Notes

Constitutional Limits on the Regulation of Laboratory Animal Research

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Animal rights activists, long unsuccessful, have recently reversed their legislative fortunes. Except for the 1985 amendments\(^1\) to the federal Animal Welfare Act (AWA),\(^2\) the successes have occurred at the state and local levels, the scenes of most animal rights lobbying and organization. Most notable are two measures recently enacted in Massachusetts, long a home of anti-vivisectionist\(^3\) activity. In 1983, Massachusetts became the first, and so far the only, state to ban both the use of in-state pound animals and the importation of out-of-state pound animals for research.\(^4\) In 1987, Cambridge became the first area to ban the LD\(_{50}\)\(^5\) and Draize\(^6\)

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5. The LD(lethal dose)\(_{50}\) test involves giving several groups of animals different doses of the agent tested. The death rates at each dose are then plotted on a graph; by interpolation, it is possible to find the dose at which fifty percent of the animals would die. Trevan, The Error of Determination of Toxicity, 101 Proc. Royal Soc'y London (Biology) 483 (1927). The test has been criticized because it is highly species-dependent and because the results reflect a complex of biological system failures, thus not giving detailed information on the mechanism by which death occurred. See, e.g.,
tests, often used in product safety evaluation. Since then, other states and local governments have considered such measures; though none have been enacted, many are pending.

The anti-vivisectionists' local successes may prove illusory. Serious constitutional problems should lead to the invalidation of such measures as the Massachusetts and Cambridge statutes. While some local measures may be constitutional, they pose relatively minor threats to research. The permissible national regulations, however, are potentially crippling.

Section I of this Note will place the Massachusetts and Cambridge laws in their historical and legislative context. Section II will argue that laws like the Massachusetts anti-importation law are unconstitutional because they violate the dormant commerce powers of the federal government. Cambridge-type restrictions on animal use, discussed in Section III, are unconstitutional because they are preempted by various federal laws. Moreover, in many states, including Massachusetts, a local ordinance like Cambridge's would violate state preemption law. State and local governments thus cannot regulate many areas of research effectively. Since, however, much of their inability rests on the presence of federal regulations, federal repeal could make much state and local regulation possible. Furthermore, the constitutional impediments addressed here do not bar federal regulation of research. 7

Office of Technology Assessment, U.S. Cong., Alternatives to Animal Use in Research, Testing, and Education 181–83 (1986) [hereinafter Alternatives]. The classical LD₅₀ test is not always necessary, as other versions exist that can provide similar results with many fewer animals. However, recent studies have concluded that, in some form, the test is still valuable. See, e.g., Lindgren, Thelstam & Lindquist, First CFN Symposium: LD₅₀ and Possible Alternatives, 52 Acta Pharmacologica et Toxicologica Supp. II (1983).

6. The Draize test for acute eye irritation requires that the potential irritant be placed on one eye of at least three rabbits. The degree of irritation to the eye is measured over time with reference to standard photos. Draize, Woodard & Calvery, Methods for the Study of Irritation and Toxicity of Substances Applied Topically to the Skin and Mucous Membranes, 82 J. Pharmacology & Experimental Therapeutics 377 (1944). The test has been criticized because of the pain and injury to the animals. A. Rowan, Of Mice, Models, and Men 216–28 (1984). Although tests that do not use live animals are being developed, they are unlikely to supplant the Draize test immediately. Alternatives, supra note 5, at 183–84, 188–91.

I. LABORATORY ANIMAL REGULATION IN CONTEXT

A. The Historical Dispute

Anti-cruelty laws were rare until the modern humane movement reached the United States in the 1850's. Most states passed general anti-cruelty laws shortly thereafter. The anti-vivisection movement started in the 1880's, soon after the first American physiological laboratories were established. Despite some early success, including the introduction of bills in the Senate to ban animal research in the District of Columbia, the movement failed to secure any important legislation. By the 1920's, the movement was moribund.

The rapidly-growing biomedical research community, first roused to action to fight the Congressional bills, continued to act through the decades that followed. It secured research exceptions to many state anti-cruelty laws and induced many states and local governments to release pound animals to research laboratories at nominal fees. By the late 1950's, researchers concentrated on securing federal financial support. Anti-vivisectionists, though extant, were entirely ineffectual in restricting animal research.

This situation remained until 1965, when Life printed an exposé on dog dealers, revealing that some stole pets and abused their animals. Spurred by the public outrage, Congress passed the Laboratory Animal Welfare Act of 1966, directed towards regulating animal suppliers. Since then, the anti-vivisection movement has received substantial attention. A number of philosophers have sought to provide the movement with

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8. For a discussion of the origins of the American humane movement, see J. TURNER, RECONCILING WITH THE BEAST 45-59 (1980).
11. S. 34, 56th Cong., 1st Sess. (1900); S. 1552, 54th Cong., 1st Sess. (1896); see also J. TURNER, supra note 8, at 94–95, 114–15.
13. E.g. FLA. STAT. ANN. § 828.02 (Harrison 1981); NEV. REV. STAT. § 574.200 (1985). Twenty-two states and the District of Columbia exempt research from animal cruelty statutes.
14. A. ROWAN, supra note 6, at 52. Challenges by anti-vivisection groups were uniformly unsuccessful. See infra note 73.
a theoretical underpinning. The movement has probably also benefited from increasing public doubt about science. Issues such as genetic engineering and reproductive technologies have moved the public from its earlier support of science to at least a questioning stand.

