

From *Is* to *Ought* in Lab Animal Welfare Policy (in the US)

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What
Animals
Want

Expertise and
Advocacy in
Laboratory
Animal Welfare
Policy

L a r r y C a r b o n e

How we treat animals depends (in part) on what (we think) we know about them.

US Animal Welfare Act c. 1985:

- How much exercise do dogs need/get?
- How big a cage for a Guinea pig harem?
- What animals will get what kinds of environmental enrichment?

The simple connection between *Is* and *Ought*

- Animal Welfare Facts → **Policy (or standards, practices, laws)**

The simple connection between *Is* and *Ought*

- Animal Welfare Facts → **Policy (or standards, practices, laws)**

We know this **FACT** about animals → **THEREFORE we OUGHT TO institute this practice**

Ought, Should, Must, It is imperative to, . . . Normative statements

- Identifying the major risks to animal welfare ... and ensuring a plan ... **should be an important element** of any on-farm animal welfare assessment protocol.
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- extending the time off feed beyond the daily feeding interval resulted in reduced blood glucose concentrations, **suggesting that time off feed needs to be carefully managed** in young transported dairy calves.
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- No severe movement events were observed in animals euthanased with MGS, ... **[therefore]** data support the preferential use of MGS over KCL.
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- longer transport distances may increase the risk of poor calf welfare ...and on-farm calf management may affect transported calves' energy status; **[therefore]** **improving this area** could result in better energy availability during fasting.
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The simple connection between *Is* and *Ought*

- Animal Welfare Facts → **Policy (or standards, practices, laws)**
- Surgery causes Pain in Mice → **Therefore we OUGHT TO ___ ?**

The not-so-simple connection between *Is* and *Ought*

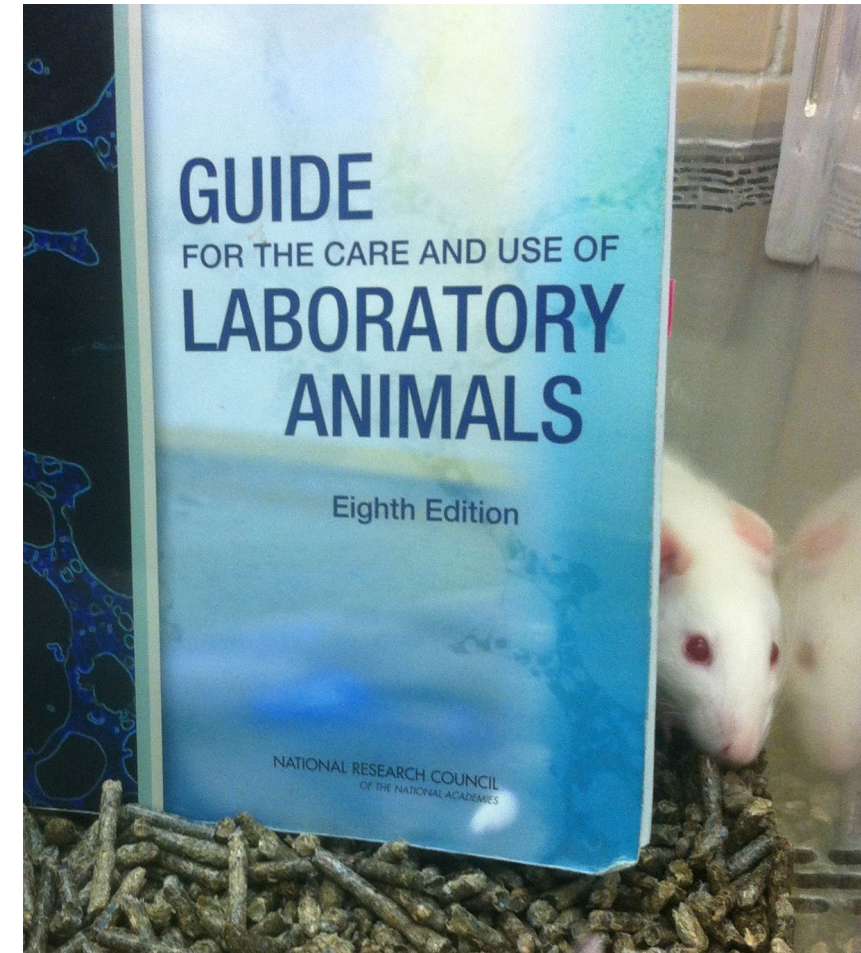
Platitudes versus Operationalizable Measurable Standards

