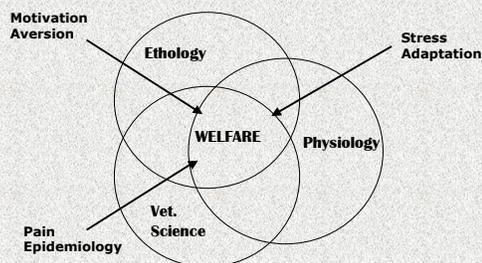
### Freedoms and Provisions

- **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

	Wellbeing	Autonomy	Justice
Human society	Wholesome, cheap food	Freedom of choice	Welfare legislation
Producers	A fair living	Free competition	Good husbandry
Farm animals	Wellbeing at all times	Environmental enrichment	"A life worth living"
Living environment	Conservation Sustainability	Biodiversity	Respect for envt. & stewards

### 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.

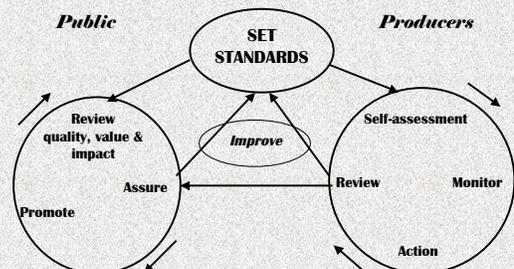
### **“Our Constant Endeavour”** The Duty of the Profession

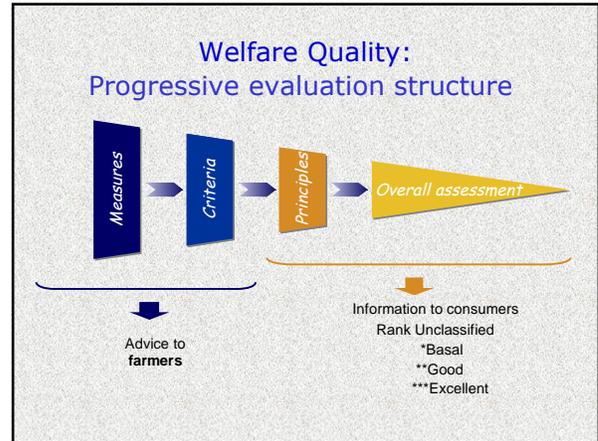
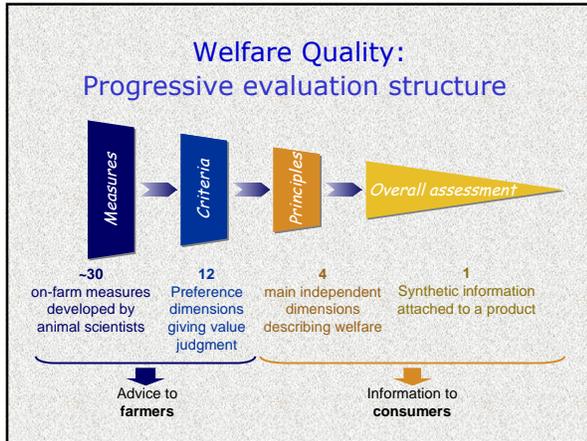
- Professional ability
  - to assess welfare and recognise suffering in a sentient animal or population of animals
  - to identify and remedy failures of provision
- Humanity
  - to respect the needs of animals and their owners
- Courage
  - to act according to that which is right, not simply that which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

### *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**

### **Welfare-based Quality Assurance** *“The Virtuous Bicycle”*





### “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

### 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

### Consumer trends, U.K.



Eggs  
Free-range >50% Market



Milk products  
organic <10% Market

### 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!