B. Legislation, Past and Present

1. Federal

Since 1966, the major accomplishments of the anti-vivisectionists at the federal level have been the enactment of amendments to the Animal Welfare Act in 1970, 1976, and 1985. The first two amendments strengthened the provisions concerning animal dealers and added regulations dealing with sport animals. The 1985 amendments addressed laboratories, mandating animal use review committees for federally-funded research institutions and requiring that animal pain and distress be minimized in the conduct of experiments. The revised Congressional statement of policy for the AWA makes explicit what has always been implicit in the act: that the purpose of the statute is not to look at the ends of research, but rather to ensure that what the researcher chooses to do is done as humanely as possible.

Several animal protection bills are pending. These include bills to grant animal rights groups third-party standing to enforce the AWA, to ban the use of pound animals in research conducted with federal funds, to ban the Draize and LD_{50} tests, and to require an exhaustive literature search before any project using live animals could receive federal funds.

17. Among the most prominent philosophers advocating animal rights are Peter Singer and Tom Regan. Singer bases his theory on classical utilitarianism, while Regan derives animal rights from a Kantian perspective. P. Singer, Animal Liberation (1975); T. Regan, The Case for Animal Rights (1983). They are not without their critics, however, perhaps the most prominent being R. G. Frey. R. Frey, Interests and Rights (1980); see also Cohen, The Case for the Use of Animals in Biomedical Research, 315 New Eng. J. Med. 865 (1986).

18. Carter, supra note 7, at 359-61, 386-93.


22. 7 U.S.C. § 2143(b) (Supp. IV 1986).


27. H.R. 1635, 100th Cong., 1st Sess. (1987) (would prohibit use of LD_{50} test in federal regulations and require that federal regulations specify non-animal tests unless animal tests are more valid).

2. State and local

All states have enacted general anti-cruelty legislation. Twenty-two states and the District of Columbia have carved out explicit statutory exceptions for research. The rest presumably allow prosecutions of researchers, but only one state has entertained such a suit. In State v. Taub, a researcher was convicted of mistreating monkeys; the state’s highest court reversed, however, finding that researchers could not be prosecuted because the AWA preempted attempts to ban conduct consistent with the Act. Other states require that research facilities be licensed. These laws vary; some explicitly track the AWA, while others provide for different schemes. None so far has been more restrictive than the AWA.

The most significant type of state and local regulation is pound release laws. By the 1950’s, many states had enacted laws mandating that pound animals be released to researchers, while others gave discretion to local governments. Since then, especially in the early 1980’s, antivivisectionists have secured the repeal of most mandatory release statutes. They have converted many permissive states into no-release states and have also lobbied local governments with some success.

Another line of bills proposes to restrict animal use by banning all animal research or certain experimental models. The first type of bill has not been enacted, though it has progressed to committee hearings in the state of Washington. The second is in place in Cambridge, Massachusetts. There, the city council voted to ban the use of the LD50 and

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29. For a recent summary, see State Laws, supra note 13.
30. Id. at 11.
37. Id. at 561-62. Twelve states now prohibit pound release, while only five states and the District of Columbia require it. State Laws, supra note 13, at 9.
38. Comment, supra note 36, at 561-62.
41. Id. at 3 (Maryland, New Jersey, and Pennsylvania bills on Draize and LD50 tests).
Draize tests, both used extensively in product testing and toxicology.  

Similar legislation is pending in New Jersey and Pennsylvania.  

II. THE MASSACHUSETTS ANTI-IMPORTATION LAW  

Until 1983, Massachusetts required its pounds to release animals to legitimate research institutions. Following a long campaign by animal rights groups, the governor signed the most restrictive pound release bill in the nation. Massachusetts joined eight other states in banning the release of pound animals to laboratories, but Massachusetts alone forbade the importation of pound animals for research purposes.  

Acts banning pound release seem constitutionally valid. Courts have held that animal release is within the police powers of the state, so the state may dispose of pound animals as it wishes. The Massachusetts anti-importation clause, however, imposes restrictions upon interstate commerce, suggesting that the law may be invalid under the dormant commerce powers of the federal government.  

Courts invoke the dormant commerce powers to invalidate state or local regulations that impose unnecessarily severe restrictions upon interstate commerce. The modern test, set out in Pike v. Bruce Church, relies on
interest balancing. If a state or local statute regulates intrastate and inter-
state commerce evenly in order to promote a legitimate state interest, with
only incidental effects upon interstate commerce, then it will be held valid
unless the burden imposed upon such commerce greatly exceeds the puta-
tive local benefit. The relevant factor here is whether the local interest
could be promoted with less effect upon interstate commerce.

A. Overt Discrimination Against Interstate Commerce

A law applying harsher standards to out-of-state firms than to those in-
state is suspect under the underlying concepts of free trade and non-citizen
representation, and the Court will scrutinize it closely. The Massachu-
setts law does not discriminate overtly against interstate commerce. The
law affects Massachusetts animal dealers just as it does those out-of-
state. As the law does not restrict imports of kennel-bred animals for
research, it appears not to discriminate in favor of local kennels. Therefore,
the strict test does not apply here. Since the law is facially neutral,
the Pike interest balancing test should be applied.

B. Legitimate State Interests

A legitimate state interest must promote a material advance in an area
in which the legislature is institutionally capable of acting. This argument is endorsed by
ban on sale of milk in plastic containers upheld, in part because in-state container manufacturers
could represent the interests of those out-of-state).