- Animal Welfare Facts → **Policy (or standards, practices, laws)**
- Surgery causes Pain in Mice → **Therefore we OUGHT TO minimize pain in mouse experiments**

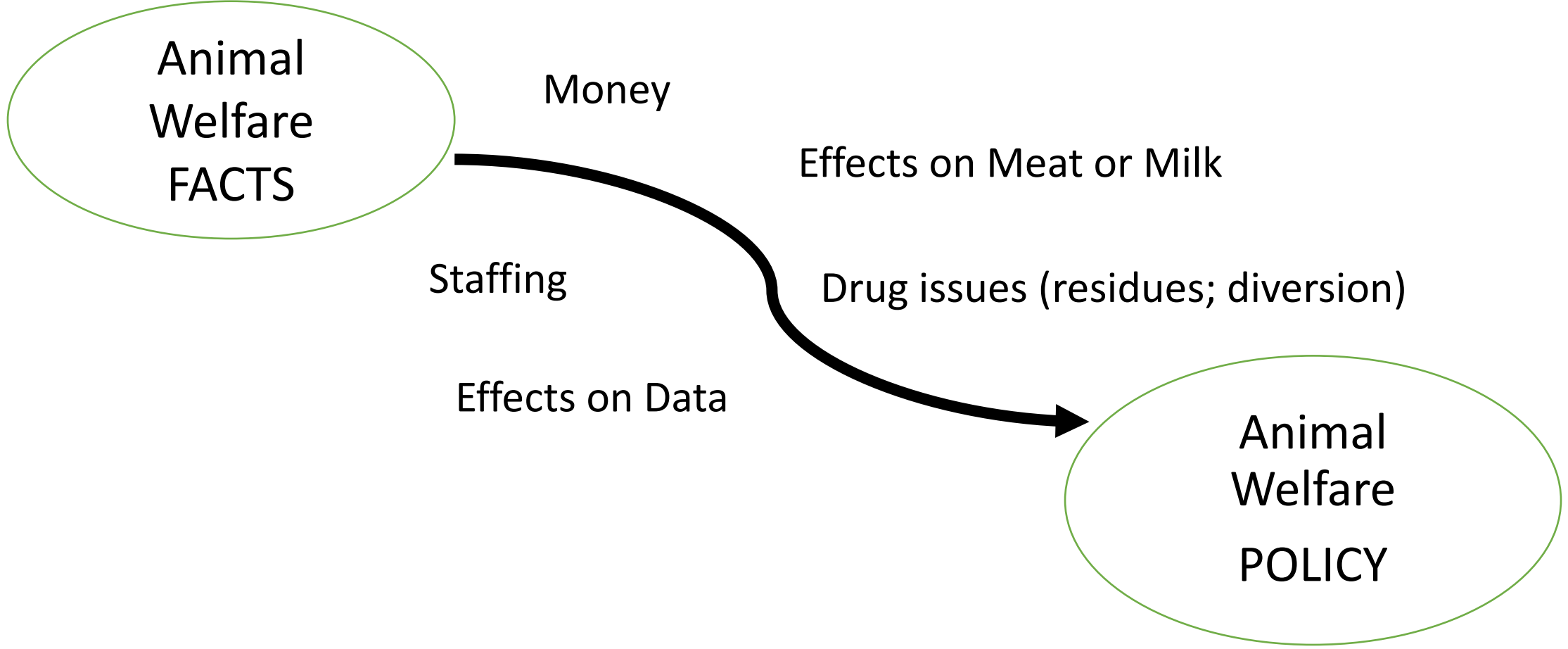
US Policy recommendations

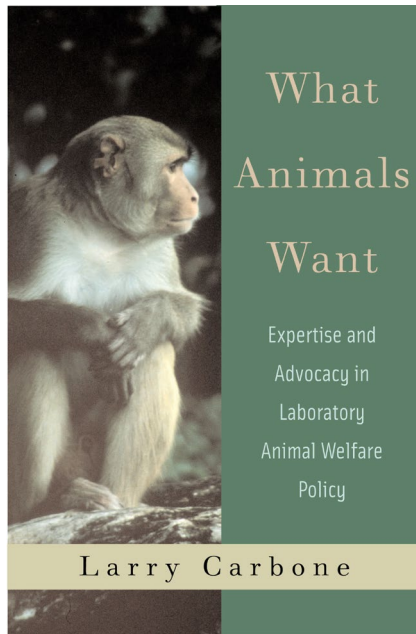
Surgery causes Pain in Mice → **Therefore we OUGHT TO**

- a. **Ban mouse surgery**
- b. **Follow all surgeries with 3 days of multimodal analgesic treatment**
- c. **Require scientists to ask their vet to prescribe**