(upholding statute that exerts only incidental effects on out-of-state pricing and has substantial and
justifiable effects on those in-state). This test has been criticized recently by some commentators who
would restrict dormant commerce clause investigations to overt discrimination. See, e.g., Regan, supra
note 51.
54. Pike, 397 U.S. at 142.
protectionism is effected by state legislation, a virtually per se rule of invalidity has been erected.");
accord Maine v. Taylor, 106 S. Ct. 2440, 2448 (1986) (burden of persuasion shifts to state when
statute is facially discriminatory).
57. Animals are generally purchased from the most convenient source, which is usually the re-
searchers' local pound for dogs and cats. But it is customary to order smaller animals from national
dealers, which generally involves interstate shipment. Thus, laboratory animal purchasers, though
perhaps preferring local suppliers, are by no means averse to long-distance animal purchases.
58. If a law advances no legitimate state interest, which happens only rarely, the law falls. See
Welton v. Missouri, 91 U.S. 275 (1876) (striking state law licensing only peddlers selling out-of-state
merchandise).
power to legislate in matters of local concern).
have been able to believe that it would.\textsuperscript{60} The Massachusetts law advances three legitimate interests.\textsuperscript{61}

First, the bill may have been intended to eliminate the use of pets in research on the grounds that pets, due to their special association with humans, are ill-adapted to, or inappropriate for, laboratory research.\textsuperscript{62} Courts have long held anti-cruelty laws within the police power of the state.\textsuperscript{63} A pet protection law may be read to prevent cruelty to a special subclass of animals. Second, Massachusetts may have an interest in protecting the moral beliefs of those people who find research on former pets ethically revolting. Protecting morals also has long stood within a state's general police powers and consequently qualifies as a legitimate state interest.\textsuperscript{64} Finally, the bill may have been intended to reduce animal research, the goal of the New England Anti-Vivisection Society.\textsuperscript{65} Attempts to regulate research already fall under routine anti-cruelty laws.\textsuperscript{66} Thus, Massachusetts has advanced legitimate state interests through its anti-importation law.


\textsuperscript{61} Other suggested interests are invalid. Massachusetts might have wanted to prevent diseased animals from entering the state. Quarantines have long been held permissible. See, e.g., Mintz v. Baldwin, 289 U.S. 346 (1933) (upholding state law requiring that all imported cattle and their herds have been tested free of Bang's disease). But this law is too narrow for that purpose, as pound animals not for sale to researchers may be imported without any special regard to health. Furthermore, Massachusetts law requires that potentially diseased animals be inspected.\textsuperscript{67} Underinclusive legislation is not inherently void; the test is whether the legislature "could rationally have decided" to legislate incompletely in order that its ends be furthered.\textsuperscript{68} Cloverleaf, 449 U.S. at 466. However, underinclusive statutes are suspect in commerce clause litigation because they may be employed to strike against a protected group, whether the protection stems from free trade or the Fourteenth Amendment. Kassel, 450 U.S. at 662, 675-78 (invalidated state ban on long tractor-trailers in part because state excepted most intrastate vehicles). There is also no evidence that this rationale was considered seriously by the legislature; though actual legislative intent is not necessary, it carries weight. South Carolina State Highway Dep't v. Barnwell Bros., 303 U.S. 177, 192-93 (1938) (legislative intent generally sets bounds on possible purpose for commerce clause analysis). Disease prevention is thus an inherently implausible rationale for the law.

The state may also believe, as did Congress when it passed the first Animal Welfare Act, that pet owners should not be robbed of their runaway dogs and cats. S. REP. No. 1281, 89th Cong., 2d Sess., \textit{reprinted} in 1966 U.S. CODE CONG. & ADMIN. NEWS 2635, 2652. This is a legitimate state interest for the state in which the animal runs away, but not in any other. The Court has consistently struck down statutes of one state that attempt to regulate the affairs of another. See, e.g., Brown-Forman Distillers v. New York Liquor Auth., 476 U.S. 573 (1986) (striking down law requiring that out-of-state price reductions by in-state wholesalers be approved by in-state board); Public Utils. Comm'n v. Attleboro Steam & Elec. Co., 273 U.S. 83 (1927) (voiding attempt to regulate price charged by in-state utility to out-of-state customers).

\textsuperscript{62} A. Rowan, \textit{supra} note 6, at 152 (citing proponents who stated that former pets are unacceptable for research because the laboratory is "foreign and threatening").


\textsuperscript{64} See, e.g., Day-Brite Lighting v. Missouri, 342 U.S. 421, 424 (1952) (police power "extends . . . to all the great public needs").


\textsuperscript{66} See \textit{supra} note 13 and accompanying text. Cf. Comment, \textit{supra} note 32 (state animal laws often allow charges to be made against researchers); Comment, \textit{Creating a Cause of Action Against Abusive Animal Research}, 134 U. PA. L. REV. 399 (1986) (suggesting animal welfare ordinances and nuisance law be implemented through more liberal use of standing doctrine).
C. Impediments to Interstate Commerce

Once a court finds a legitimate state interest, the court must weigh the extent to which the legislation advances the interest against the impairment it works upon interstate commerce.\textsuperscript{67} The burden on interstate commerce is significant. Some seventy percent of the dogs used in animal research come from pounds.\textsuperscript{68} Researchers favor pound animals because of the price; while pound dogs cost from five to fifteen dollars if unconditioned and $75 to $140 if conditioned, purpose-bred dogs cost at least $275 each, with some recent estimates running from $750 to $1200.\textsuperscript{69} Although no precise figures are available, it has been estimated that Massachusetts laboratories use roughly 5,000 dogs each year.\textsuperscript{70} Thus, the actual annual cost of the anti-importation provision is from $1,000,000 to $4,000,000.\textsuperscript{71} The Supreme Court uses the cost that a statute places upon those affected by it as a means of determining whether the statute substantially burdens interstate commerce.\textsuperscript{2} It has found significant burdens in cases involving smaller sums;\textsuperscript{73} although it is hard to compare the relative effect in those cases with the effects here, anecdotal evidence suggests that some Massachusetts researchers have been severely restricted by the rise in costs.\textsuperscript{74}

D. Balancing Under Pike

If the state interest were weighed against the impairment on interstate commerce, the Massachusetts law would be invalidated. Comparing financial impediments to moral and ethical benefits is difficult. The Massachusetts law only marginally reduces animal research, as it does not restrict the use of kennel-bred animals or pets donated directly to the laboratories. In light of the substantial burdens the law imposes upon interstate com-

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\textsuperscript{67} Pike, 397 U.S. at 142.
\textsuperscript{68} See Ringler & Peter, Dogs and Cats, in LABORATORY ANIMAL MEDICINE (J. Fox, B. Cohen & F. Loew eds. 1984).
\textsuperscript{69} A. Rowan, supra note 6, at 159 ($275) (1984 estimate); Cohen, supra note 65, at 190 ($750) (1984 estimate); Metz, From the Labs to the Legislatures, STUDENT LAW., Oct. 1986 at 15 ($1,200) (1986 estimate). Conditioned animals are pound animals that have been treated for any diseases they may have contracted before or during their time as strays. A. Rowan, supra note 6, at 158-59.
\textsuperscript{70} A. Rowan, supra note 6, at 152.
\textsuperscript{71} A recent estimate places the national cost of a pound animal ban at $90,000,000. Smith & Hendee, Animals in Research, 259 J. A.M.A. 2007, 2007 (1988); see also A. Rowan, supra note 6, at 152 (early 1980's estimate that Massachusetts act would cost $1,000,000).
\textsuperscript{73} See, e.g., id. at 439 n.14 (shipping cost increases of $2,000,000 and $165,000); Bibb v. Navajo Freight Lines, 359 U.S. 520, 525 (1939) (appellees' total cost due to regulation approximately $50,000).
\textsuperscript{74} White, The Facts About Animal Research, Reader's Digest, Mar. 1988, at 127, 129 (cardiovascular research at Harvard and Massachusetts General Hospital curtailed).
merce, this state interest cannot itself support the law. The moral interest makes this a close question. Although there is no directly comparable authority in dormant commerce clause jurisprudence, the Court has looked rather skeptically at assertions of intangible benefits in standing and equal protection cases. Although it is impossible to predict how a court will employ a balancing test with certainty, the relatively weak state interests in banning pound animal imports, when combined with the substantial burden upon interstate commerce, make it likely that the Massachusetts anti-importation act would be overturned.

III. THE CAMBRIDGE COMMERCIAL RESEARCH RESTRICTIONS

In 1987, Cambridge became the first city to enact an ordinance limiting animal experimentation, banning two widely-used and widely-criticized toxicological tests, the LD50 and Draize tests. Cambridge specifically excepted non-commercial research from its proscription, but, in spite of its narrow scope, such an ordinance is preempted by federal law and, in many states (including Massachusetts), by state law as well.

A. Federal Preemption

The Supreme Court has fashioned three tests to determine whether a state or local law is preempted. First, a local law is void if Congress has displayed an intent to occupy the field of the conflict. Second, where it is impossible to comply with both a federal statute and a local law, the local law yields. Finally, local laws are invalid where they frustrate the intent

75. See, e.g., Raymond, 434 U.S. 429; Bibb, 359 U.S. 520 (laws stricken that minimally advanced state interest while placing significant burdens on interstate commerce).


77. Garner, supra note 43; for descriptions of the tests, see supra notes 5-6.


79. Moreover, it could effect a taking compensable under the Fifth Amendment. Since Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 (1922), it has been accepted that a regulation could constitute a taking. See, e.g., Ruckelshaus v. Monsanto Co., 467 U.S. 986 (1984) (release of trade secret a taking). However, the Court is reluctant to impede a state's police power, and consequently seldom grants compensation for a regulatory taking. Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470 (1987). It is unlikely that a testing laboratory could demonstrate that it was all but destroyed by this ordinance, as these tests do not comprise all of the business of a testing firm. Consequently, while it is possible that a firm would undergo such a cataclysm that the courts could find a regulatory taking, it is very improbable. See supra note 50.


of Congress, even where Congress has displayed no preemptive intent. A law will be preempted if it fails any one of these tests. Ordinances such as the one enacted by Cambridge can survive the first test, but will fail the second and perhaps the third.

1. **The Occupied Field Test**

In *Rice v. Santa Fe Elevator*, the Court held that, where Congress displays an intent to occupy a field, any state law within that field is preempted. This “occupied field” test has been reaffirmed repeatedly. The text and legislative history of the AWA do not reveal any preemptive intent. Section 15(b) of the AWA provides that “the Secretary [of Agriculture] is authorized to cooperate with the officials of the various States or political subdivisions thereof in effectuating the purposes of this Act and of any State, local, or municipal legislation or ordinance on the same subject.” This provision on its face disavows preemption.

It is possible that Congress intended to preserve state laws existing when the AWA was passed, none of which extended appreciably beyond the scope of the Act. Section 15(b) would then only permit laws consistent with the AWA. Other federal regulatory laws operate in this manner. However, the legislative history of the AWA suggests that the clause should be read to accommodate local measures. In an exchange on the floor of the House, the sponsor of the bill, referring to possible state bans upon the purchase of pound dogs for research, stated that “[the bill] will not add to the authority to buy anything that is prohibited by State law.” Thus, *Rice* preemption does not void the Cambridge ordinance.