- d. **Use the same pain treatment regimen a human patient would get for the same surgery**



The Real World





US Animal Welfare Act c. 1985:

How much exercise do dogs need/get?

- **Only require expensive big cages or paid dog-walkers is dogs NEED exercise**

How big a cage for a Guinea pig harem?

- **Only give breeders extra per Gpig if they strongly prefer/need it**

- What animals will get what kinds of environmental enrichment?

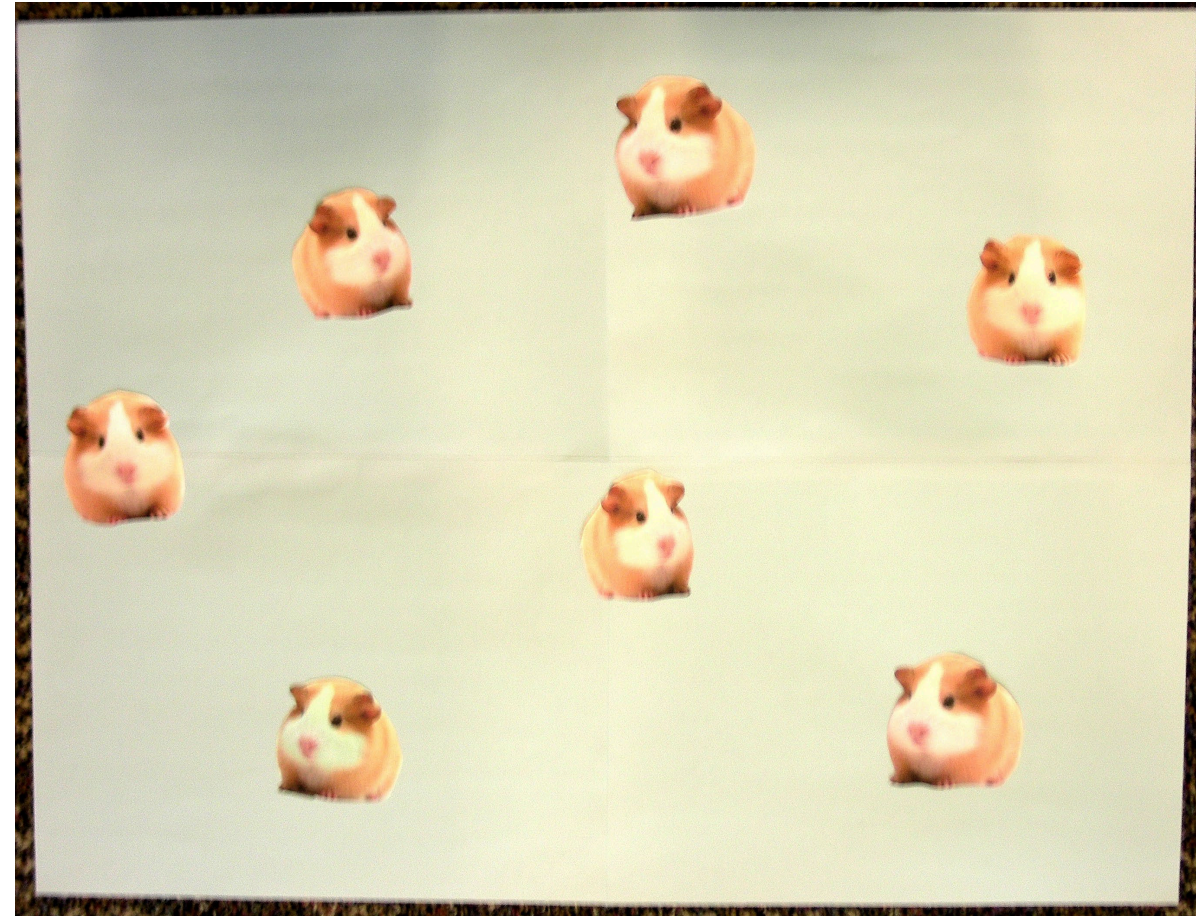
Evidence-based welfare practices/policies