2. **The Conflicting Regulations Test**

The second test for preemption, expressed most clearly in *Florida Lime & Avocado Growers, Inc. v. Paul*, states that preemption occurs if it is impossible to obey both state and federal law. Where both the state and

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82. Hines v. Davidowitz, 312 U.S. 52 (1941); see also *Schneidewind*, 108 S. Ct. at 1151.
88. 373 U.S. at 142-43 (California statute mandating higher minimum oil content in avocados than federal standard not preempted).
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federal laws establish minimum standards, it is possible to obey both.99 If the AWA sets minima, a more restrictive state or local regulation does not flatly contradict the standards but rather supplements them. Indeed, Florida Lime and the cases since distinguish between federal minimum and maximum standards. The former, generally devised for consumer protection or safety, imply no preemptive intent absent specific language; Congress is presumed only to have set up a foundation upon which otherwise valid state and local laws may build.90 Local governments, however, may not exceed federal maxima.91 At times, Congress seeks to protect an industry or group by devising safe zones in which local regulation is unconstitutional.92 In practice, the Court tends to accept local regulations made in exercise of the police power unless they burden interstate commerce severely or run afoul of the frustrated purposes test discussed below.93 Under the Florida Lime test, the AWA does not impede the Cambridge-type ordinance.

But other federal statutes and regulations do.94 The Court has consistently held that federal laws mandating positive action may not be frustrated by local bans.95 Several federal statutes and regulations require that LD$_{50}$ and Draize tests be performed by various chemical, pesticide, and pharmaceutical manufacturers. The Federal Hazardous Substances Labeling Act,96 for example, defines hazardous substances in relation to animal test results, including the Draize and LD$_{50}$ tests.97 Failure to per-

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89. Id.
94. Regulations, as well as statutes, may preempt local legislation. Hillsborough, 471 U.S. at 713.
95. See, e.g., Lawrence County v. Lead-Deadwood School Dist., 469 U.S. 256 (1985) (federal statute requiring that federal payments to school districts be used freely preempts state law dictating means of expenditure); Capital Cities Cable, Inc. v. Crisp, 467 U.S. 691 (1984) (state law banning alcoholic beverage advertisements carried by cable preempted by FCC regulations requiring that such signals be carried in full); Farmers Educ. & Cooper. Union v. WDAY, 360 U.S. 525, 535 (1959) (federal statutory duty to broadcast replies to political messages preempts state law banning them).
form these tests makes it criminal to introduce the substance into inter-
state commerce. Thus, the Cambridge ordinance makes it impossible for
a manufacturer to comply with federal law if he wishes to operate outside
his own state. Given the rather expansive interpretation of the commerce
clause long accepted by the Court, it seems likely that most businesses
would be caught between federal and local law here.

Other federal statutes impose similar obligations on manufacturers. The
Toxic Substances Control Act allows the EPA Administrator to direct
that manufacturers test chemicals potentially hazardous to either humans
or the environment in order to assess the extent of the danger and thus to
promulgate regulations for their handling. The statute lists animal tests
as one of the options which the Administrator may choose in setting up a
roster of acceptable tests. The regulations in fact mandate that LD$_{50}$
and Draize tests be performed when the EPA requires data on acute tox-
icity and primary eye irritation not otherwise available. Similarly, the
Federal Environmental Pesticide Control Act of 1972, which requires
that manufacturers register pesticides intended for more than laboratory
use with the EPA Administrator and provide such data as the Adminis-
trator may desire, mandates LD$_{50}$ and Draize tests for all chemical and
most biological pesticides. In a different field, the Virus-Serum-Toxin
Act of 1913 prohibits the sale of viruses, sera, and antitoxins except
when manufactured and tested under guidelines established by the Secre-
tary of Agriculture. These guidelines use LD$_{50}$ data to define the safety
and purity tests. Consequently, these agents cannot now be manufac-
tured without recourse to a test banned by Cambridge. Other statutes and
regulations have similar effects. Thus, a large body of positive federal

TERNATIVES, supra note 5, at 26-29.

(federal reclamation statute within commerce powers if there is any rational basis for Congress to
have believed that regulated activity affected interstate commerce); Katzenbach v. McClung, 379 U.S.
294 (1964) (upholding federal regulation of business that, though not itself substantially in interstate
commerce, is part of class of businesses that is).
(1982)).
103. 40 C.F.R. §§ 798.1100-.1175 (LD$_{50}$), 798.4500 (Draize) (1987). In neither case are any
alternatives listed.
110. For example, the Hazardous Materials Transportation Act, Pub. L. No. 93-633, tit. I, 88
be done for materials shipped in interstate commerce for which the extent of toxicity is not yet known.
Toxicity is defined in terms of an LD$_{50}$ test. Other statutes enable regulations that require testing for
law requires what Cambridge forbids, thereby preempting Cambridge's ordinance.\footnote{111}

It could be argued that Cambridge's ban exerts a de minimis effect upon the requirements of the federal laws described above. This would be true if the ordinance in fact prevented very little testing.\footnote{112} A drug manufacturer based in Cambridge could farm out its toxicity testing, though probably at some inconvenience or expense. A commercial testing firm could likewise reallocate its resources. This would, however, make conformity with federal law a burden, which is generally per se grounds for preemption.\footnote{113} Furthermore, \textit{Florida Lime} analysis does not allow an exemption for de minimis preemption.\footnote{114}

3. The "Frustrated Purpose" Test

In \textit{Hines v. Davidowitz},\footnote{115} the Supreme Court held that state laws inconsistent with the aims and purposes of federal law are preempted, even when Congress has not expressed an intent to occupy the field.\footnote{116} It is not easy to divine the aims of the federal laws on animal research. However, the federal government promotes experimentation and, to a degree, animal testing. The laws and regulations discussed above speak to the latter;\footnote{117} as to the former, the National Institutes of Health estimate that the federal government spent over seven billion dollars on health research and devel-

\footnote{111. Moreover, failure to comply with federal safety standards has been held to constitute negligence per se under state law. \textit{See}, e.g., \textit{Griffin v. United States}, 351 F. Supp. 10, 34 (E.D. Pa. 1972), \textit{aff'd in part and rev'd in part on other grounds}, 500 F.2d 1059 (3d Cir. 1974) (Sabin oral polio vaccine); \textit{see also Restatement (Second) Of Torts § 288(B)(1) (failure to meet governmental safety standard is negligence).}


114. The test set forth in \textit{Florida Lime} does not mention any weighing of interests. Instead, it considers only whether it is possible to obey both federal and state law. \textit{Florida Lime}, 373 U.S. at 141-43, 146-52.

115. 312 U.S. 52 (1941) (invalidating state law regulating alien movements).


117. \textit{See supra} notes 94-111 and accompanying text. American industry spent roughly $650 million on toxicological testing in 1985, mainly to fulfill federal requirements. \textit{Alternatives}, \textit{supra} note 5, at 251.
opment in 1986. Many federal departments and agencies both perform research and sponsor outside research: literally hundreds of statutory references permit or require federal units to do animal research.

In the AWA amendments of 1985, Congress stated that "the use of animals is instrumental in certain research and education for advancing knowledge of cures and treatment for diseases and injuries which afflict both humans and animals." A state or local ban on research, as proposed in several cities and states, frustrates a general federal intent to promote research. Hence, proposals to ban all animal research would be preempted under Hines as well as under Florida Lime.

Whether this would apply to the Cambridge ordinance is a more difficult question. Hines is usually invoked when the states interfere with peculiarly national powers. Here, local governments would regulate research using their health and welfare powers, which the Court has repeatedly held are quintessentially local. This does not mean that local interests are so immediate that they trump more general federal interests; rather, where an area potentially under conflict is within traditional local powers, the Court has favored co-regulation. It is unclear whether Cambridge's ban would withstand this type of preemption analysis.

It would be difficult to make the Cambridge ordinance both effective and constitutional. The ordinance would have to exclude all federally-required research and testing to get by the hurdles described above. It would also have to exclude all research and testing by the federal government. The Court recently reaffirmed that "the activities of federal installations are shielded by the Supremacy Clause from direct state regulation unless Congress provides 'clear and unambiguous' authorization for such regulation." The AWA does not explicitly authorize the regulation of

118. U.S. DEPT. OF HEALTH & HUMAN SERVICES, NAT'L INSTITUTES OF HEALTH, NIH DATA BOOK 2 (1987). The states spent somewhat less than $1 billion, while industry spent approximately $5.6 billion and private non-profits $625 million. Id.
119. One recent survey found seven departments and five independent agencies with active animal research programs. ALTERNATIVES, supra note 5, at 44-46.
122. Hines concerned the power to regulate immigration and nationalization. See also Xerox Corp. v. County of Harris, 459 U.S. 145 (1982) (state tax on goods held in custom warehouse preempted where Congress intended to set up duty-free system for imported products awaiting export).
124. See, e.g., California Coastal Comm'n v. Granite Rock, 107 S. Ct. 1419 (1987) (state licensing requirement for mining validly applied to mining on federal lands by federal permit holders); Pacific Gas & Elec. Co. v. State Energy Comm'n, 461 U.S. 190 (1983) (California moratorium on certification of nuclear waste disposal plants not preempted by federal nuclear regulatory law). However, these cases refer to limits or heightened requirements rather than to bans. In Granite Rock, for example, the Court noted that the state had not actually banned mining; if it had, the Court said, the case might be different. 107 S. Ct. at 1429.
federal facilities, though it contemplates a degree of state regulation. The statutes requiring animal tests also do not explicitly authorize state contravention. Moreover, federal contractors, including grant recipients, also appear immune from a Cambridge-type ban. As a result, to withstand challenge, any ordinance would have to exclude virtually all researchers who would seek to perform Draize or LD50 tests.

B. State Preemption

The Cambridge-type ordinance does not escape invalidation if it survives federal preemption analysis. Virtually all local ordinances are potentially invalidated by state law as well. Though localities stand in much the same relationship to states as states do to the federal government, the analogy is imperfect and state and federal preemption jurisprudence differ.

The basic difference comes from the relative subordination of localities to states. Local governments exist as creatures of the state and thus are subject to whatever degree of control the legislature wishes to impose. State constitutional and statutory provisions and common-law standards do, however, provide some limits on the ability of state legislatures to preempt local actions.