- Good data: robust and reproducible
- Good interpretation of data
- Effect size is large
- Competing values

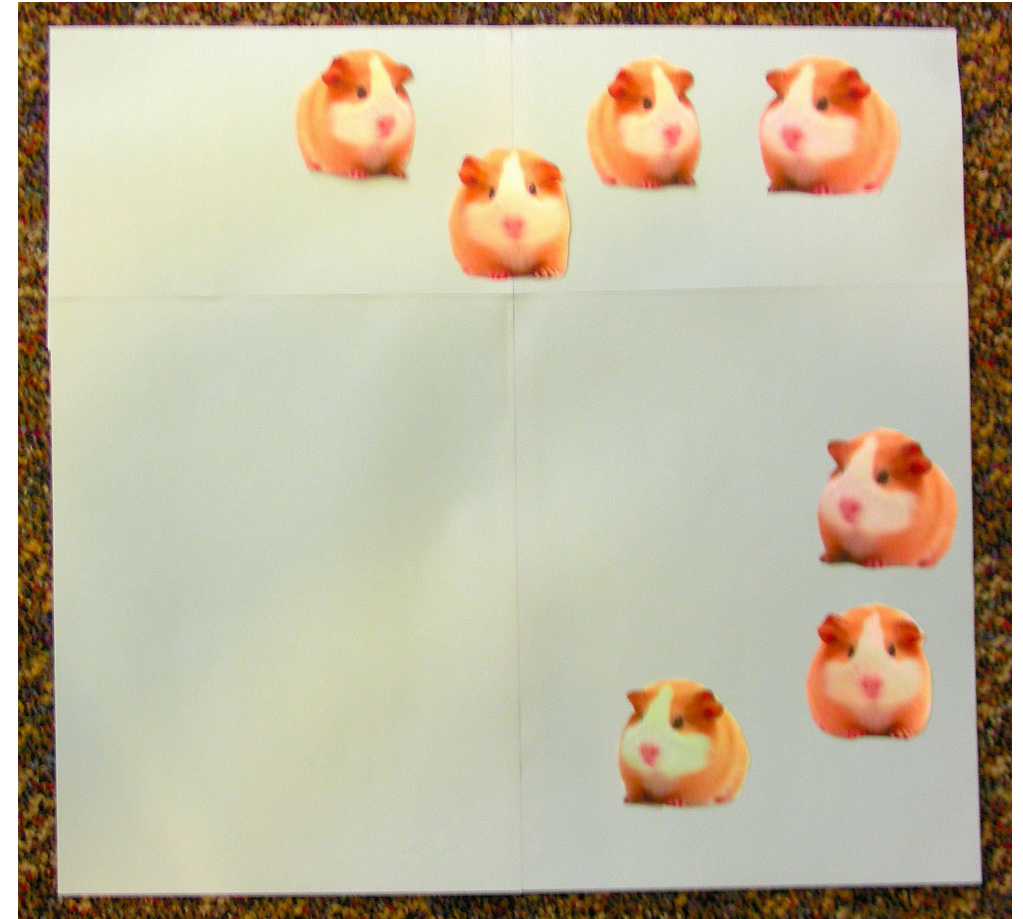
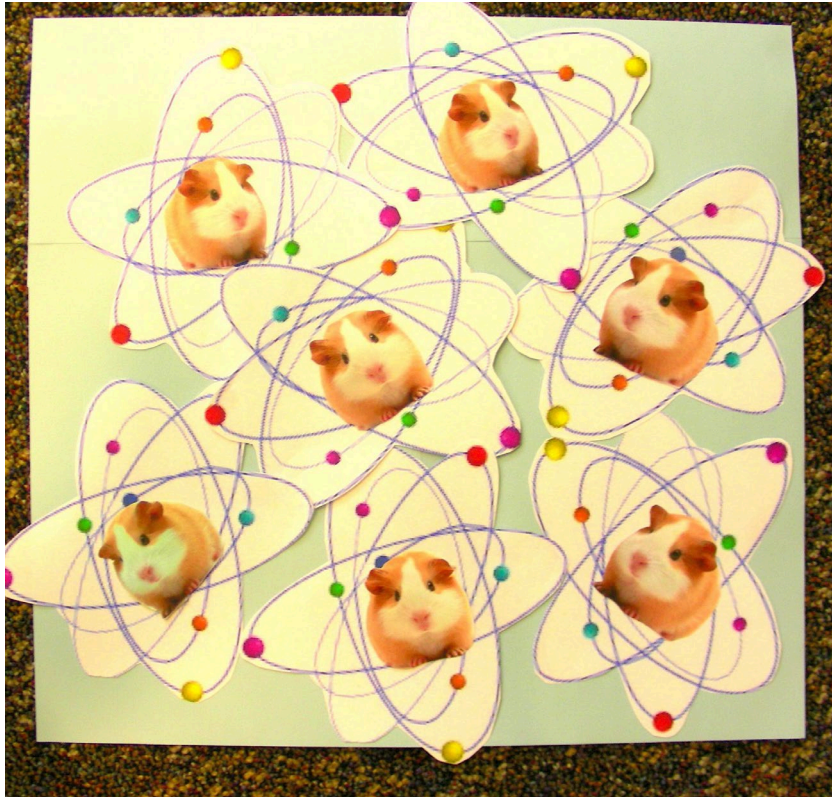
Case: How much space does a G Pig harem* need?

Theory: they will spread out to their preferred inter-personal/porcinal space preference

*Harem = 1 Vasectomized male + 5 females



Are Guinea Pigs in a cage like gas molecules, or are their preferences less simple?





OUTCOME:

- Based on data (that I accept is likely accurate) one unrepeated behavioral assay in peer-reviewed lab animal science literature, there is no need to change rules about how big a rectangular cage should be.
- Need to accommodate for thigmotaxis?

Is and *Ought* in mouse experiments

We know these FACTS

- Mouse pain is very difficult to recognize
- Optimal mouse pain medicines, doses, and dosing frequency are yet to be defined

Therefore we SHOULD

- Assume experiments cause more pain that we can identify
- Assume analgesics have limited use
- Err on the side of avoiding experiments that would cause pain in species we know better (people)

Questions? Answers? Suggestions?



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