The requirements differ in home rule and non-home-rule states. Home rule refers to local governments that derive their powers from either constitutional or statutory provisions that create areas in which local law prevails over state law if not in direct conflict with it or in which local law supersedes state law entirely. Washington's Constitution, like that of several other states, grants local governments the power to enact "such local police, sanitary and other regulations as are not in conflict with general law." Illinois's Constitution, in contrast, allows home rule units to

126. 7 U.S.C. § 2145(b) (1982).
128. See, e.g., Boyle v. United Technologies Corp., 108 S. Ct. 2510 (1988) (state tort law preempted by federal common law immunizing federal contractors); Leslie Miller, Inc. v. Arkansas, 352 U.S. 187 (1956) (state law requiring contractors to secure state permits unconstitutionally applied to federal contractor, which is immune from regulations that would counter goals of federal government); United States v. Town of Windsor, 765 F.2d 16 (2d Cir. 1985) (state building code preempted for contractor for federal facility).
129. See, e.g., Williams v. Mayor of Baltimore, 289 U.S. 36, 40 (1933) (municipal corporation "has no privileges or immunities under the federal constitution which it may invoke in opposition to the will of its creator"); City of Trenton v. New Jersey, 262 U.S. 182, 187 (1923) (municipalities have no inherent right of self-government beyond state legislative control). The Court has since qualified this for voting rights, the sole exception. Avery v. Midland County, 390 U.S. 474 (1968) (one-man, one-vote principle applies to local government elections); Gomillion v. Lightfoot, 364 U.S. 339 (1960) (state revision of municipal boundaries limited by Fifteenth Amendment).
131. Thirty-seven states have home rule provisions in their constitutions. 1 C. ANTEAU, MUNICIPAL CORPORATION LAW § 3.00 (1988).
132. WASH. CONST. art. XI, § 11.
exercise "any power . . . pertaining to its government . . . including but not limited to, the power to regulate for the protection of the public health, safety, morals, and welfare; to license; to tax; and to incur debt." Home rule has initiative and protective functions; the former allow the locality to act, while the latter secure release from preemptive state legislation. In non-home-rule states, local governments only legislate as far as the state legislature allows; their enactments are at all times subject to preemption, constrained only by the state common law that may have developed.

The protective functions are relevant here. Under Washington's Constitution, state preemption requires only a conflict; under Illinois law, however, the legislature must explicitly preempt a field to shut out municipal action. Preemption doctrine is even more complicated in non-home-rule states, for which the courts have devised elaborate sets of preemption criteria. In People v. Llewellyn, for example, the Michigan Supreme Court held that the legislature preempts local laws if the legislature expressly reserves powers, implies preemption in the legislative history, devises a pervasive regulatory scheme, or regulates in a field that by its nature demands exclusive state regulation. In contrast, Kentucky adopted a less generous test from California case law: state law preempts local law (a) if the former fully covers the field, thus making local law superfluous, (b) if it partially covers the field, but a paramount state concern will not tolerate additional local action, or (c) if the adverse effect of the local ordinance on transient citizens of the state outweighs the possible benefit to the municipality. In non-home-rule states, local statutes generally fail when they affect any function outside the municipality in which the state has a police power or other governmental interest. In these
and most other home rule cases, however, the courts balance state and local interests.  

Given the wide range of both preemption doctrines and state laws, a Cambridge-type ordinance would be valid in some states but not others. The ordinance, however, is automatically suspect because it invokes the health and welfare powers of government, which most states find are matters of general interest and hence not within the unique scope of local government. Courts have held that animal regulation is not exclusively a local affair. Hence, even the home rule states that grant substantial exclusive powers to the locality may preempt a Cambridge-like ordinance.  

State preemption, then, could occur in several ways. If the state's regulations expressly or implicitly authorize LD$_{50}$ or Draize testing, local ordinances banning them would be preempted. A general animal testing regulatory scheme might also preempt a Cambridge-type ordinance, in the same manner that a Berkeley ordinance banning electroconvulsive therapy was recently held preempted because state regulation of such therapy indicated the state's interest in its continued practice. Many states require LD$_{50}$ or Draize testing in their environmental or safety regulations. As with similar federal legislation under Florida Lime, the local ordinance would be preempted.  

The Kentucky preemption rules suggest a Hines-like approach to preemption. Kentucky balances local and state interests, with local laws presumed valid if they operate within traditional municipal powers.


145. See, e.g., Do, 674 S.W.2d at 521; City of Shreveport v. Curry, 357 So. 2d 1078, 1080 (La. 1978) (municipal ordinance preempted when it forbids what state authorizes).

146. Psychiatric Soc'y, 178 Cal. App. 3d at 90, 223 Cal. Rptr. at 609.

147. Many states explicitly require the LD$_{50}$ or Draize tests in their regulations. See, e.g., CAL. ADMIN. CODE tit. 22, §§ 66696, 66720 (1987) (defines hazardous waste by LD$_{50}$ values); 5 COLO. CODE REGS. § 3.1.8(3)(b)(v) (1987) (maximum concentrations of toxic substances in sewage mixing zones defined by LC$_{50}$ values); IOWA ADMIN. CODE r. 30-10.21 (1986) (pesticide toxicity defined by LD$_{50}$ values); MICH. ADMIN. CODE rr. 408.11605(5), 408.11607(2) (1979) (defining toxicity for occupational hazards by LD$_{50}$ values); MINN. R. 7045.0129(1)(B), .0131(6) (1987) (defines hazardous waste by LD$_{50}$ values); OHIO ADMIN. CODE § 3745-51-11(A)(2) (1986) (defines hazardous waste by LD$_{50}$ values); OR. ADMIN. R. 333-16-005(5) to (8) (1980) (defines hazardous substances by LD$_{50}$ and Draize results); S.C. CODE REGS. 5-390(d) to (g) (1976) (same). Alternatively, states simply adopt federal regulations that require LD$_{50}$ or Draize tests. See, e.g., GA. COMP. R. & REGS. r. 391-3-11-07 (1987) (adopting federal hazardous waste definitions); ILL. ADMIN. CODE tit. 77, § 850.20 (1985) (adopting federal hazardous substances definitions); KAN. ADMIN. REGS. 28-31-3(a) (1986) (adopting federal hazardous waste regulations); CODE M.E. R. ch. 800, § 4(A) (1987) (adopting federal Clean Water Act regulations).

148. See supra notes 88-114 and accompanying text.

149. See supra notes 115-24 and accompanying text.

150. See Andersen, Resolving State/Local Governmental Conflict—A Tale of Three Cities, 18
Consequently, a state's desire to sell safe commodities could preempt testing bans where the tests banned are very significant and the ban raises significantly the cost or difficulty in performing them. Such balancing tests depend greatly on the facts of each case. State courts, however, often find local law preempted. For example, courts have granted state policies encouraging group homes supremacy over local zoning ordinances forbidding them.\(^\text{161}\) Similarly, state licenses given to toxic waste dumps override local ordinances forbidding them.\(^\text{162}\)

In summary, a Cambridge-type ordinance would probably be preempted in many states, including Massachusetts, which requires LD\(_{50}\) and Draize tests in its hazardous substances regulations.\(^\text{163}\) Though the Supreme Judicial Court of Massachusetts has adopted a very strict preemption standard, it includes Florida Lime-like factors which would lead to preemption.\(^\text{164}\) Since other states have even more expansive preemption doctrines, state preemption law is an additional obstacle for the proponents of a Cambridge-type ordinance.\(^\text{165}\)

### IV. Conclusion

The two state and local measures that have attempted to restrict laboratory animal research are unconstitutional. Furthermore, the legal principles that render these invalid would also render invalid more extreme laws of the same types. This suggests that anti-vivisectionists may have chosen their focus badly. If the federal government were to ban required animal use, the preemption problems of the Cambridge ordinance would fall. Likewise, though Massachusetts may not bar the importation of pound animals for research purposes, the federal government may condition grants on their non-use, which would effectively ban them.\(^\text{166}\)


\(^{154}\) Barlow v. Town of Wareham, 401 Mass. 408, 517 N.E.2d 146 (1988) (local laws not preempted unless state legislative purpose cannot be achieved if they coexist with state laws).

\(^{155}\) In addition, state contractors may have immunity from local regulation similar to that enjoyed by federal contractors. E & E Hauling, Inc. v. Forest Preserve Dist., 821 F.2d 433 (7th Cir. 1987) (local regulation placing higher requirements on state contractor than those mandated by state is preempted); *see also supra* notes 125-28 and accompanying text.

\(^{156}\) Although the government cannot condition grants on abridgement of constitutional rights or privileges, a requirement that research grant recipients not use pound animals is not an "unconstitutional condition," as the right to perform research lacks independent constitutional grounds. Compare Sherbert v. Verner, 374 U.S. 398 (1963) (invalidating requirement that unemployment benefit recipi-
applies to more radical measures as well. For example, the federal government need not fund animal research beyond its current contractual commitments.\textsuperscript{187} It could ban the shipment of any laboratory animal in interstate commerce.\textsuperscript{188} Either measure would devastate animal research.

While such measures are constitutionally acceptable, they may be undesirable. This Note has outlined the broad issues on which the legal battles must turn and has demonstrated that current approaches face grave problems. Paradoxically, animal rights advocates have been directing their efforts of late precisely where they can secure the least real success, local pound release bans aside. The extent to which the federal umbrella shields animal research must be recognized. But, as Professor Stephen Carter has observed, even legal victories for researchers may prove Pyrrhic if the populace responds with more severe strictures.\textsuperscript{189} A dramatic example of the possibility is the battle over the patentability of higher organisms.\textsuperscript{190} Anti-vivisectionists may have mobilized well after all; though the local and state laws may prove either unconstitutional or relatively harmless to researchers, they may help bring the public behind more damaging federal measures.\textsuperscript{191} In the long run, researchers cannot rely upon constitutional arguments to protect their present rights to perform humane animal research.

\textsuperscript{187} Cf. Maher v. Roe, 432 U.S. 464 (1977) (right to abortion does not entail right to federal funding).

\textsuperscript{188} Cf. United States v. Darby, 312 U.S. 100 (1941) (federal government may prohibit shipment of goods in interstate commerce when manufactured in violation of Fair Labor Standards Act).

\textsuperscript{189} Carter, supra note 7, at 379-86.


\textsuperscript{191} A recent poll shows that 81\% of Americans think it necessary to use animals in some applied medical research, while 72\% do for basic medical research and 61\% for allergy testing. However, 76\% think that animals have rights, though only 46\% of those think that the use of animals in research violates those rights. 72\% believe that pound release is acceptable. Although only 55\% approve of the use of dogs in experiments, 60\% of those who disapprove would approve if dogs were the only animals suitable for life-saving experiments. Kilman, \textit{Are Laboratory Animals Treated Humanely?}, Associated Press, Oct. 28, 1985 (\textit{NEXIS}, Current library). The results are at times contradictory; nevertheless, one may conclude that at present there is substantial support for research in this country. But see Williams, \textit{Americans Are Nuts Over Pets, But Maybe That's Not So Nutty}, N.Y. Times, Aug. 17, 1988, at 19, col. 1 (Congress receives more mail on animal use in research than any other subject; mail runs 99\% against animal use).